

STEAL THUNDER OR BE TRUMPED UP: EFFECTS OF EARLY CRISIS COMMUNICATION
ACROSS DIFFERENT INDUSTRIES IN THE INFORMATION AGE

By

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ABSTRACT

STEAL THUNDER OR BE TRUMPED UP: EFFECTS OF EARLY CRISIS COMMUNICATION ACROSS DIFFERENT INDUSTRIES IN THE INFORMATION AGE

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Scholars in the field of public relations have been focusing on stealing thunder as an potential crisis communication strategy to understand how it could affect the image of an organization after a crisis. The idea of reaching the public with the crisis information first before the third party has many potential positive outcomes, including controlling the pipeline of the crisis information and showing the organization as a reliable source of information. Social media has been a helpful medium to reach the public fast and without a third party's interference like the media. However, perceived reach of the crisis information messages on social media could influence the crisis communication message. The current study investigated the effectiveness of stealing thunder messages and their perceived reach via social media (i.e., Twitter.com) on the public's satisfaction and the perceived credibility of the organization using four different organizations from different sectors. The study employed a 2 (crisis communication strategy: stealing thunder vs. thunder) x 2 (the public's perceived reach of the message: high vs. low) between-subjects experimental design. The four industries chosen for the experiment were auto, airline, food and beverages, and the manufacturing industry. For each company, a hypothetical crisis scenario was created with four different conditions (tweets). Stealing thunder was represented by a tweet from the company itself. Thunder condition was represented by a tweet from a media organization (New York Times) with tweets representing either a high perceived reach or low perceived reach. Results were calculated based on the respondents' perceived reach of the crisis messages. In total, sixteen different conditions were used for the study (n=940). The findings confirm that stealing thunder leads to better satisfaction, credibility, word-of-mouth communication, and purchase

intentions. In addition, the public's perceived high reach of social media messages could lead to better satisfaction when organizations decide to steal thunder. This study opens the door for further investigation into the influence of perceived reach of crisis communication messages using stealing thunder strategy.

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To Sheikha, Halima and Zuweina, wonder women of my life. Thank you for your unconditional love and unwavering support.

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TABLE OF CONTENTS

LIST OF TABLES	ix
LIST OF FIGURES	xi
CHAPTER 1: INTRODUCTION	1
CHAPTER 2: LITERATURE REVIEW	6
Crisis Communication	6
Crisis Communication in Social Networking Sites	9
Stealing Thunder as a Communication Timing Strategy	11
Theories Explaining Effectiveness of Stealing Thunder	19
Perceived Reach	23
Perceived Reach in Crisis Communication Studies	26
Satisfaction	27
Perceived Organizational Credibility	29
CHAPTER 3: RESEARCH METHODS	33
Design of the Study	33
Stimuli Development	33
Believability and Readability of Stimuli Materials	35
Measures of Independent Variables	35
Perceived Reach	35
Stealing Thunder	36
Study Subjects and Procedure	36
Data Cleaning and Manipulation Check Measures	37
Measures of Dependent Variables	39
Credibility	39
Satisfaction	40
Purchase intentions	40
Negative word of mouth intentions	41
Positive word of mouth intentions	41
Scale Reliabilities for the Dependent Variables	41
CHAPTER 4: RESULTS	44
Descriptive Analysis	44
Main Effects of Stealing Thunder	47
Main Effects of Perceived Reach	49
Interaction Effects Between Stealing Thunder and High Reach	50
On satisfaction	50
On credibility	53
Tests of the Moderating Effect of Perceived Reach	54
Relationships Among Dependent Variables	55

CHAPTER 5: DISCUSSION	64
Stealing Thunder	64
Perceived Reach	65
High Perceived Reach Effect on Credibility	66
Stealing Thunder with a High Perceived Reach Message	67
Theoretical Implications	69
Practical/Managerial Implications	70
Limitations and Future Research	71
 CHAPTER 6: CONCLUSION	 74
 APPENDICES	 76
Appendix A: Means, and Standard Deviations in terms of Satisfaction and Credibility	77
Appendix B: Satisfaction & Credibility Post Hoc Comparison between High Reach Stealing Thunder and Low Reach Thunder for the Four Companies	78
Appendix C: Differences of Means of Satisfaction & Credibility between the Four Groups	79
Appendix D: Satisfaction & Credibility Means, Standard Deviations, and Effect Size for the Four Industries	83
Appendix E: Stimuli	85
Appendix F: Consent Form	93
Appendix G: Survey	94
 REFERENCES	 100

LIST OF TABLES

Table 1 Means (M), standard deviations (SD), and Scale reliabilities (α) across the four companies.....	42
Table 2 Scales, Items, Factor Loadings, Composite Reliability, Cronbach's α	43
Table 3 Descriptive Statistics	45
Table 4 Distribution of participants per conditions	47
Table 5 Pearson's r correlations between satisfaction and credibility varied by industry	55
Table 6 Pearson's r correlations between satisfaction and purchase intentions varied by industry	56
Table 7 Pearson's r correlations between satisfaction, and positive and negative WOM varied by industry.....	57
Table 8 Pearson's r correlations between credibility and purchase intentions varied by industry	58
Table 9 Pearson's r correlations between credibility, and positive and negative WOM varied by industry.....	59
Table 10 Pearson's r correlations between purchase intentions, and positive and negative WOM varied by industry.....	60
Table 11 Results summary	61
Table 12 Means, and standard deviations in terms of satisfaction and credibility	77
Table 13 Satisfaction & Credibility Post Hoc comparison between high reach stealing thunder and low reach thunder.....	78
Table 14 Satisfaction & credibility means, standard deviations, and effect size	83

Table 15 Satisfaction & credibility means, standard deviations, and effect size	84
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LIST OF FIGURES

Figure 1 Interaction between stealing thunder and reach on means of satisfaction	51
Figure 2 Differences of Means of Satisfaction between the Four Groups	52
Figure 3 Differences of Means of credibility between the Four Groups	54
Figure 4 Differences of Means of Satisfaction with Dow between the Four Groups.....	79
Figure 5 Differences of Means of credibility of Dow between the Four Groups.....	79
Figure 6 Differences of Means of Satisfaction with Cadillac between the Four Groups .	80
Figure 7 Differences of Means of credibility of Cadillac between the Four Groups	80
Figure 8 Differences of Means of Satisfaction with Nestle between the Four Groups	81
Figure 9 Differences of Means of credibility of Nestle between the Four Groups	81
Figure 10 Differences of Means of Satisfaction with SWA between the Four Groups....	82
Figure 11 Differences of Means of credibility of SWA between the Four Groups.....	82
Figure 12 Low reach thunder tweet for Dow	85
Figure 13 Low reach stealing thunder tweet for Dow.....	85
Figure 14 High reach thunder tweet for Dow	86
Figure 15 high reach stealing thunder tweet for Dow.....	86
Figure 16 Low reach thunder tweet for Cadillac	87
Figure 17 Low reach stealing thunder tweet for Cadillac	87
Figure 18 High reach thunder tweet for Cadillac	88

Figure 19 High reach stealing thunder tweet for Cadillac	88
Figure 20 Low reach thunder tweet for Nestle	89
Figure 21 Low reach stealing thunder tweet for Nestle	89
Figure 22 High reach thunder tweet for Nestle	90
Figure 23 High reach stealing thunder tweet for Nestle	90
Figure 24 Low reach thunder tweet for Southwest Airlines	91
Figure 25 Low reach stealing thunder tweet for Southwest Airlines.....	91
Figure 26 High reach thunder tweet for Southwest Airlines.....	92
Figure 27 High reach stealing thunder tweet for Southwest Airlines.....	92

CHAPTER 1: INTRODUCTION

The field of crisis communication has seen several developments in recent years. Throughout research involvement in crisis communication, the main interest was in the communication between an organization and its publics during a crisis. There are different types of crises that warrant different response strategies. Most research in crisis communication focuses on response strategies. This dissertation tackles the timing strategy of stealing thunder.

Stealing thunder is when an organization tells its public about the crisis early, often before a third party, like the press, leaks the crisis information. Researchers have hailed stealing thunder as a strategy to increase the credibility of the organization and decrease the perceived severity of the crisis. Research studies on stealing thunder are still ongoing but scarce.

The term stealing thunder first appeared in Williams, Bourgeois & Croyle (1993). They defined it as releasing potentially negative information about the self before it is learned or mentioned by another party. Crisis communication researchers have studied stealing thunder to improve organizations' crisis response. In essence, stealing thunder is concerned with the timing of the crisis message rather than the type of response. However, the current study argues that crisis message effects may be influenced by their perceived reach as well. Perceived reach is the number of others an individual perceives have received the same message (Gunther & Schmitt, 2004).

Existing studies do not address the concept of perceived reach as a reliable method to enhance stealing thunder effectiveness. Therefore, the significance of this study stems from using perceived reach to investigate the effect of stealing thunder on perceived organizational credibility, as well as customer satisfaction, purchase intentions, and word-of-mouth

communication. The literature review discusses what we know about stealing thunder and its importance as a crisis communication timing response strategy, especially with a broader range of perceived reach.

Stealing thunder is a timing strategy that organizations could use organizations to affect the perceptions of the company after a crisis. However, it may not have been taken seriously by researchers in the field for several reasons. First, it has the potential to backlash on the organization and to affect it negatively, considering no one knew about the crisis beforehand. Second, stealing thunder is a novel practice in crisis communication as it comes from law researchers looking into how stealing thunder affects the perception of the defendant's credibility by the jurors during a court trial. The difference between stealing thunder in the court and stealing thunder on social media is that the latter could be perceived by millions of people, including those inactive publics on social media. Influencers on social media who might not have had an interaction with the company before might still affect the company's reputation. Third, crisis communication theories often recommend not acknowledging blame for a crisis because stakeholders may use it in legal battles as this affirms the responsibility of the crisis (Cohen, 2002; Coombs & Holladay, 2012). While the above reasons are reasonable, it is imperative to note that crises also could be of different types (i.e., reputational, operational, etc.). Therefore, communication and management of one type of crisis are different from another.

Stealing thunder has not yet been incorporated in the major theories in the field of crisis communication. Situational crisis communication theory (SCCT) by Coombs (2007b) does not address it, although Coombs mentions that it is better to tell the public about a crisis once it happens. Coombs, however, sheds some light on the importance of monitoring issues before they turn into crises. Also, image restoration theory (IRT) by Benoit (1995) focused on response strategies but did not mention crisis timing strategies such as stealing thunder. In

addition, social-mediated crisis communication theory does not mention stealing thunder (Austin, Fisher Liu & Jin, 2012). However, newer theories in the field have recognized stealing thunder as a strategy in one form or another. For example, the interactive crisis communication model, which looked at social media crises, includes stealing thunder as a concession strategy (Cheng, 2018). According to the model, concession is one of five primary crisis responses. Concession includes compensation, apology, and stealing thunder as strategies. It is likely that concession is not an ideal overarching crisis response for stealing thunder. Instead of treating it like a last resort strategy, stealing thunder should be used at a pre-crisis response stage (the base stage in the model).

On the other hand, since crises are different from each other, researchers argued that it is necessary to determine the type of channel to be used for each crisis (Park & Avery, 2016). The reach of those channels and their effectiveness could either enhance or decrease the crisis communication strategy's success. Therefore, perceived reach could be an essential variable to determine the effectiveness of the use of stealing thunder. Perceived reach is the perception of how many others one thinks a particular message has reached (Huge & Glynn, 2010). Social media is an important venue for perceived reach. Researchers have found that the number of users who read or share an article on social media websites is a variable that affects others more than ourselves (Antonopoulos, Veglis, Gardikiotis, Kotsakis, & Kalliris, 2015). Therefore, perceived reach could function as a cue that leads the individual to make one issue more important than another (Christen & Huberty, 2007). This cue might also shape how crisis information is processed when using the strategy of stealing thunder.

Studies on stealing thunder in crisis communication have primarily focused on how media personnel perceives organizations using the strategy of stealing thunder (Arpan & Pompper, 2003; Wigley, 2011). There are a few studies that had empirically tested the effect of stealing thunder on public perception (Arpan & Roskos-Ewoldsen, 2005). Regardless of

the importance of stealing thunder in crisis communication, the current study was able to draw on research studies that looked at the role of perceived reach in crisis communication in general, and in stealing thunder in particular. Perceived reach, nonetheless, could influence stealing thunder effectiveness. Theories tackling the issue of audience perception like inoculation theory and anchoring are discussed in the literature review chapter to investigate the role that perceived reach might play in affecting stealing thunder.

The research design of this study is a quantitative between-subjects experiment that investigates the roles of stealing thunder and perceived reach in crisis communication. The dependent variables in this study are perceptions of organizational credibility, satisfaction, word-of-mouth communication, and purchase intentions. The independent variables are stealing thunder and perceived reach. Mechanical Turk was used to garner a sample of residents of the United States who are also users of a particular social media platform, Twitter. The users of the website self-selected to be part of the study. This study contributes to the body of knowledge, theoretically and practically. Practically, it asserts that crisis communication methods and strategies, including a crisis timing strategy like stealing thunder, are viable and essential parts of crisis communication for any organization. In addition, the perception of the reach of the message is also essential to a company trying to communicate to its publics during a crisis. Theoretically, crisis communication research, although getting more common, has been growing behind the focus on the situational crisis communication model in the past decade. Science is evolving, and research into other dimensions of crisis communication (e.g., perceived reach in stealing thunder) will open new doors of understanding to researchers.

As for the organization of the next chapters, chapter 2 goes deeper into the definitions and introduction of stealing thunder into the field of crisis communication. It also looks into perceived reach and its importance to the field. Along with that, the review looks into the

possibility of satisfaction mediating the relationship between stealing thunder and purchase intentions, and between stealing thunder and word-of-mouth communication. Also, a theoretical framework is established to account for the hypotheses in the chapter. Chapter 3 presents the methodology used in the study of the dissertation and the operational definitions of dependent and independent variables. Chapter 3 reports the results of the study by answering the hypotheses and giving an interpretation of the findings. Chapter 6 discusses the study results, along with the limitations of the study and recommendations to practitioners and future researchers.

CHAPTER 2: LITERATURE REVIEW

This chapter gives an introduction to crisis communication research, as well as different theories and strategies used to mitigate crises. Then, it delves deeper into crisis communication in the realm of social media. After that, stealing thunder as a crisis communication timing strategy is introduced. In addition, the chapter points out the concept of perceived reach and how it might be a novel but significant addition to stealing thunder research. Theoretical frameworks to the effectiveness of stealing thunder and perceived reach in crisis communication are mentioned. Finally, the chapter concludes with a review of the concepts of satisfaction, perceived credibility of an organization, and behavioral outcomes (i.e., word of mouth communication and purchase intentions) as possible important variables in stealing thunder research.

Crisis Communication

A crisis is an unpredictable and significant event that threatens stakeholders in areas related to their health, safety, the environment, and the economy. When an organization does not deal with a crisis in a proper manner, the crisis can seriously affect the performance of the organization and can lead to negative consequences (Coombs, 2014a). Crises are inevitable. An organization should be prepared to tackle them from the very beginning (Mitroff & Pearson, 1993). As a field, crisis communication is trying to guide crisis management teams in organizations to limit the harmful effects of crises on organizations and their stakeholders (Coombs, 2014b).

Crises can either be related to the organization's operations, reputation, or both. While both types of crises can be interrelated, researchers have tried to define them independently. An operational crisis like an explosion or a product-harm recall could manifest in creating a threat to the safety of the public. On the other hand, a reputational crisis, e.g., offensive

messages or management misbehavior, does not have the same level of public-safety perception of a threat as in an operational crisis (Coombs, 2014b). A reputational crisis affects the organization when crisis information may lead stakeholders to take another look at their perception of the organization (Sohn & Lariscy, 2014; Zyglidopoulos & Phillips, 1999). However, one can argue that all crises turn to reputational crises once public perception is involved. Therefore, Sohn and Lariscy (2014) argue that there are two types of reputational crises: corporate ability (CA) crises and corporate social responsibility (CSR) crises. A corporate ability crisis is a major event that negatively affects the reputation of the organization in areas related to expertise, technological innovation, and industry leadership. A corporate social responsibility crisis is a major event that threatens the reputation of the organization in areas related to the norms, values, and social expectations of the society (Sohn & Lariscy, 2014). One can notice the differences in public perception of the reputation of an organization facing either corporate ability or corporate social responsibility crises.

Corporate ability crises affect reputation more than corporate social responsibility crises. The prior reputation of an organization facing a corporate ability crisis might help in mitigating effects of the crisis. However, when the organization faces a crisis related to its corporate social responsibility, like a moral issue that goes against society values, for example, prior reputation may not help the organization to diminish the effects of the crisis (Sohn & Lariscy, 2014). Lack of impact of reputation on social responsibility crises possibly occurs because the public might not easily forgive issues that go against the norms of the society, like a sexual assault crisis. Researchers argue that building a reputation requires time where one of its main factors is the credibility of the organization among its publics (Mahon & Wartick, 2003). A discussion on credibility in crisis communication comes later in this chapter.

With regard to strategies to manage such crises, researchers have found that proactive confession of the harmful act by the organization was the most reliable way to mitigate the harmful effects of a crisis irrespective of its type. The proactive revelation of crisis information immensely helps in reducing public anger and negative word of mouth, as well as increasing sympathy, positive attitude, and loyalty (McDonald, Sparks, & Glendon, 2010). Researchers found that reputation after dealing with a crisis in such a way is unaffected. This may be due to an increase of credibility among stakeholders as a consequence of the proactive crisis communication approach taken by the organization (Claeys & Cauberghe, 2012). Proactive crisis communication is also termed in the literature as stealing thunder.

Several theories in the field of crisis communication have emerged to provide guidance on what to say after a crisis materializes, be it operational or reputational (Avery, Lariscy, Kim, & Hocke, 2010). Of particular importance, two of the major theories that have been used extensively in crisis communication in the public relations literature are image restoration theory (IRT) (Benoit, 1995, 1997) and situational crisis communication theory (SCCT) (Coombs, 1995, 2007).

Early theories in the field of crisis communication focused on describing the type of crisis or the different stages of a crisis (e.g., theories of apologia and accounts) (Benoit, 1995; Ryan, 1982). Image restoration theory, on the other hand, focused on message options to tackle a crisis. This focus on message options has distinguished image restoration theory from previous theories in the field (Benoit, 1997). IRT poses five strategies that could be used in the event of a crisis. Those strategies are denial, responsibility evasion, offensiveness reduction, taking corrective actions, and mortification. However, later studies found no difference between taking corrective actions and mortification (Coombs, 2006a).

Nonetheless, the most studied crisis communication theory in the literature is Coombs' (1995) situational crisis communication theory (SCCT) (Kim, Avery, & Lariscy, 2011). According to Coombs and Holladay (1996), SCCT is based on attribution theory. SCCT differs from IRT in that it delves further into describing crisis response strategies, as well as offering different strategies for different crisis types. SCCT proposes that when responding to a crisis, the type of crisis should determine what type of message strategy is used (Coombs & Holladay, 1996). SCCT presumes that a crisis situation could be defined by external control and intentionality. External control refers to the cause of the crisis situation. The situation could stem from the internal or the external environment of the organization in crisis. Intentionality, on the other hand, refers to whether the organization appears to be the perpetrator of the crisis. When the crisis is found to be intentional, research shows that it may have a more significant impact on attributes of crisis responsibility (Coombs & Holladay, 2002).

A communication timing response strategy can use any of the strategies mentioned in both IRT and SCCT as long as the crisis information is revealed by the organization first. Next, we talk about crisis communication in social networking sites as they warrant particular attention because of their applicability as fast and unfiltered channels to communicate with stakeholders.

Crisis Communication in Social Networking Sites

Perhaps one of the advantages, or disadvantages, of online social networks is that news of a particular crisis can reach millions of people, without any intervention of journalists (Veil, Buehner, & Palenchar, 2011). Social networking sites have quickly become an important area to study crisis communication. In the latest study published by Pew Research Center, 90% of Americans were Internet users (2019). Meanwhile, 72% of

American adults said that they got their news via social media (Pew Research Center, 2019). Compared to older generations, younger generations are showing more active engagement in seeking crisis information using online channels (Park & Avery, 2016). Park and Avery (2016) mentioned that participants aged 18-34 stated that their primary sources of information were websites and social media networks.

Researchers have found that social media leads people to process crisis messages differently than traditional media (Liu & Kim, 2011). We see an interesting pattern when researching how the public enquires about crisis information on the internet sphere. People prefer speaking to one another and seeking information from peers and followers about a particular crisis through use of social media, instead of going directly to the website of the organization in crisis (Stephens & Malone, 2009). Content that is created by users can sometimes even work better than traditional media at giving extra information to what traditional sources of media give to the public; sometimes, news even spreads on social media before being consumed by traditional media (Veil, Buehner, & Palenchar, 2011). Lindsay (2011) contends that the fourth most popular source of information during emergencies is social media sites. Traditional media is currently using social media as a way to “backchannel” news during crises, because that is what audiences prefer and find more suitable, due to the increase of social media users online compared to traditional media websites (Sutton, Palen, & Shklovski, 2008). Therefore, because of the popularity of social media, researchers on crisis communication are turning to social media research (Etter & Vestergaard, 2015; Utz, Schultz, & Glocka, 2013).

Crisis communication research focusing on users of social media is an evolving field of study (Sjoberg, 2016). Coombs (2014b) considers social media as an important force in the “bleeding edge” research of crisis communication. Usage of social media has substantially changed how people interact with media; however, this change motivates more research and

studies in the crisis communication field (Park & Avery, 2016). Fowler (2017) advocates for the use of Twitter, for example, to communicate crises in a timely manner. Also, Eriksson (2018) in his systematic review affirms the effectiveness of the use of social media messaging in crisis communication to enhance dialogue and selecting the appropriate message for the target stockholders. He also confirms that timing of the messages matters in order to have an effective crisis communication via social media.

Stealing Thunder as a Communication Timing Strategy

Stealing thunder, i.e., proactive crisis communication, is used as a tactic for social influence where a person in crisis chooses to address negative information before another party reveals it. By stealing thunder, the damaging effect of the negative information can be mitigated or even, in some cases, eliminated (Baumeister & Vauhs, 2007). Stealing thunder, however, was not initially considered as a crisis communication strategy in the public relations field.

Literature and theories on stealing thunder originated in the law field. They focused on the effectiveness of voicing incriminating information to the jury by the defendant before the lawyers of the accuser disseminate them (Dolnik, Case, & Williams, 2003). Researchers found that stealing thunder could work even without framing a response strategy. However, the use of framing within stealing thunder improved the defendant's credibility and lessened perception of criminal responsibility. This stream of research was then adapted by the communication discipline, specifically by crisis communication researchers (Arpan & Pompper, 2003).

The crisis communication literature on stealing thunder is developing with the aim to bring a new understanding to crises' development and response (Lee, 2016). Stealing thunder during a crisis is concerned with protecting the relationship between an organization and its

publics. Public response can be a crucial factor in the success or failure of any crisis response. Therefore, an organization's relationship with its publics during and after a crisis may be influenced by its ability to control the timing of crisis information the public receives, along with its ability to reach them with new information as soon as possible (Fennis & Strobe, 2014). Thus, stealing thunder can be considered as a timing response strategy.

Already, in cases of preventable crises, researchers have recommended that organizations use an "early self-disclosure" strategy (Archer & Burleson, 1980). "Early self-disclosure" has nearly the same meaning as stealing thunder. However, it does not advise necessarily breaking the news first as long as the information is presented in the first stages of the crisis (Jones & Gordon, 1972; Wortman, Adelman, Herman, & Greenberg, 1976). Crisis information in both cases, early self-disclosure and stealing thunder, is presented as soon as possible. However, the only difference is that stealing thunder emphasizes that organizations facing crises must be the first to talk about them. Surprisingly, it may not be essential to propose image repair or response strategies like an apology as a first response if an organization could steal thunder (Kim, 2015). Researchers recommend apology as a strategy across all stages of the crisis response. However, organizations that are uncertain of the ramifications of apology should still try to reveal their crisis news first. That is because early self-disclosure would help organizations have a credible image regardless of the type of strategy used later (Coombs, 2015).

One could argue that the use of stealing thunder comes with potential pitfalls to which organizations might be attentive. Some instances can make the quick release of crisis information problematic (Arpan & Roskos-Ewoldsen, 2005). These include the potential of legal liability, the lack of time to evaluate the situation, and the potential desire to have one consistent organizational message (Fitzpatrick & Rubin, 1995). First, since the use of apology is not recommended by SCCT unless absolutely necessary for fear of legal liability, the same

could be true when stealing thunder. Legal liability, in this case, may happen because the release of information by the organization could be an indication of acknowledging the crisis or the issue. This acknowledgment might make the organization liable towards its stakeholders. Second, stealing thunder might be done hastily in order to get the information out first (Fowler, 2017). Haste might prevent the organization from systematically and methodically assessing the situation before it presents it to the public. Third, another nuisance that could be expected of stealing thunder is the fear of not developing a unified organizational message in a timely manner, due to the need to inform the public as soon as possible in order for the organization to “steal the thunder” from other third parties that might leak the information (Kaufmann, Kesner & Hazen, 1994). However, these reasons do not diminish the potential value of considering stealing thunder in crisis communication, as stressed by various researchers (Arpan & Pompper, 2003; Arpan & Roskos-Ewoldsen, 2005; Fennis & Stroebe, 2014; Lee, 2016).

For instance, apology as a crisis response strategy is being used hesitantly by organizations for fear of legal liability (Tyler, 1997). Yet, when stealing thunder, the apology strategy could be used at a later time since the essential and initial goal of an organization in crisis is to offer the crisis necessary information to the public as soon as possible. Apology can be distilled into some components like admitting responsibility, expressing concern, and compensating the victims ((Benoit & Drew, 1997; Lee & Chung, 2012; Patel & Reinsch, 2003). Therefore, organizations, whether they want to apologize or not, should consider stealing thunder as a strategy in their crisis communication. They could probably show one or more of the apology components in their stealing thunder message. Stealing thunder, moreover, makes the organization the focal point of information with any future public or press inquiries on the crisis (Arpan & Pompper, 2003).

Furthermore, being the first to break the news of the crisis also gives the organization the ability to convey to the public a tailored response. No matter what the cause of the crisis has been, the organization might want to frame the response and control the narrative by revealing the news first. Therefore, it may be worth considering stealing thunder as the first response strategy to mitigate the negative effects of crises on organizational reputation (Claeys & Cauberghe, 2012). Choosing not to steal thunder, however, might have its disadvantages.

An organization facing a crisis might choose to take an opposite approach to stealing thunder. The opposite of stealing thunder is called stonewalling strategy. Stonewalling is uncooperatively and strategically blocking or postponing the flow of crisis information (Smithson & Venette, 2013). However, use of stonewalling instead of stealing thunder strategy at the early stages of the crisis might render the use of crisis communication strategies at a later time ineffective. That is because researchers have speculated that an organization choosing a stonewalling attitude (i.e., not responding at all) during a crisis may suffer negative effects as a consequence (Lyon & Cameron, 1998).

Organizations, nevertheless, often resist being the first to relay their crisis information. Coombs (2014b) calls this the “ostrich approach,” where organizations think that if they do not talk about the crisis, nobody else will know about it. However, information might leak, especially in this age of social media (Coombs, 2014b). Organizations may not be able to hide information because a comment or a photo about a crisis posted on social networks by an employee or an insider could reveal the crisis information and rapidly increase its adverse effects on the organization. Still, few studies in crisis communication literature seek to understand how stealing thunder differs from other crisis communication strategies like stonewalling (Arpan & Pompper, 2003; Arpan & Roskos-Ewoldsen, 2005; Claeys & Cauberghe, 2012; Lee, 2016).

Previous studies on stealing thunder have demonstrated its effectiveness in crisis communication. Arpan and Pompper (2003) found that highly proactive crisis communication might positively affect the credibility of the organization. In a later study, Arpan and Roskos-Ewoldsen (2005) added that it might lead to a less severe crisis perception. Another study by Claeys and Cauberghe (2012) indicated that organizations stealing thunder may not have to use any reputation-restoring crisis strategies like an apology. Moreover, Lee (2016) studied the moderating conditions of the effects of stealing thunder like persuasiveness and attachment. The researcher found that when the public is not aware of the persuasive nature of the stealing thunder strategy, it may render the communication of the organization more effective. All of the mentioned studies emphasize that stealing thunder appears to work as a viable and effective crisis communication timing strategy.

Early research on stealing thunder found that the effectiveness of stealing thunder may vary due to many explanations. Studies in the legal context, for instance, have found that “enhancement of credibility and change of meaning” are two theoretical explanations for the efficacy of stealing thunder (Forgas & Williams, 2001; Williams & Dolnik, 2001). Stealing thunder enhances credibility because message recipients appear to believe that the organization is working towards solving the crisis by acknowledging it, and allowing its stakeholders to know about the issue regardless of the impending ramifications of the crisis (William & Dolnik, 2001). The revealer of the negative information gives an honest impression to the public, and therefore becomes more likable. Likeability correlates positively with trustworthiness (one of the main components of credibility) (O’Keefe, 2002). The public do not expect others to show themselves in a negative manner, which affects the recipients of such a message in changing their perception of the message sender to be less damaging (Claeys, Cauberghe, & Leysen, 2013).

In addition to enhancement of credibility, stealing thunder can also help change the meaningfulness of the crisis (Williams & Dolnik, 2001). Stealing thunder allows the organization to present the information in a favorable manner. Current research suggests that there is no need to frame the given information in a certain way to have an effect of stealing thunder. Consumers seek information when they are scarce and unavailable. Attention to the information and its value appears to lessen when the information is made public early.

On the contrary, when the information is not available or scarce, people give it more value, and that is why stealing thunder might help in reducing the effect of the scarcity of information (Baumeister & Vauhs, 2007). Hence, a crisis could have a different, potentially damaging, meaning, if a third party leaked it - mostly if that third party was the press (Arpan & Roskos-Ewoldsen, 2005). The press plays a significant role in elevating the magnitude of the crisis. Stealing thunder could help in mitigating the press effect.

Using stealing thunder can reduce the probability that journalists might use crisis information against the interest of the organization. When the public receives a different version of the crisis information to which they have already been exposed, they might be expected to perceive it with suspicion. The use of stealing thunder by the organization could decrease the weight of the negative information potentially presented by the press later (Williams, Bourgeois & Croyle, 1993). Researchers found that an attack from the press, after an organization uses the stealing thunder strategy, is less effective compared to an attack on an organization that does not proactively steal thunder (Easley, Bearden & Teel, 1995).

Stealing thunder has been shown to increase the credibility of those who steal thunder, which also leads the public to look at them more favorably (Dolnik, Case & Williams, 2003). The public is interested in crisis information, but they may be equally interested in who delivers the information first. In order to avoid having their public to turn to other sources of

information that might be less credible, organizations in crises must show openness and honesty in their communication (Veil, Buehner & Palenchar, 2011). A proactive approach enhances openness and honesty perceptions with both the public and the media. On the other hand, less honesty in messaging crisis communication leads to the perception that the organization has done something wrong (Seeger, 2006). In addition, public attention and motivation to know more about the incident might be greater when other parties launch future attacks on the organization, due to the organization's lack of honesty. In other words, the public would enquire and search for information about the crisis in other sources when information is not provided in an open manner by the organization in crisis. That leads to losing the ability to control the message of the crisis by the organization. Impressions can have an effect long after the crisis, depending on how the organization communicated during and after a crisis (Coombs, 2007).

A study found that practitioners in the field of communication are often afraid of having the public set the agenda. Therefore, they prefer to use the more traditional types of media where communication is based on one-to-many approaches (Gonzalez-Herrero & Smith, 2008). However, regardless of the medium, organizations can start working on setting the agenda once they were the first to divulge the crisis information. Using a reactive approach might mean that a third party has already framed the agenda. In most cases, that framing is likely a negative one.

On the other hand, stealing thunder allows the organization to give its own story using its own framing (Claeys, 2017). Stealing thunder gives the organization the opportunity to frame the negative information in the best manner possible, to decrease its negative impact (Kassin, Reddy, & Tulloch, 1990). The public who receive the message may resist the persuasive messages, not because of the negative information itself, but because the organization provides a piece of evidence as an interpretation to the negative information

before a third party leaks the crisis information with condemning evidence (Dolnik, Case & Williams, 2003). The ability to convey the information first shows the importance of stealing thunder. The entity that reveals the information first might be treated as honest and credible, which allows their message to be more persuasive (Eagly, Wood, & Chaiken, 1978; Williams et al., 1993).

It is logical to conclude that organizations do not lose a lot when they become proactive in their crisis communication by using stealing thunder strategy. Denial of rumors, on the other hand, can either have positive or negative effects. Denial may either persuade consumers to accept the untrue nature of the rumor or solidify the perception that it is true by giving it legitimacy (DiFonzo, Bordia, & Rosnow, 1994). In this case, denial could have the same effect as complete ignorance of the allegations. However, accommodative strategies may help in restoring the image of the corporation. Admitting responsibility might not be needed, but being proactive in communication has its merits (Griffin, Babin & Attaway, 1991).

The channel by which the organization steals thunder might also serve the effectiveness of crisis communication. To steal thunder through a particular channel, one of the options organizations should consider is the use of social media. That is because social media is more immediate and accessible as a channel than news media. Social media allows the organization to communicate the crisis promptly instead of depending on traditional news media to become a facilitator in releasing the story of the crisis (Coombs, 2014b). Besides, stealing thunder during crises gets less coverage in mainstream news media compared to social media (Wigley, 2011).

Arpan and Pompper (2003) argue that using stealing thunder, as a timing response strategy in crisis communication, seems more efficient than a stonewalling response in terms

of credibility and perceived severity of aggression. A stonewalling response likely shows that the organization does not care about the effect of the crisis on its publics, its main stakeholder (Lyon & Cameron, 1998). On the other hand, a stealing thunder response, even if it is to offer information only as an initial response, might work to assure the care and interest the organization gives to its publics. Therefore, stealing thunder not only allows organizations to lessen the severity of a looming crisis, but it also could give the organization more credibility in the eyes of its publics (Kim, 2015).

Next, we discuss theories that might explain why stealing thunder might be successful in a crisis.

Theories Explaining Effectiveness of Stealing Thunder

The importance of stealing thunder stems from the fact that it is a proactive strategy in response to what the public expects of actions initiated by an organization in crisis (Jaques, 2010). One of the theories that could explain stealing thunder is anchoring. Anchoring is related to the individual's adjustment heuristic that helps the sender adjust the received message, especially when facing uncertain circumstances (Epley & Gilovich, 2001).

Anchoring is a cognitive bias where individuals tend to depend mainly on the initial flow of information when making decisions (Sherif, Taub, & Hovland, 1958). The individual makes an estimate, a specific point of reference, and then adjusts from that point to make a final judgment. That specific point can be introduced to the individual by suggesting it, and then anchoring happens (Tversky & Kahneman, 1975). In other words, the individual searches for possibilities of making judgments almost equal to the anchor, and by doing this search, the anchoring point attains its goal, which is adjusting the judgment of the receiver (Wegner, Petty, Detweiler-Bedell & Jarvis, 2001). One can conclude that when an organization steals thunder, it anchors the recipients to have a closer viewpoint to that of the

organization. In usual crisis circumstances, the public sheds a negative light on the organization's crisis information that they have received from the media. When they perceive that the organization has been the first to tell of its crisis, they adjust their perception of the severity of the crisis to a less severe perception.

In addition, another theory explaining stealing thunder effectiveness is disconfirmation of expectancy theory. The disconfirmation of expectancy theory states that the public of an organization expects it to suppress any negative information about its operations (Eagly, Wood & Chaiken, 1978). However, when the organization shows the contrary, the public sees it as more trustworthy and persuasive. Likewise, persuasion research shows that when one party discloses information that is negative or working against its interests, it shows more sincerity and credibility (Eagly, Wood, & Chaiken, 1978; Williams et al., 1993). Research also shows that when an organization willingly informs the public of information against its own best interests, it appears more credible (Eagly, Wood & Chaiken, 1978). Wood and Eagly (1981) found that expectancy confirmation did not have a strong effect on credibility, but there was a weaker effect on the perceived bias of the communicator. However, researchers found that the public showed more comprehension of the message when the communication was disconfirming, rather than confirming their expectancies (Eagly & Chaiken, 1975). Perceived bias against the organization in crisis comes from the perception that what it revealed is meant to keep its reputation, and that the inclination of the organization to communicate the crisis information is compromised (Arpan & Pompper, 2003). Previous research found that stealing thunder could be used to minimize the effect of potentially harmful information (Dolnik et al., 2003; Howard, Brewer & Williams, 2011; Williams et al., 1993). Wood and Eagly (1981) found that participants were seeing the communicator as less biased. They were more persuaded by the message presented when the communicator disconfirmed their expected outcomes.

Another theory that could possibly explain the effectiveness of stealing thunder is commodity theory. Commodity theory claims that the value of the commodity depends on the extent of its availability (Brock, 1968, p. 246). Availability of the commodity depends on its scarcity and affects the effort the public will exert to acquire that commodity (Brock, 1968; Lynn, 1991). When the organization conceals crisis information, the unavailability of the information thus makes it more attractive. On the other hand, when the organization steals thunder and makes its crisis information available, that information becomes less valuable, and the public along with the media may lose interest in the crisis information (Claeys, 2017). When a third party discloses the negative information, the public might perceive that the organization is hindering the disclosure of the crisis information, according to the argument of Brock's commodity theory (Brock, 1968; Brock & Brannon, 1992). This perception, in turn, makes information more valuable and significant (Brock, 1968). The news value itself gets affected for the good of the company; a company hiding information about the crisis is more newsworthy than news about a company experiencing a crisis. The public even pays less attention to the crisis information if the organization itself revealed it. Commodity theory looks into the ability to reduce the perceived severity of a particular issue by providing a large amount of information that an organization discloses. Therefore, commodity theory shows that stealing thunder could possibly work in that when more information is provided in a fast and transparent manner, that information carries less value to the receiver (Brock & Brannon, 1992). When there is less value in the information, perceived severity also becomes less.

A fourth theory is inoculation theory. It could also explain how perception of crisis severity could be affected using stealing thunder. Crisis severity perception depends on the extent of damage the crisis has on stakeholders (Fediuk, Coombs & Botero, 2010). Inoculation theory was developed in 1961 to clarify changes in beliefs and attitudes, and how

existing notions of those beliefs and attitudes resist those changes (Godbold & Pfau, 2000). The theory is defined as a method of self-disclosure, which may lead to lessen the effects of negative information disclosed by a third party (Easley, Bearden & Teel, 1995, pp. 94). The purpose of the inoculation is to negate allegations from any third party by providing a weakened form or small dose of the negative information. When it comes to communication, this shows that a crisis could be perceived as less severe, or impactful, when the organization gives the public a dose of the crisis information before another party discloses the same information (Hoonhorst, 2017). Stealing thunder allows organizations to prepare stakeholders to face an incoming attack by inoculating them with a weaker version of that attack. Inoculating the public with a weaker version allows the organization to mitigate the perception of crisis severity, and gives it space and time to prepare even a better-calculated response strategy later, depending on the type of crisis as suggested by Coombs (2007b) (Wan & Pfau, 2004).

All in all, the theories mentioned above explain the importance and ability of stealing thunder to be treated as a crisis communication theory. In fact, these theories state that it is essential to use stealing thunder and a strategy to interact with the public along with other tactics and strategies explored by previous researchers in the field. A company or an entity in crisis tries to beat a third party in divulging its crisis information by using inoculating the public with the crisis information first. This helps the company in anchoring the conversation towards a favorable outcome rather depending on the speculations of the media. Therefore, when the stealing thunder message is sent, it shows that the company has sent this information without being forced to do it by any third part. Since the public thinks that companies usually try to suppress their crisis information, stealing thunder will lead the public to disconfirm their expectation which would show the company as more trustworthy.

Consequently, the public considers this information as a less valuable commodity which helps in lessening how the public share and react to the crisis information.

Perceived Reach

Situational crisis communication theory (SCCT) by Coombs (1995) argues that different crisis types need different message strategies. In the same vein, Park and Avery (2016) say that different crisis types also necessitate looking into different channels, taking into account their reach and effectiveness. Therefore, the perception of reach is worth considering for our questions about the effects of stealing thunder in this study.

Perceived reach is how many other individuals a person thinks have received the same information (Huge & Glynn, 2010). Gunther and Schmitt (2004) similarly defined perceived reach as whether a message appears to reach a large audience. Gunther, Christen, Liebhart, and Chia (2001) say that perceived reach could have a moderating effect on public opinion. In this regard, people often rely on their own opinions when they estimate that a particular view is prevalent among others. Further, inferences on public opinion are thought to be at least partially drawn from assumed media influence. Therefore, high perceived reach could lead to greater perceived importance of the message. With the advent of social media, perceived reach could be playing a major role in affecting perceptions of severity of crises and credibility of organizations.

Researchers on social media found that the number of users who read or share an article on social media websites is a variable that affects others more than ourselves (Antonopoulos, Veglis, Gardikiotis, Kotsakis, & Kalliris, 2015). This perception of effect on others is at least partly based on perceived reach. Perceived reach, therefore, could be a significant factor in influencing the public receiving a stealing thunder message from an organization.

Researchers argue that paying attention to messages that contain information, such as crisis information, and processing them takes an effort by selecting wanted and unwanted messages, and then discriminating between them (Deutsch & Deutsch, 1963). Based on this, seeing a message that contains crisis information might affect the way the receiver processes that information. Nevertheless, when that particular message appears to have a higher perceived reach, one might argue that perception of the reach of the message might lead to a lower depth of processing. Lower processing eventually leads to less selection between different messages, especially when other crisis messages are introduced later by other parties. Thus, high reach messages may lead to a positive attitude toward the message (Tal-Or, Cohen, Tsifti, & Gunther, 2010).

By testing for reach, Gunther (1998) says that people become attentive to information that is high reach. This means that in stealing thunder, people receiving high reach information might react in a way that is different from when they receive the same information in a low reach condition. Research has shown that individuals might be less meticulous in processing the information they receive when they anticipate that their opinions would be consistent with other individuals' opinions (Petty, Harkins & Williams, 1980).

Research suggests that audiences try to take corrective action when they perceive the media content as biased, and when they believe that this bias will have a large effect on other audience. They try to disassociate themselves from that bias because they think that media messages have a greater influence on others than on themselves, i.e., third-person effect. They take corrective actions against the perceived media bias they think affects others (Rojas, 2010). To balance the effects of a perceived media message, recipients of the message take corrective action when they perceive the information as hostile or damaging. For example, a media outlet exposing an organization in crisis might raise the audience's suspicions of media

bias towards that organization. People act reactively to media messages in order to counterbalance the perceived effects of those messages (Rojas, 2010).

Perception of bias, as well as perception of the effect of the message on others, become important predictors of public behavior. When the perceived effect of a message on others is expected, one is less likely to like or share that message, which means lower reach of the message (Chung, Munno, & Moritz, 2015). However, researchers on social media metrics noticed that the existence of those metrics had eliminated the third-person effect (Stavrositu & Kim, 2014). That is probably because the existence of social media metrics has affected the individual's perceived social distance from other receivers of the same message on social media. Hence, it is likely that when social media metrics are low, i.e., low reach, third-person effect becomes present, which means that receivers of the message perceive it to influence others more than themselves.

As a consequence, the receiver thinks that the effect of the story would be more significant on others than on himself. On the other hand, when social media metrics are high, third-person effect almost diminishes, which means that people report the same effect of the message on others and themselves. The theory of social distance corollary supports this phenomenon in that this result is due to the high level of social media metrics, i.e., high reach. Perception of high reach helped in reducing perceived social distance between others and one's self (Stavrositu & Kim, 2014). Based on this, high reach and low reach may have an effect on messages in crisis communication, depending on the perceived reach of those messages.

Interestingly, previous research on stealing thunder in crisis communication might have been unknowingly testing for reach along with the testing of stealing thunder conditions.

Perceived Reach in Crisis Communication Studies

Two studies I mention here might have ignored a moderator effect that probably should have been taken into consideration. First, Arpan and Pompper (2003) compared a police scanner in the thunder condition to a phone call from a PR official at the company in the stealing thunder condition. The thunder condition was construed in a way that likened it to the high reach condition. A police scanner, by its nature, has more people who are perceived to listen to it than a phone call. In the thunder condition, information from a police scanner may account for the low rating evaluation for credibility of the organization based on the fact that a police scanner has a much higher reach than a phone call from a public relations officer at the organization. The results of the study showed that using a medium with a low perceived reach (phone call) was more effective in terms of lessening crisis severity and increasing credibility than did the use of a medium with a high perceived reach (police scanner). However, perceived reach in social media, where the public consider themselves as active participants, could have a different effect.

Another study had a different result than Arpan and Pompper's (2003). Lee (2016) compared a press conference by the organization (stealing thunder condition) to a phone call from the third party to a journalist (thunder condition). Like the previous study, manipulation of thunder did not account for perceived reach of the phone call and the press conference. This variable might have affected the outcome of the study. Results showed that the press conference was more effective in terms of credibility after the crisis than did a phone call.

The results of both studies have been contradicting on the value of perceived reach. However, it is proposed that perceived reach might have an effect on organizational credibility as does stealing thunder, especially in the realm of social media, where the distinction between self and others dissipates as we will discuss later.

Stealing thunder means promptly communicating the crisis information to the public (Arpan & Pompper, 2003). Individuals perceive a message based on the facts it contains. They may also assess it based on other factors like source, medium used, and, as the current study suggests, perceived reach of the message. Reach seems likely to be important to the effect of stealing thunder because it could serve as a cue about the nature of the potential crisis. For example, it could indicate importance of the presented information or the source of information. An example of that is when a tweet has many re-tweets, replies, and likes, i.e., high reach, it shows that either the tweet is important or the source of the tweet is influential enough to garner such high reach.

Further, this cue might also shape how crisis information is processed. Perceived reach could function as a cue that leads the individual to assign salience to an issue (Christen & Huberty, 2007). Eventually, this may affect perceptions of satisfaction with the way an organization handles a crisis as well as organizational credibility. The relationship between stealing thunder and perceived reach, however, does not appear to have been discussed in previous studies.

Satisfaction

Satisfaction is the comparison between the expectation of the consumer and the actual presentation of the organization's product or service (Oliver, 1981). While attitude towards an organization is also essential when measuring consumers' reactions toward an organization after a crisis, researchers argue that attitude is a construct that comes before a decision. In contrast, satisfaction/dissatisfaction comes after a decision (pre-decision construct versus post-decision construct) (LaTour & Peat, 1979). Therefore, research on satisfaction has shown that perceived performance of an organization or a product affects satisfaction (Swan & Trawick, 1980).

When a crisis happens, consumers usually base their perception of an organization on their expectations of how it acts. In that regard, research shows that consumers are more satisfied with a particular organization when it does better than they expect it to be (Churchil Jr & Surprenant, 1982). This expectation shows that there is a satisfaction benchmark consumers assign to an organization. They expect that their satisfaction with the organization would go higher once it moves past that benchmark. It is probable that when an organization faces a crisis, the satisfaction benchmark that the public has assigned to the organization probably gets lower. Therefore, it is likely that when the way the organization deals with the crisis surpasses customers' expectations, this may lead to a positive effect on their satisfaction. Since stealing thunder is believed to be good for the company, satisfaction with an organization using stealing thunder as a strategy after a crisis would go higher. Likewise, an organization informing as many people as possible about its crisis might lead to a better perception of satisfaction, considering that consumers usually expect organizations to not talk about their crisis to a broader audience as they tend to keep their crisis information in-house. Consumers also believe that organizations share their crisis information with shareholders only. Based on the previous discussion on stealing thunder and perceived reach, and considering that a stealing thunder condition means divulging crisis information first while a thunder condition means that crisis information would be leaked by a third party, the following are expected:

H1: participants in a stealing thunder condition will show higher satisfaction with the way the crisis is being handled by the organization compared to participants in a thunder condition

H2: participants in a high reach condition will show higher satisfaction with the way the crisis is being handled by the organization compared to participants in a low reach condition.

H3: Participants in a high reach stealing thunder condition will show higher satisfaction towards the way the organization is handling the crisis than participants in conditions with a) low reach thunder and b) high reach thunder, and c) low reach stealing thunder.

Researchers have found that organizations that are more reputable experience higher levels of consumers' behavioral intentions than less reputed organizations after they face a crisis (Sengupta, Balaji, & Krishnan, 2015). Online communication via Twitter for example, if done effectively, could influence consumers' purchase intentions (Zhang, 2017). Crisis communication online could also be a factor in affecting consumers' attitudinal change in the long run, including purchase intentions. Positive attitudes towards the organization lead to positive intentions like word-of-mouth as well as purchase intentions (Ayeh, Au & Law, 2013).

In measuring service quality, researchers found that there was a stronger and more consistent effect of consumer satisfaction on purchase intentions than the quality of the service provided to them (Cronin, Jr & Taylor, 1992). In addition, Word-of-mouth has been found to be an outcome variable of satisfaction by many researchers (De Matos & Rossi, 2008; Molinari, Abratt, & Dion, 2008)). Therefore, the following hypotheses are proposed:

H4: Higher levels of satisfaction with the way the crisis is handled after the crisis will be correlated with higher levels of positive purchase intention.

H5: Higher levels of satisfaction with the way the crisis is handled will be correlated with a) higher levels of positive WOM and b) lower levels of negative WOM.

Perceived Organizational Credibility

Credibility is based on how the audience perceives the source; therefore, it can be described as believability (Hsieh, Hudson, & Kraut, 2011). In crisis communication literature, credibility is an essential factor in evaluating the source of the message (van Zoonen & van

der Meer, 2015). When the presenters of negative information steal thunder, they are perceived to be more credible, which in turn can lead to more favorability (Williams, Bourgeois, & Croyle, 1993).

Researchers argue that there are three dimensions of source credibility (Giffin, 1967). The first dimension is expertise or competence, which means the degree of which the receiver believes the source to know the truth. The second dimension is trustworthiness, which is the degree by which the receiver believes the source will tell the truth as it is. The third dimension is goodwill, which is the degree by which the receiver believes the source has the public's best interest at heart (Lin, Spence, & Lachlan, 2016; McCroskey & Teven, 1999). Perceived source credibility warrants additional examination, especially on social media crisis communication. Testing perceived source credibility in social media crisis communication is needed because gatekeeping is now moving from producers of the content to consumers of that content, especially within the realm of new media where information is becoming increasingly available (Haas & Wearden, 2003). When source credibility is high, it can lead to relatively higher purchase intentions (Lafferty, Goldsmith, & Newell, 2002). Based on the previous discussion on stealing thunder and perceived reach, the following are proposed:

H6: participants in a stealing thunder condition will show higher perceptions of organizational credibility compared to participants in a thunder condition.

H7: participants in a high reach condition will show higher perceptions of organizational credibility compared to participants in a low reach condition.

H8: participants in a high reach stealing thunder condition will show higher perception of organizational credibility compared to participants in conditions with a) low reach thunder and b) high reach thunder, and c) low reach stealing thunder.

The credibility of the organization, i.e., corporate credibility, has been found to influence purchase intentions of the consumers (Wang & Yang, 2010). Added to that, researchers have found that corporate credibility has more influence on consumers' purchase intentions than source credibility, be it a spokesperson of the organization (Lafferty & Goldsmith, 1999) or an endorser (Goldsmith, Lafferty & Newell, 2000).

Perceived source credibility elicits positive responses from the public (Rosenbaum & Levin, 1969). Therefore, a positive response to a persuasive message can lead to more intentions to purchase a particular product from an organization (Arpan & Roskos-Ewoldsen, 2005; Homer, 1990; MacKenzie & Lutz, 1989). Research shows that an initial positive attitude makes the public show more favorability and behavioral intentions towards an organization in a crisis than an initial negative attitude (Arpan, 2005; Arpan & Roskos-Ewoldsen, 2005; Coombs & Holladay, 2001; Ledingham, 2003; Lyon & Cameron, 1998). It is possible that preexisting credibility perceptions towards an organization affect how the public reacts to crisis messages divulged by that organization. Credibility of the organization might get affected after a crisis. However, if crisis communication was effective in improving brand credibility using stealing thunder, it is expected that this will, in turn, lead to positive purchase intentions. Therefore, the following hypotheses are proposed:

H9: Higher satisfaction with the way the crisis is handled will be associated with higher levels of credibility.

H10: Higher levels of credibility of the organization after the crisis will be correlated with higher levels of positive purchase intention.

Word of mouth communication (WOM) has been studied by early researchers to understand those variables that influence it as well as the variables that are influenced by it (Gelb & Johnson, 1995). WOM is an oral, face-to-face communication between a sender and

receiver where the sender expresses an opinion, an experience, or a feeling towards a particular product, brand name, or an organization (Arndt, 1967). Perceptions of the credibility of the organization after a crisis might have an influence on word of mouth communication. Positive word of mouth might be a result of higher perceptions of credibility, while negative word of mouth may result from lower perceptions of an organization's credibility after a crisis. The following hypothesis is proposed:

H11: Higher levels of credibility after the crisis will be correlated with (a) higher levels of positive Word-of-Mouth and (b) lower levels of negative Word-of-Mouth.

Concurrently, researchers have found that behavioral intentions could be intertwined. Molinary and Abratt (2008) found that there is a positive correlation between word of mouth and repurchasing of a product. Other previous studies have looked into the association between these two behavioral outcomes, where they argued for their correlation (e.g., De Matos & Rossi, 2008; Ewing, 2000). Therefore, the following hypothesis is proposed:

H12: Higher levels of positive purchase intention after the crisis will be correlated with (a) higher levels of positive WOM and (b) lower levels of negative WOM.

CHAPTER 3: RESEARCH METHODS

This research study examines the effects of perceived reach and stealing thunder on perceptions of organizational credibility and crisis communication satisfaction after a crisis using experimental design. This chapter gives an overview of the study's design, constructs and measurements, the data collection procedure, and sampling.

Design of the Study

To test the proposed hypotheses and research questions, the study employed a 2 (crisis communication strategy: stealing thunder versus thunder) $\times$ 2 (perceived reach: high perceived reach versus low perceived reach) between-subjects experimental design.

Stimuli Development

The study used real organizations to measure the effects of stealing thunder and perceived reach. The use of real organizations from different industrial sectors has been determined to be most appropriate by many researchers (Claeys & Cauberghe, 2012; Dawer & Pillutla, 2000; Liu, Austin, & Jin, 2011). Four organizations from four different industries were chosen for the study. Stimuli materials were created for each of the four companies. The divulgence of the crisis information was going to be via the social network site twitter.com. The crisis information was created as tweets and designed in a way that simulates the same experience a reader would go through as if they are reading about the crisis from Twitter itself (see appendix E).

Different brands (organizations) were chosen for the experiment. They represented different industries to account for the differences in consumers' experiences and perceptions. The organizations used for the study included an airline company (Southwest Airlines), a manufacturing company plant (Dow Chemical), a car company (Cadillac), and a food and

beverage company (Nestle). Crisis scenarios chosen for each company were hypothetical, but they were tested for their believability. Details of the testing are mentioned below.

For the airline company, the crisis was the disappearance of a flight from their radars. For the manufacturing company plant, the crisis tested was a chemical leak in one of their agricultural products plants. The car manufacturing company had a braking malfunction in a new car model. As for the food manufacturing company, a food poisoning incident was the crisis.

Media organizations are the first to divulge crisis information to the public. They are also the first sources of information that consumers use to get more information on crises (Austin, Fisher Liu, & Jin, 2012). Even with the presence of social media, people seek media organizations because of their influence and large readership, along with their extensive networks of reporters that could cover a whole range of industries and geographic locations. Alongside that, media organizations try to maintain their presence on social media. They garner many followers due to their reputation and ease of getting to their latest news (i.e., no subscription or need to log on to a different website) (Bastos, 2015). The New York Times is a reputable media organization with one of the highest circulation numbers in the United States, along with the Wall Street Journal and the Washington Post (State of the news media, 2019). Therefore, to account for the “thunder” condition, where another source other than the company breaks the crisis information, the “New York Times” was chosen to represent this condition. Each one of the four crisis scenarios contained four different tweets from either the company facing the crisis or a media organization (i.e., NYT). For each crisis scenario, the first tweet was from the company (stealing thunder) with a high number of likes, re-tweets, and replies (high perceived reach). The second one was from the media organization (thunder) with a high number of likes, re-tweets, and replies (high perceived reach). The third tweet was from the company (stealing thunder) with a low number of re-tweets, replies, and

likes (low perceived reach). The fourth one was from the media organization (thunder) with a low number of re-tweets, replies, and likes (low perceived reach). Appendix E shows all the tweets by the companies and the media organization that were used as stimuli in the experiment. Each one of the four industry brands had four conditions. In total, the experiment contained sixteen different conditions.

Believability and Readability of Stimuli Materials

Crisis scenarios were evaluated for their readability and believability. The crisis scenarios were tested after each participant was exposed to the stimulus. Results of readability and believability were analyzed after cleaning the data and before starting hypothesis testing. Readability was measured using two items in a seven-point bipolar scale: “In your opinion, the presentation of the information in this tweet is...” confusing/not confusing; not easy to read/easy to read (Chebat, Gelinas-Chebat, Hombourger & Woodside, 2003). Results indicate significant correlation between the four conditions presented to the participants and their readability of the tweets “ $t(939) = 138.68, p < .001, d = 6.09, 95\% \text{ CI } [6.00, 6.17]$ ”. In addition, believability was measured using a three-item seven-bipolar scale: “In your opinion, the information provided in the tweet was...” not at all believable/highly believable; not at all true/could be true; not at all acceptable/could be acceptable (Gurhan-Canli & Maheswaran, 2000). Results indicate significant correlation between the four conditions presented to the participants and their believability of the tweets “ $t(939) = 127.85, p < .001, d = 5.58, 95\% \text{ CI } [5.49, 5.67]$ ”

Measures of Independent Variables

Perceived Reach

Perceived reach is conceptually defined as the number of people one perceives to have received the same news in the same outlet (Huge & Glynn, 2010). For this study, the

researcher defines reach operationally as the number of likes, re-tweets, and replies a tweet receives using the social networking site Twitter.com. Perceived reach was manipulated by whether the perceived reach of the message was high (more likes, re-tweets, and replies to the tweet) or low (fewer likes, re-tweets, and replies to the tweet). Based on a previous study that tested the likelihood of exposure to a YouTube video (Lim & Golan, 2011), reach was measured using a 7-point Likert scale that asked the participants to rate the likelihood (1 = not likely at all, 7 = very likely) that the Twitter account followers have viewed the tweet.

Stealing Thunder

Stealing thunder is a proactive crisis communication strategy that is defined as letting the public know about your crisis information before a third party does (Coombs, 2015). Stealing thunder was manipulated to be either a proactive crisis revelation (stealing thunder) or a third-party crisis revelation (thunder). In this study, stealing thunder is operationally defined as a tweet from the organization itself, addressing a crisis that has happened before anybody else. A thunder condition is when the tweet comes from a media company talking about leaked information about the crisis the company is facing while the company has not commented on the issue yet. Effectiveness of stealing thunder manipulation was measured by asking participants about who broke the information of the crisis first: the organization itself or a media company.

Study Subjects and Procedure

Subjects were recruited for the experiment. Each participant viewed one of the sixteen different conditions that were distributed randomly and anonymously among participants. The study was hosted on the online survey website Qualtrics and then distributed online to participants in Amazon Mechanical Turk (MTurk). MTurk could help in getting data with good quality in an inexpensive and fast way (Buhrmester, Kwang, & Gosling, 2011).

Multiple responses by one subject can hardly be found in MTurk because each participant is assigned an ID that must correspond to a particular credit card number. Also, participation was limited to those concentrated in the United States because the companies used in the experiment were relevant to this sample. Researchers found that MTurk samples were more representative of the US population (in terms of gender, race, education, etc.) than other internet samples in general, and it has better generalizability than the use of undergraduate college samples (Paolacci, Chandler, & Ipeirotis, 2010).

As per the suggestion of Wetzel (1977), subjects responded to the manipulation check measures directly after being exposed to the experimental conditions. The instrument started with an instruction, which read: “The following is a tweet from Twitter.com that was re-tweeted, replied to, and liked by less than eight viewers (or more than 130,000 viewers for high perceived reach tweets). Please look at the tweet carefully and answer the questions that follow.” After showing the tweet, manipulation checks were introduced then the dependent measures.

Upon completion of the experiment, participants were offered \$0.43 US for their participation. The choice of the amount was consistent with the amount recommended to pay MTurk respondents for the time they spent on the survey. In addition, the number gave the study better ranking and visibility on the MTurk page. No identifiable information was requested, so the anonymity and confidentiality of those taking the experiment were maintained. Permission for conducting data collection was granted by the Michigan State University internal review board (IRB).

Data Cleaning and Manipulation Check Measures

The data was downloaded from Qualtrics to SPSS for cleaning and preparation for analysis. There were 1046 cases. Fourteen cases were deleted initially because they did not

have any data. In the experimental survey, two manipulation checks were conducted to confirm the success of the manipulation. The manipulation checks tested were on the independent variables stealing thunder and perceived reach. The manipulation of stealing thunder was done by asking respondents to determine the source of the tweet, whether it was the company or a media institution. As for manipulation check for perceived reach, respondents were asked to determine whether the tweet presented to them was seen by a large number or a small number of people using a 7 point Likert scale (Gunther & Liebhart, 2006).

The manipulation check question for stealing thunder asked the participants whether they believe the random tweet assigned to them originated from the company (in the stealing thunder condition) or the media (in the thunder condition). Across the four companies, 20 participants failed the manipulation check for Dow Chemical, 21 for Cadillac, 23 for Nestle, and 28 for Southwest Airlines. The total number of participants failing the stealing thunder manipulation check was 92 cases. Those who failed the stealing thunder were deleted because they were unable to identify the source of the tweet, whether it originated from the company that represented a stealing thunder condition or from the media, representing a thunder condition. Eventually, 234 participants completed the Dow Chemical survey, 237 for Cadillac, 238 for Nestle, and 231 for Southwest Airlines. The total final number of cases used for analysis was 940.

As for the manipulation check for perceived reach, researchers have defined it as the likelihood we believe others have viewed or reacted to the same information that we received (Gunther & Liebhart, 2006). Usually, researchers ask one item question to account for perceived reach, where they ask about the likelihood that others have viewed the same information. To account for the fact that Twitter allows viewers to also react to tweets, a four-item variable was created. It asked the participants to rate the likelihood (from 1 strongly disagree to 7 strongly agree) that a reader of the twitter message would re-tweet it, like it,

reply to it and view it. It is worthy to note that this four-items variable (perceived reach on Twitter) is distinguishable from other engagement scales because it asked participants about their perception of others exposed to the tweet, not what they would do themselves. The tweets had already mentioned the numbers of re-tweets, replies, and likes to give an indication of the reach of the message. Mean of the four items was later calculated to perform the analysis to determine the success of the manipulation check. For Dow Chemical, there was a significant correlation between the manipulation check for reach and the stimuli material presented at the experiment, $F(1, 232) = 81.79, p < .001$. There was also a significant correlation for Cadillac, $F(1, 235) = 80.78, p < .001$. The correlation for Nestle showed a significant correlation of the manipulation check for reach $F(1, 236) = 77.00, p < .001$. Also, there was a significant correlation for Southwest Airlines $F(1, 229) = 45.12, p < .001$. When the four companies are combined together to check for success of the manipulation check across all companies used in the experiment, there was also a significant correlation between perceived reach manipulation check and the stimuli material presented in the experiment, $F(1, 938) = 227.86, p < .001$. The success of the manipulation check for the four companies showed that we could go ahead with the analysis of the proposed hypotheses and research questions.

Measures of Dependent Variables

Credibility

Past research on credibility looked at the expertise and trustworthiness of the source as dimensions to measure credibility (Berlo, Lemert, & Mertz, 1969; Burgoon & Hale, 1984; Hovland, Janis, & Kelley, 1953; McCroskey & Richmond, 1996; Yang, Kang & Johnson, 2010). Perceptions of credibility were measured by using three 7-point scales. Anchored at numeric values of 1 (lowest credibility) and 7 (highest credibility), the items assessed the

degree to which participants felt the organization was dishonest/honest, untrustworthy/trustworthy, and insincere/sincere. These items were based on scales previously used to indicate the degree of perceived communicator character or trustworthiness (McCroskey & Young, 1981), and items previously shown to measure the degree of perceived communicator bias in research on disconfirmation of expectancies (Wood & Eagly, 1981; Arpan & Pompper, 2003).

Satisfaction

The satisfaction measure was adapted from Hon and Grunig's (1999) organization–public relationships measures. Satisfaction is defined as “the extent to which one party feels favorably toward the other because positive expectations about the relationships are reinforced” (Hon & Grunig, 1999; Sohn & Lariscy, 2014). Specific satisfaction is when participants are asked about attributes to a specific incident the organization has handled, the crisis in this case. Therefore, it was measured on a single survey item that asked respondents to indicate their satisfaction level with the way the organization was handling the crisis on a seven-point ordinal scale with 1 = extremely dissatisfied to 7 = extremely satisfied (Baker & Crompton, 2000; Reisig & Chandek, 2001; Reisig & Stroshine, 2001).

Purchase intentions

Previous researchers found that consumer satisfaction has a strong influence on purchase intentions (Cronin & Taylor, 1992). Purchase intentions assessed whether participants would purchase products produced by the organization. Participants indicated their level of agreement on a four-item seven-point Likert scale (1 strongly disagree, 7 strongly agree) based on an application of the theory of reasoned action to the prediction of behavior (Ajzen & Fishbein, 1980; Arpan & Roskos-Ewoldsen, 2003; Coombs & Holladay, 2007). The higher the score, the more likely subjects would purchase products made by the

company (Lee, 2016; Lutz, Mackenzie, and Belch, 1983). Some participants might not know if Nestle or Dow makes products that individual consumers could buy. Therefore, a short sentence on the products made by these companies was introduced before presenting the purchase intention scale (e.g., Nestle products include baby food, medical food, bottled water, breakfast cereals, coffee and tea, confectionery, dairy products, ice cream, frozen food, pet foods, and snacks).

Negative word of mouth intentions

Negative word of mouth scale assessed the degree that participants reported the likelihood that they would speak unfavorably about the organization. Participants indicated their level of agreement on a three-item seven-point Likert scale ranging from 1 = extremely unlikely to 7 = extremely likely. The higher the score, the more it is likely that they would not recommend the purchase of a product from the organization. Example items include “I would warn my friends and relatives not to buy this brand” and “I would say negative things about this brand to other people” (Alexandrov, Lilly & Babakus, 2013).

Positive word of mouth intentions

The scale used for positive word of mouth intentions measured whether participants would speak in a favorable way of the organization after its crisis information was presented to them (Alexandrov, Lilly & Babakus, 2013). Three items were presented to the participants asking them the likelihood whether they would speak positively about the company, recommend it to others, and recommend to people who might seek their advice.

Scale Reliabilities for the Dependent Variables

Table 1 shows means, standard deviations, and scale reliabilities across the four companies (Dow Chemical, Cadillac, Nestle, and Southwest Airlines). After merging cases of all companies, Table 2 shows the scales, items, factor loadings, composite reliabilities (*CR*),

and overall Cronbach Alpha (α). As presented in Table 2, the overall perceived credibility reliability scale in this study was $\alpha = .90$. Also, purchase intentions reliability scale in this study was $\alpha = .96$. Negative word of mouth reliability scale in this study was $\alpha = .92$.

Table 1
Means (M), standard deviations (SD), and Scale reliabilities (α) across the four companies

	Dow Chemical			Cadillac			Nestle			Southwest Airlines		
	M	SD	α	M	SD	α	M	SD	α	M	SD	α
Credibility	4.29	1.43	.91	5.01	1.24	.86	4.76	1.52	.91	4.83	1.53	.89
Purchase Intentions	3.01	1.37	.94	2.86	1.42	.96	4.34	1.59	.95	3.76	1.59	.97
Negative Word of Mouth	4.09	1.52	.92	3.40	1.40	.91	3.77	1.58	.91	3.17	1.51	.94
Satisfaction	3.73	1.27	na	4.55	1.22	na	4.39	1.36	na	4.09	1.35	na

Table 2Scales, Items, Factor Loadings, Composite Reliability, Cronbach's α

Construct	Items	Factor loading	CR	Overall α
Credibility (7-point, strongly disagree-strongly agree)	1. Reading the tweet, I believe that is dishonest	.916	.936	.898
	2. Reading the tweet, I believe that is untrustworthy	.908		
	3. Reading the tweet, I believe that is insincere	.910		
Satisfaction (7-point, extremely dissatisfied-extremely satisfied)	1. How satisfied are you with the way the company is handling the crisis?			
Purchase Intentions (7-point, strongly disagree-strongly agree)	1. Given the chance, I intend to purchase from	.941	.971	.960
	2. Given the chance, I predict that I will purchase from in the future	.950		
	3. It is likely that I will buy products from in the near future	.939		
	4. I expect to purchase from in the near future	.951		
Negative Word of Mouth (7-point, extremely unlikely-extremely likely)	1. Warn my friends and relatives not to buy this brand	.901	.950	.922
	2. Complain to my friends and relatives about this brand	.947		
	3. Say negative things about this brand to other people	.941		
Positive Word of Mouth (7-point, extremely unlikely-extremely likely)	1. Say positive things about this brand	.958	.981	.971
	2. Recommend this brand to others	.980		
	3. Recommend this brand to someone else who seeks my advice	.978		

CHAPTER 4: RESULTS

The experiment was undertaken to understand the effects of stealing thunder and perceived reach on online crisis communication for companies from four different sectors. This chapter overviews the results of the study presented in chapter three. It starts with an overview of the data followed by the results of hypothesis testing and research questions by looking at main effects, interaction effects, and moderation analysis.

Descriptive Analysis

The raw data from the experiment were downloaded from the Qualtrics software and imported into the statistical software package, SPSS. SPSS was used to clean the data and for analysis. Analyses were also carried out using JASP, an open-source statistical software (2020). A descriptive analysis was conducted first to analyze the dataset. The total number of collected cases was 1046. Those with unacceptable missing values and those who failed the stealing thunder manipulation check were deleted from the data file. The final number of participants with complete and valid responses was 940.

Descriptive analysis helps in summarizing the sample and noticing emergent patterns in the dataset (Kerlinger & Lee, 2000). Table 3 shows the percentages of the demographic variables. Majority of the respondents were White (74%). As for sex, 56% identified as females. All academic levels were presented in the sample. Participants' age ranged between 18 and 76 years old ($M = 35$, $SD = 11$). Table 3 represents the demographics of the sample.

Table 3
Descriptive Statistics

Demographics	Dow	Cadillac	Nestle	Southwest	All
Respondents (<i>N</i>)	234	237	238	231	940
Sex (%)					
Male	52	46.4	45.3	48.6	44.4
Female	48	53.6	54.7	51.4	55.6
Race (%)					
Hispanic or Latino	6.1	4.1	4.7	6.8	5.5
White	74.7	74.1	74.4	74.9	74.5
Black or African American	9.1	11.8	11.4	10	10.7
American Indian or Alaskan Native	1.5	0.5	0.8	0.4	.9
Asian	8.6	6.4	5.5	6.4	6.8
Native Hawaiian or Pacific Islander	0.5	0.5	0.4	0	.4
Other	1	1.4	1.2	.8	1.2
Income (%)					
Less than \$10,000	6.1	5.9	5.1	5.8	5.6
\$10,000 to \$19,999	10.6	6.8	5.1	7.5	7.4
\$20,000 to \$29,999	13.6	11.8	12.4	14.6	13
\$30,000 to \$39,999	11.6	9.1	12	11.5	11.4
\$40,000 to \$49,000	7.1	11.4	9.8	12.8	10.2
\$50,000 to \$59,000	16.2	17.3	14.5	7.5	13.8
\$60,000 to \$69,000	6.6	7.3	7.7	7.5	7.3
\$70,000 to \$79,999	5.1	8.6	8.5	8.8	7.8
\$80,000 to \$89,999	5.6	4.1	5.6	4.9	5.1
\$90,000 to \$99,999	2	6.4	3.4	5.3	4.3
\$100,000 to \$109,999	10.6	8.6	9.8	11.5	10.1
\$150,000 or more	5.1	2.7	6	2.2	4

Table 3 (Cont'd)

Demographics	Dow	Cadillac	Nestle	Southwest	All
Highest Degree (%)					
High School	7.1	9.5	7.7	11.1	8.9
Some College	25.8	22.3	22.3	27.6	24.6
Associate degree	22.7	10.9	13.7	8.9	14
Bachelor's degree	30.8	43.2	41.6	33.8	37.5
Master's degree	11.6	10.5	13.3	16.4	12.9
Doctoral degree	0.5	0.9	1.3	2.2	1.3
Professional degree (JD, MD)	1.5	1.8	0	0	.8
Employment Status (%)					
Paid employee	60.6	59.1	65.8	60.6	61.5
Self-employed	23.2	24.5	19.2	18.6	21.4
Looking for work	3.5	5.5	4.7	7.5	5.3
Retired	2.5	2.7	1.3	4	2.6
Not working (disabled)	1.5	0.9	1.7	1.8	1.5
Not working (other)	6.6	5	6.8	7.1	6.3
Prefer not to answer	3.6	1.8	0.4	0.4	1.4

As an initial step before conducting main statistical analyses, the researcher examined whether there were any significant relationships between demographic variables (i.e., sex, age, race, income, degree, and employment) and the main variables used in the research questions or hypotheses (i.e., perceived reach, stealing thunder, credibility, purchase intentions, positive word of mouth, negative word of mouth, and satisfaction). Demographic variables that might correlate with the main variables would be treated as covariates when conducting the main analysis. Using Pearson correlation analysis, none of the independent variables correlated with the demographic variables. Spearman correlation analyses showed that there were no statistically significant relationships between sex and the variables of

stealing thunder and perceived reach. However, an independent T-test found a significant difference in means of satisfaction. Therefore, main statistical analyses were conducted with controlling for sex.

The experiment consisted of 16 conditions that were assigned randomly to the participants. Table 4 shows the distribution of participants across all the conditions.

Table 4
Distribution of participants per conditions

Industries	ST	Perceived Reach		Total
		Low reach	High reach	
Manufacturing (DOW)	Stealing thunder	61	62	123
	Thunder	54	57	111
	Total	115	119	234
Auto (CDLC)	Stealing thunder	61	55	116
	Thunder	59	62	121
	Total	120	117	237
Food & Beverages (NSTL)	Stealing thunder	57	60	117
	Thunder	59	62	121
	Total	116	122	238
Airline (SWA)	Stealing thunder	57	61	118
	Thunder	57	56	113
	Total	114	117	231
Total	Stealing thunder	236	238	474
	Thunder	229	237	466
	Total	465	475	940

Main Effects of Stealing Thunder

In the experiment, there were 16 groups across all the companies, where there were four stimuli for each company. To better analyze the data collectively to measure the effects of stealing thunder and perceived reach, the groups that were similarly exposed to the same stimuli (i.e., stealing thunder/thunder, high reach/low reach) were merged with the other similar groups

in other companies. There were four groups combined (stealing thunder, thunder, high perceived reach, & low perceived reach).

A one-way ANOVA test was conducted to look at differences in means of (a) satisfaction and (b) credibility between the two groups (stealing thunder group vs. thunder group), respectively. For the manufacturing industry (Dow Chemicals), participants who read a tweet with a stealing thunder crisis scenario ($M = 3.95$, $SD = 1.46$) exhibited a higher mean value of satisfaction towards the way the crisis is being handled than did participants who read a tweet with a thunder crisis scenario ($M = 3.59$, $SD = 1.17$), $F(1, 232) = 4.41$, $p < .05$, partial $\eta^2 = .019$. Appendix D shows means, standard deviations, and effect sizes for the four industries.

The only insignificant correlation between stealing thunder and satisfaction was in the auto industry (Cadillac). Regardless, participants in the stealing thunder condition for Cadillac ($M = 4.64$, $SD = 1.44$) showed a higher satisfaction mean value than participants in the thunder condition ($M = 4.38$, $SD = 1.11$). Kendall's Tau-b correlation was run between stealing thunder and satisfaction to check if there was any association between both variables for Cadillac. There was a statistically significant correlation, $\tau_b(234) = .126$. H1 was supported.

Also, participants who read a tweet with a stealing thunder crisis scenario for Dow Chemicals ($M = 4.71$, $SD = 1.32$) exhibited higher mean value of perception of credibility than did participants who read a tweet with a thunder crisis scenario ($M = 3.88$, $SD = 1.42$), $F(1, 232) = 21.77$, $p < .001$, partial $\eta^2 = .086$. Appendix D shows the results of the four industries. H6 was supported.

Main Effects of Perceived Reach

A one-way ANOVA test was conducted to look at differences in means of (a) satisfaction and (b) credibility between the two groups (high perceived reach group vs. low perceived reach group), respectively. Participants who read a tweet with a high reach crisis scenario of a Dow Chemicals company ($M = 3.94$, $SD = 1.26$) exhibited a higher mean value of satisfaction towards the way the crisis is being handled than did participants who read a tweet with a low reach crisis scenario ($M = 3.61$, $SD = 1.41$), but it did not reach the significance level, $F(1, 232) = 3.64$, $p = .058$, partial $\eta^2 = .015$. Appendix D shows ANOVA results, means, and standard deviations across the four industries. Since the change in means differed as expected, further analysis was implemented. Point-biserial correlation was run between perceived reach and satisfaction score to look if there was any association between both variables for the Dow Chemicals company. There was a statistically significant correlation, $r_{pb}(234) = .029$, where participants with high perceived reach showed more satisfaction than participants exposed to low perceived reach, $M = 3.94$ ($SD = 1.26$) vs. $M = 3.61$ ($SD = 1.41$). The other three industries showed significant associations between perceived reach and satisfaction using point-biserial correlation except for the airline industry. Appendix D shows the results of the correlations. Therefore, H2 was supported by three of the four industries.

In addition, participants who read a tweet with a high reach crisis scenario ($M = 4.68$, $SD = 1.54$) did not differ in their higher mean value of credibility from participants who read a tweet with a low reach crisis scenario ($M = 4.70$, $SD = 1.42$), $F(1, 938) = 0.032$, $p = .86$. Results for the other industries did not support the seventh hypothesis. Appendix D shows means, standard deviations, and effect sizes for the four industries.

Interaction Effects Between Stealing Thunder and High Reach

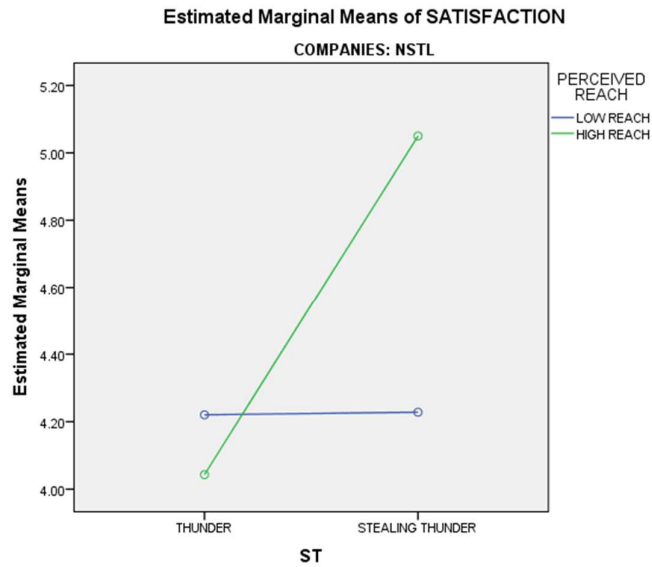
On satisfaction

A factorial analysis of variance (ANOVA) was conducted to look at the interaction effects between stealing thunder strategy in crisis communication and the dichotomous variable of perceived reach when informing them about a crisis for the satisfaction of stakeholders with the way the crisis information is communicated. Stealing thunder has two levels (stealing thunder and thunder), while perceived reach also has two levels (high reach and low reach). A moderation analysis using two-way ANOVA was conducted to see whether perceived reach moderates the relationship between stealing thunder and satisfaction with the way a company communicates its crisis information.

For the groups that were exposed to a Dow Chemical crisis message, there was no statistically significant interaction between stealing thunder and perceived reach for “satisfaction” score, $F(1,230) = 0.208, p > .05$. In addition, there was no statistically significant interaction between stealing thunder and perceived reach for “satisfaction” score among participants exposed to crisis messages for auto and airline industries, $F(1,233) = 0.156, p > .05$; $F(1,227) = 0.375, p > .05$ respectively. However, there was a significant interaction between stealing thunder and reach on participants’ satisfaction when exposed to crisis messages regarding a food and beverage industry, $F(1,234) = 0.156, p = .005$, partial $\eta^2 = .033$. Figure 1 shows the interaction effect between stealing thunder and perceived reach for a food and beverages company.

Figure 1

Interaction between stealing thunder and reach on means of satisfaction



For further analysis, the following four groups were identified and coded in the study: high reach stealing thunder (A), high reach thunder (B), low reach stealing thunder (C), and low reach thunder (D). Further analyses were done by splitting the cases by names of companies (industry). A one-way analysis of variance test (ANOVA) was conducted to analyze the differences in means of the dependent variables (satisfaction and credibility) between these four groups for each industry.

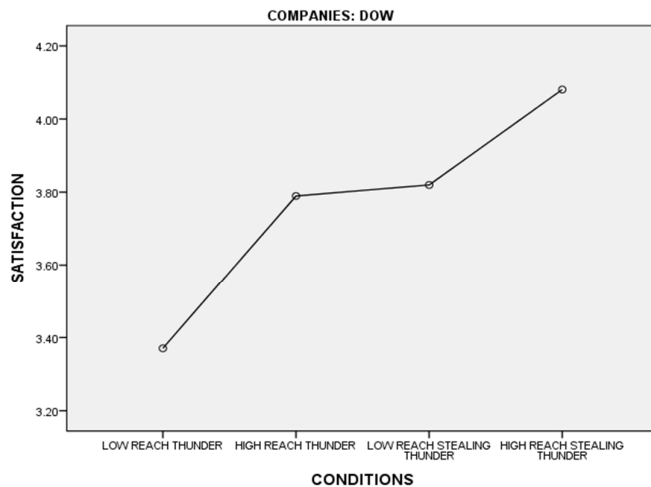
For the manufacturing industry (i.e., Dow Chemicals), each of the four condition showed its own unique mean of satisfaction: high reach stealing thunder ($M = 4.08$, $SD = 1.43$), high reach thunder ($M = 3.79$, $SD = 1.03$), low reach stealing thunder ($M = 3.82$, $SD = 1.49$), and low reach thunder ($M = 3.37$, $SD = 1.28$). One-way ANOVA analysis revealed that there were statistically significant differences in means of satisfaction among the four conditions presented with a Dow Chemicals crisis scenario. $F(3,230) = 2.804$, $p < .05$, partial

$\eta^2 = .035$. A post hoc analysis with the Tukey test showed that high reach stealing thunder (Group A) yielded higher satisfaction than did the low reach thunder (Group D) ($p < .05$).

Means and standard deviations for satisfaction of all companies are reported in Appendix A. Furthermore, Tukey test results, along with the mean differences between the high reach stealing thunder condition and the low reach thunder for each of the four industries, are presented in Appendix B. The results show that hypothesis 3 is supported for manufacturing industries (Dow Chemicals) and the food and beverages industry (Nestle), but not for the auto industry (Cadillac) and the airlines industry (Southwest Airlines) (See Appendix B).

As mentioned above, for the Dow Chemicals company, there were statistically significant differences in means of satisfaction between low reach thunder and high reach stealing thunder ($p < .05$). Figure 2 shows participants' mean of satisfaction is the lowest in the condition of low reach thunder, followed higher up by high reach thunder, low reach stealing thunder, and finally high reach stealing thunder as the highest mean for satisfaction among the four groups. All figures for the other three industries are reported in Appendix C.

Figure 2
Differences of Means of Satisfaction between the Four Groups



On credibility

A factorial analysis of variance (ANOVA) was conducted to look at the interaction effects between stealing thunder and participants' perceived reach for the credibility of the organization after the crisis. As stated above, stealing thunder has two levels (stealing thunder and thunder), while perceived reach also has two levels (high reach and low reach).

For Dow Chemicals company, there was no statistically significant interaction between stealing thunder and perceived reach for "credibility" score, $F(1,230) = 1.124, p > .05$. In addition, there was no statistically significant interaction between stealing thunder and perceived reach for "perceived credibility" score among participants exposed to crisis messages for auto, food and beverages, and airline industries, $F(1,233) = 0.215, p > .05$; $F(1,234) = 0.919, p > .05$; $F(1,227) = .425, p > .05$ respectively.

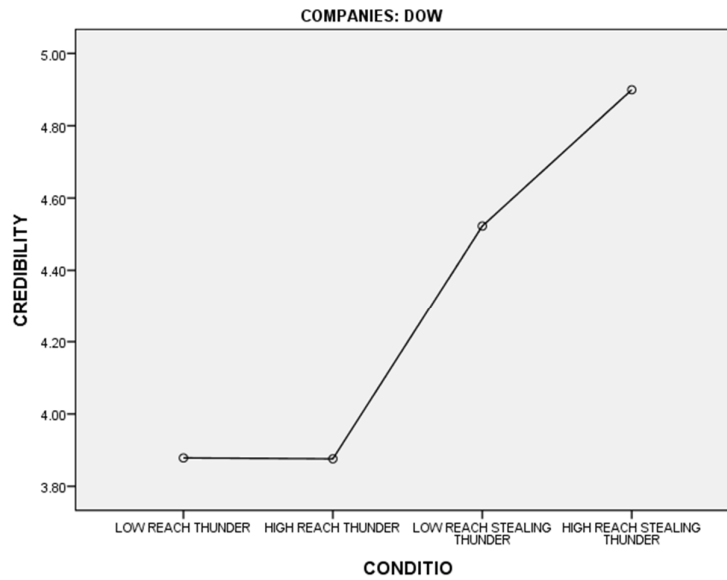
As for perceived credibility among the participants who were exposed to either of the four Dow Chemicals crisis tweets, each group showed its own mean of credibility: high reach stealing thunder ($M = 4.90, SD = 1.22$), high reach thunder ($M = 3.88, SD = 1.25$), low reach stealing thunder ($M = 4.52, SD = 1.39$), and low reach thunder ($M = 3.88, SD = 1.59$). One-way ANOVA analysis revealed that there were statistically significant differences in means of credibility among the four groups. $F(3,230) = 8.048, p < .001$, partial $\eta^2 = .095$. A post hoc analysis with the Tukey test showed that high reach stealing thunder (Group A) yielded higher credibility than did the low reach thunder (Group 4) ($p < .001$). Analysis of the other three industries yielded the same results except for the airline industry (Appendix B). Therefore, hypothesis 8 is supported except for the airline industry.

Figure 3 shows that participants' mean of credibility is almost identical in the conditions of low reach thunder and high reach thunder. However, it becomes higher in the

condition of low reach stealing thunder, and finally, high reach stealing thunder has the highest mean for credibility among the four groups. This was expected from the result in hypothesis 7

Figure 3

Differences of Means of credibility between the Four Groups



Tests of the Moderating Effect of Perceived Reach

To further investigate the moderating role of perceived reach of the correlation between stealing thunder and satisfaction, regression analysis was employed using Hayes PROCESS macro in SPSS (Hayes, 2013). For Nestle (a food and beverage company), stealing thunder and perceived reach accounted for a significant amount of variance in satisfaction with the way Nestle was handling the crisis, $R^2 = .047$, $F(2, 235) = 5.797$, $p < .005$. The results of the interaction term indicated a significant proportion of the variance in customer satisfaction, $\Delta R^2 = .032$, $\Delta F(1, 234) = 8.074$, $p = .005$, $b = .99$, $t(234) = 2.84$, $p < .005$. Examination of the interaction plot (Figure 1) showed an enhancement effect that as perceived reach is higher when the company steals thunder, customer satisfaction increased. When the company decided not to steal thunder, satisfaction means were similar whether perceived reach was high or low.

Stealing thunder and perceived reach did not account for a significant amount of variance in satisfaction in other industries. In addition, perceived reach did not act as a moderator of stealing thunder effect on credibility of the organization after a crisis in any of the four industry sectors.

Relationships Among Dependent Variables

With the dataset split by companies, Pearson's product-moment correlation was run to assess the relationship between satisfaction with the way the crisis is handled and perceived credibility of the organization after the crisis. For Dow Chemicals, there was a statistically significant, moderate positive correlation between satisfaction and credibility, $r(232) = .333, p < .001$. All the other industries reported in Table 5 show that there is a significant positive correlation between satisfaction and perceived credibility. The result shows that as satisfaction increases, the likelihood of perceiving the organization as more credible increases. Therefore, H9 was supported.

Table 5
Pearson's r correlations between satisfaction and credibility varied by industry

<i>Industries</i>	<i>N</i>	<i>Pearson's r</i>
Manufacturing (DOW)	234	.33**
Auto (CDLC)	237	.41**
Food & Beverages (NSTL)	238	.31**
Airline (SWA)	231	.32**

Note: **Correlation is significant at the 0.01 level (2-tailed).

Also, Pearson's product-moment correlation was run to assess the relationship between purchase intention after the crisis and perceived satisfaction with the organization's response after the crisis varied by industries (companies). For Dow Chemicals (a

manufacturing company), there was a statistically significant, moderate positive correlation between satisfaction and purchase intentions, $r(232) = .421, p < .001$. All the other industries reported in Table 6 show that there is a significant positive correlation between satisfaction and positive purchase intentions. The result shows that as satisfaction increases, the likelihood of having positive purchase intentions increases. Therefore, H4 was supported.

Table 6
Pearson's r correlations between satisfaction and purchase intentions varied by industry

<i>Industries</i>	<i>N</i>	<i>Pearson's r</i>
Manufacturing (DOW)	234	.42**
Auto (CDLC)	237	.28**
Food & Beverages (NSTL)	238	.48**
Airline (SWA)	231	.43**

Note: **Correlation is significant at the 0.01 level (2-tailed).

In addition, Pearson's product-moment correlation was run to assess the relationship between satisfaction with the way the crisis is handled and positive word-of-mouth of the organization. For Dow Chemicals (manufacturing company), there was a statistically significant, moderate positive correlation between credibility and positive word-of-mouth, $r(232) = .59, p < .001$, with satisfaction explaining 35% of the variation in positive word-of-mouth communication. The result shows that as satisfaction increases, the likelihood of having positive word-of-mouth communication increases. The three other industries have also reported a positive correlation between satisfaction and positive word-of-mouth (Table 7). Therefore, H5a was supported.

Likewise, Pearson's product-moment correlation was run to assess the relationship between satisfaction with the way the crisis is handled and negative word-of-mouth of the

organization. For Dow Chemicals, there was a statistically significant, moderate negative correlation between satisfaction and negative word-of-mouth, $r(232) = -.44, p < .001$, with satisfaction explaining 19% of the variation in negative word-of-mouth communication. The other three industries have also reported a statistically negative correlation between satisfaction and negative word of mouth (Table 7). The result shows that as satisfaction increases, the likelihood of having negative word-of-mouth decreases. Therefore, H5b was supported.

Table 7

Pearson's r correlations between satisfaction, and positive and negative WOM varied by industry

<i>Industries</i>	<i>N</i>	<i>Pearson's r</i>	
		<i>SAT/PWOM</i>	<i>SAT/NWOM</i>
Manufacturing (DOW)	234	.59**	-.44**
Auto (CDLC)	237	.46**	-.46**
Food & Beverages (NSTL)	238	.56**	-.49**
Airline (SWA)	231	.54**	-.47**

Note: **Correlation is significant at the 0.01 level (2-tailed); *SAT*. satisfaction; *PWOM*. positive word of mouth; *NWOM*. negative word of mouth

Varied by industries, Pearson's product-moment correlation shows that there is a significant positive correlation between perceived credibility of an organization reporting a crisis and purchase intentions for participants exposed to messages about the manufacturing company crisis, $r(232) = -.33, p < .001$. Table 8 shows the Pearson r results in the four industries. H10 was supported.

Table 8*Pearson's r correlations between credibility and purchase intentions varied by industry*

<i>Industries</i>	<i>N</i>	<i>Pearson's r</i>
Manufacturing (DOW)	234	.33**
Auto (CDLC)	237	.20**
Food & Beverages (NSTL)	238	.36**
Airline (SWA)	231	.18**

Note: **Correlation is significant at the 0.01 level (2-tailed).

A Pearson's product-moment correlation was run to assess the relationship between perceived credibility of the organization after the crisis and positive word-of-mouth of the organization. For Dow Chemicals, there was a statistically significant, moderate positive correlation between credibility and positive word-of-mouth, $r(232) = .33, p < .001$, with credibility explaining 11% of the variation in positive word-of-mouth communication. The other three industries showed a significant positive correlation, as shown in Table 9. The results show that as credibility increases, the likelihood of having positive word-of-mouth communication increases. Therefore, H11a was supported.

In addition, Pearson's product-moment correlation was run to assess the relationship between perceived credibility of the organization after the crisis and negative word-of-mouth communication about the organization. For Dow Chemicals, there was a statistically significant, moderate negative correlation between perceived credibility and negative word-of-mouth, $r(232) = -.335, p < .001$, with credibility explaining 12% of the variation in negative word-of-mouth communication. Results for other industries yielded significantly negative correlations (Table 9). The results show that as credibility increases, the likelihood

of having negative word-of-mouth communication decreases. Therefore, H11b was supported.

Table 9

Pearson's r correlations between credibility, and positive and negative WOM varied by industry

<i>Industries</i>	<i>N</i>	<i>Pearson's r</i>	
		<i>CRED/PWOM</i>	<i>CRED/NWOM</i>
Manufacturing (DOW)	234	.33**	-.34**
Auto (CDLC)	237	.39**	-.45**
Food & Beverages (NSTL)	238	.33**	-.36**
Airline (SWA)	231	.24**	-.30**

Note: **Correlation is significant at the 0.01 level (2-tailed); *CRED.* credibility; *PWOM.* positive word of mouth; *NWOM.* negative word of mouth

Pearson's product-moment correlation was run to assess the relationship between purchase intentions and positive word-of-mouth of the organization varied by industries. For Dow Chemicals, there was a statistically significant, positive correlation between purchase intentions and positive word-of-mouth, $r(232) = .70, p < .001$. The result shows that as the score for purchase intentions increases, positive word of mouth increases as well. Correlations between the same variables in other industries returned significantly positive correlations (Table 10). Therefore, H12a was supported.

In addition, Pearson's product-moment correlation was run to assess the relationship between purchase intentions and negative word-of-mouth of the organization. For Dow Chemicals, there was a statistically significant, moderate negative correlation between purchase intentions and negative word-of-mouth, $r(232) = -.564, p < .001$. Correlations for the other industries showed significantly positive correlations (Table 10). The results show

that as scores for purchase intentions increase, negative word of mouth scores decrease.

Therefore, H12b was supported.

Table 10

Pearson's r correlations between purchase intentions, and positive and negative WOM varied by industry

<i>Industries</i>	<i>N</i>	<i>Pearson's r</i>	
		<i>PI/PWOM</i>	<i>PI/NWOM</i>
Manufacturing (DOW)	234	.70**	-.56**
Auto (CDLC)	237	.62**	-.22**
Food & Beverages (NSTL)	238	.67**	-.63**
Airline (SWA)	231	.74**	-.55**

Note: **Correlation is significant at the 0.01 level (2-tailed); *CRED*. Purchase intentions; *PWOM*. positive word of mouth; *NWOM*. negative word of mouth

Table 11 summarizes the hypotheses and results.

Table 11

Results summary

Hypothesis	Results			
	Dow Chemicals	Cadillac	Nestle	Southwest Airlines
participants in a stealing thunder condition will show (H1) higher satisfaction with the way the crisis is being handled by the organization and (H6) higher perception of organizational credibility compared to participants in a thunder condition	H1 supported	supported	supported	supported
	H6 supported	supported	supported	supported
H2: participants in a high reach condition will show (H2) higher satisfaction with the way the crisis is being handled by the organization and (H7) higher perception of organizational credibility compared to participants in a low reach condition.	H2 supported	supported	supported	Not supported
	H7 not supported	Not supported	Not supported	Not supported

Table 11 (Cont'd)

Hypothesis	Results			
	Dow Chemicals	Cadillac	Nestle	Southwest Airlines
H3: Participants in a high reach stealing thunder condition will show (H3) higher satisfaction towards the way the organization is handling the crisis and (H8) higher perceptions of credibility than participants in a low reach thunder condition.	H3a supported	Not supported	supported	Not supported
	H8a Supported	Supported	Supported	supported
H9: Higher satisfaction with the way the crisis is handled will be associated with higher levels of credibility.	Supported	Supported	Supported	Supported
H4: Higher levels of satisfaction with the way the crisis is handled after the crisis will be associated with higher levels of positive purchase intention.	Supported	Supported	Supported	Supported

Table 11 (Cont'd)

Hypothesis	Results			
	Dow Chemicals	Cadillac	Nestle	Southwest Airlines
H5: Higher levels of satisfaction with the way the crisis is handled will be associated with a) higher levels of positive WOM and b) lower levels of negative WOM.	H5a supported	Supported	Supported	Supported
	H5b supported	Supported	Supported	Supported
H10: Higher levels of credibility of the organization after the crisis will be associated with higher levels of positive purchase intention.	H10 supported	Supported	Supported	Supported
H11: Higher levels of credibility after the crisis will be associated with a) higher levels of positive WOM and b) lower levels of negative WOM.	H11a supported	Supported	Supported	Supported
	H11b supported	Supported	Supported	Supported
H12: Higher levels of positive purchase intention after the crisis will be associated with a) higher levels of positive WOM and b) lower levels of negative WOM.	H12a supported	Supported	Supported	Supported
	H12b supported	Supported	Supported	Supported

CHAPTER 5: DISCUSSION

The discussion goes over the results and then talks about the implications of this study for practitioners and researchers. It then ends with the study's limitations and future directions.

Stealing Thunder

Previous studies evaluating the effectiveness of stealing thunder (as a crisis response timing strategy) have emphasized its importance in mitigating harmful effects not only in courtrooms but also in the field of crisis communication (Dolnik et al., 2003). Researchers have concluded that institutions that feel that a crisis affecting either or both their operations and reputations should be prepared to disclose their information preemptively (Coombs, 2006b). Therefore, informing journalists of a crisis is linked to the journalists' assessment of the credibility of the organization (Arpan & Pompper, 2003). Similarly, crisis communication researchers have investigated the relationship between early disclosure of the crisis information (stealing thunder) and its effect on the public's perception of the organization and the severity of the crisis (Claeys & Cauberghe, 2012).

Since stealing thunder in the field of crisis communication is about contacting customers and stakeholders fast, social media platforms have been playing a significant role in this field in current years. Several studies have postulated the importance of social media platforms for brand building, public relations, and political campaigns (e.g., Bastos, 2015; Eyrich et al., 2008). Added to that, communication tools such as social media platforms are faring better than journalists and traditional media as information dissemination means (Liu & Kim, 2011). Many recent studies (e.g., Cheng, 2016; Lindsay, 2011) have discussed the importance of social media in incorporating crisis communication strategies, including stealing thunder.

Perceived Reach

The rise of social media platforms necessitates researching the effects of perceived reach on their audiences. Perceived reach is the perception of the message receiver of the number of people who might have received the same message (Huge & Glynn, 2010). The present study was designed to assess the potential effectiveness of stealing thunder and perceived reach in mitigating crises. This study adds to the previous studies of crisis communication researchers to further our understanding of the effects of stealing thunder in crisis communication. The importance of this study stems from the premise that perceived reach is a major factor in social media use for crisis communication. It might be considered as commonsense that the more people receive your communicated messages, the easier your messages' effectiveness becomes. The audience would share, like, and reply to your social media posts. However, when it comes to crises, some organizations prefer to stonewall the crisis information or to keep the discussion as limited as possible. In other cases, if the organization going through a crisis is forced to talk about it, they would rather not convey it to the whole public. Instead, they might favor a smaller audience of their most important stakeholders. Regardless, this research shows that stealing thunder could function better with the use of a high reach medium.

The findings confirm that stealing thunder leads to more satisfaction with the way the crisis is being handled by the organization and more perceptions of organizational credibility. This result confirms previous findings on the importance of stealing thunder as a crisis communication response strategy (Arpan & Pompper, 2003; Arpan & Roskos-Ewoldsen, 2005; Cranage & Mattila, 2006; Guchait, Han, Wang, Abbot & Liu, 2019; Wigley, 2011).

Perhaps the use of perceived reach as a variable in crisis communication is novel in the field. Park and Avery (2016) have touched on the importance of using reach when

communicating crisis information to an affected audience. Perceived reach is primarily mentioned when discussing the use of social media in crisis communication. Researchers studied perceived reach to understand the effects of getting more audiences to follow messages of organizations. They have discussed the essentiality and weight of social media reach metrics such as “liking,” “sharing,” and “commenting” (Peters, Chen, Kaplan, Ognibeni, & Pauwels, 2013).

On that vein, the results of this study call attention to the importance of perceived reach in crisis communication. Results show that high perceived reach of crisis communication messages- i.e., high number of retweets, likes, and replies- could potentially lead to more positive perceptions of organizational credibility than messages with low perceived reach. For Dow and Cadillac respectively, credibility mean values for high perceived reach ($M = 4.41$ ($SD = 1.33$) & $M = 5.00$ ($SD = 1.42$) respectively) were higher than mean values for low reach ($M = 4.22$ ($SD = 1.52$) & $M = 4.81$ ($SD = 1.17$)).

High Perceived Reach Effect on Credibility

However, an unexpected result is that high reach messaging after a crisis showed an insignificant effect on perceived credibility of the organization. Companies are usually followed and discussed on social media initially because of their credibility. Therefore, one would expect that the perceived reach of a crisis message could positively affect the credibility of the organization after the crisis. However, this study shows the contrary. One reason for that might be the design of the experimental question used to test credibility. The credibility questions directed participants to answer based on their perceptions after reading a company’s crisis message on twitter. Using a three-items on a 7-point Likert scale, participants were asked whether they believed that the company is dishonest, untrustworthy, and insincere. Also, participants’ preconceived credibility perceptions of the organization

may have affected the outcome of the experiment because their answers may have reflected their earlier perceptions rather than their perceptions after reading the tweet.

On the other hand, preconceived opinions might have diminished when participants were asked about the particular characteristics of the message. For instance, after exposure to the stimuli, participants were asked about their satisfaction with the way the crisis was handled after reading the crisis twitter message using one item on a 7-point Likert scale. It might be that preconceived perception of their satisfaction with the organization's products or services did not play a role in making their decision regarding their level of satisfaction with the message itself.

Stealing Thunder with a High Perceived Reach Message

Results show that an organization's early crisis communication message (stealing thunder), combined with having high perceived reach for that message, would lead to more perceptions of credibility for the organization. It would also lead to more satisfaction with the way the organization is handling the crisis in the manufacturing and food and beverage industries (Appendix B). However, the study shows that the auto and airline industries might not be able to attain customer satisfaction after the crisis. Crises associated with such industries tend to be most probably deadly and affecting a more comprehensive range of people. While people might die from contamination or food poisoning, for example, it is still much bearable than an airline accident where the survival rate is almost negligible. Not being satisfied with these airline and auto companies might also be related to factors of control and choice. Customers can control the type of food they choose to eat, but they might not be able to control an airline accident. Customers expect auto and airline industries to run smoothly so people's lives would not be endangered.

Besides, more satisfaction with the way the crisis is handled is associated with higher levels of credibility, higher levels of positive purchase intention, higher levels of positive word-of-mouth communication (WOM), and lower levels of negative WOM communication. Also, higher levels of credibility of the organization after the crisis is associated with higher levels of positive purchase intentions, higher levels of positive word-of-mouth communication (PWOM), and lower levels of negative word-of-mouth communication (NWOM) (Tables 8 & 9). Additionally, higher levels of positive purchase intentions after the crisis are associated with higher levels of positive WOM communications and lower levels of negative WOM communications (Table 10).

Therefore, along with previous researchers in the field of crisis communication, findings confirm the effectiveness of stealing thunder. They also confirm that the utilization of perceived reach when stealing thunder could be a compelling factor in mitigating the effects of a crisis. Organizations should act fast but also ensure that their message reaches as many customers as possible. The results of this study show that a stealing thunder communication message that has a high perceived reach is more effective than a low reach stealing thunder message. Mean values for satisfaction have increased across the four industries between the low reach stealing thunder condition and the high reach stealing thunder condition (Appendix A). The same rise is also seen in the credibility mean difference between low reach stealing thunder and high reach stealing thunder across the manufacturing industry, food and beverage industry, and the auto industry, as shown in Appendix A. The results show that stealing thunder could be affected by whether the perceived reach of the message is high or low.

This study illustrates that satisfaction with the handling of the crisis, credibility of the organization after the crisis, word of mouth communication, and purchase intentions are all positively affected by stealing thunder messages that have a high perceived reach. Results

indicate that satisfaction with the way a crisis is handled (in this case, a stealing thunder high reach crisis communication message) could have a positive effect on credibility, word of mouth communication, and purchase intentions ($p < .01$) (Tables 5, 6, & 7). These results fit in with previously published literature about the use of stealing thunder in crisis communication (Arpan & Roskos-Ewoldsen, 2005; Fowler, 2017; Howard, Brewer, & Williams, 2006; Wigley, 2011). Additionally, they add the layer of perceived reach to account for a variable that might have been missing in previous stealing thunder research.

The following section looks at the theoretical and practical implications of this study with suggestions for researchers and crisis communication practitioners.

Theoretical Implications

The current study contributes to the existing literature by confirming and extending research on the stealing thunder timing strategy in crisis communication. Stealing thunder was confirmed as a valid response strategy in crisis communication. It has a positive effect on satisfaction, credibility, purchase intentions, and positive word-of-mouth communications. This study also shows that a message that is purposefully sent out to a large number of people (i.e., there is a potential high reach) could lead to better satisfaction and credibility of a company stealing thunder during a crisis. Previous studies had unintentionally included perceived reach in their experimental designs when they were testing for stealing thunder effects (Arpan & Pompper, 2003; Lee, 2016). Sharing crisis information using a police scanner or a press conference might probably have a different effect on the organization than making a personal phone call, as the current study shows.

Since perceived reach has not been formally studied in the crisis communication literature before, the researcher hopes to add to the existing literature on the effectiveness of stealing thunder by emphasizing on the importance of perceived reach when using stealing thunder in

crisis communication. Further studies using more experiments and case studies, will enrich our understanding of this phenomenon.

However, it may be surprising that there was an interaction effect between stealing thunder and perceived reach on satisfaction only in the food and beverage industry. The result showed that perceived reach matters when a company decides to steal thunder but not when it does not decide to steal thunder (Appendix A). The interaction effect for the other industries was not significant. However, the mean differences for satisfaction were still higher when a company decides to steal thunder in a high reach environment than in a low reach environment (Appendix B).

Practical/Managerial Implications

This study provides insights on how to deal with a crisis. The results of the study indicate the need for corporations to develop and extend their messages' perceived reach before crises. A high message reach will ultimately prove its value when a crisis hits. Laying low and being away from the public might not be the best precautionary option for a company trying to limit online conversation regarding its brand. It seems that being online for companies offering products and services is not an option any longer. All things considered, having a good presence, reputation, and perceived reach on social media could lead to more satisfaction and credibility by the public if, during a crisis, organizations decided to steal thunder using their high-reach social media accounts.

It is noteworthy to mention that social media differs from traditional media in its reach. Social media reach does not only depend on the number of followers or people who comment or retweet messages. It also depends on the individual's social media presence. One retweet by an influencer who has thousands of followers is not the same retweet by a follower with 100 followers. Therefore, organizations should garner as much social media attention as

possible and gauge their reach not by the number of company's followers only, but also by their reactions (whether retweeting, replying, or liking) and the number of people who follow and interact with those followers. Researchers call these types of reach as second-degree and third-degree reach (Peters et al., 2013).

Also, this study shows that social media platforms could play a major role in crisis communication. Companies should include social media platforms like Twitter in their strategy for crisis management and crisis communication plan because of their potentially high perceived reach. Being present on social media creates a high perceived reach environment and paves the way for faster and better communication with the public. Such platforms would help companies facing crises and trying to steal thunder. Depending on other sources of information dissemination like traditional media and third-party new media platforms might not be an optimal solution considering the prevalence and ease of social media use.

Limitations and Future Research

Despite the findings, the study has several limitations. The experiment might have used a better design of the stimuli. The tweets in the sixteen conditions contained only textual information. Researchers have confirmed that visuals could affect customers' perceptions of a particular brand (Delbaere et al., 2012). Probably providing additional video, image information, or both to the crisis information might have a different effect on participants. Previous research has established the positive effects of social media messages using videos and images (i.e., visual stimuli) (Ang & Lim, 2006).

Moreover, there were also issues with the participants' exposure to the stimuli during the experiment. The stimuli were shown to the participants during the experiment only, which took a short time. Longitudinal research might be needed where researchers could ask

participants to follow an organization's twitter account for some time (weeks or even more) by reading regular tweets and interactions before updating it with the crisis information in real-time.

In addition, participants' preconceived perceptions of the companies used in the experiment might have affected the outcome of the study. However, it is challenging to study crises that are not real or involving fake companies. That is because real crises tend to guarantee participants' involvement as they are more salient than hypothetical crises. Nonetheless, it would be better to confirm the results of this study, that have used real organizations, with another study using fictitious companies, where participants exposed to stimuli would not have had any prior attitudes towards the company before. Use of fictitious brands might help researchers gain a better understanding of customers' perceptions when companies use stealing thunder high reach scenarios in their crisis communication strategy.

In addition, more preparation for the inclusion of perceived reach in stealing thunder research could render better robust results. An example of that could be having pretests on what counts as a high reach condition compared to a low reach condition in terms of numbers. Also, a topic for further investigation in future studies could be to further manipulation of reach (i.e. low vs. medium vs. high) instead of treating reach as a dichotomous variable.

Despite these limitations, the current study adds theoretical and practical insights into the existing body of literature in the field of crisis communication. It also shows that social media platforms such as Twitter are essential for the success of crisis communication and to garner enough followers in order for the high reach effect to work. Messaging will be fast and concise. Consequently, cultivating social media accounts takes a long time and needs to be done cautiously, yet it still has great promises (Zhang, 2017).

In addition, one of the contributions of the study to the field of public relations research is that it adds to the current knowledge by conducting an experimental study. Research has shown that experimental studies in public relation research constitute a few percentage of studies published in public relations journals (Roshan, Warren, & Carr, 2016; Stacks, 2016).

Added to that, the language used by organizations to communicate crises matters; hence the essentiality of further studying the types of language structures that should be used by companies especially in social media websites that have limitations in messaging size. The way the crisis is being talked about also matters because language could work as a carrier of emotions and at the same time it could function as a mechanism to convey information in a practical way that could heal consumers affected by the crisis or even could show them how the company is moving forward in terms of dealing with the crisis. Therefore, language and words used in crisis communication messages could be a worthwhile endeavor for future research in the field.

CHAPTER 6: CONCLUSION

The study aimed to further develop our understanding of stealing thunder strategy in crisis communication. It also aimed to explore the relationship between stealing thunder as a proactive crisis communication strategy and perceived reach of the crisis message using social media. The study assessed their influence on consumer satisfaction and organizations' credibility after the public consumes crisis information. Interaction between the independent variables (stealing thunder and perceived reach) helped to understand their effect on consumer satisfaction and organizations' credibility, which eventually affected word-of-mouth communications and purchase intentions.

The study employed a 2 (crisis communication strategy: stealing thunder vs. thunder) $\times$ 2 (perceived reach: low vs. high) $\times$ 4 (industry (company): (manufacturing (Dow Chemicals) vs. Auto (Cadillac) vs. food and beverages (Nestle) vs. airline (Southwest Airlines))) between-subjects experimental design. Particularly, crisis communication timing strategy and perceived reach were manipulated to see the changes in satisfaction with the way the crisis was handled and the credibility of the organization after the crisis. Also, word of mouth communication and purchase intentions were assessed.

Each participant was exposed to one of 16 crisis communication messages using twitter.com as an example of an information dissemination medium. After reading the tweet, participants answered survey questions to check the success of the experimental manipulation of stealing thunder and perceived reach. Then, the experimental survey asked them about their perceptions of the company after reading about the crisis.

The results show that using a stealing thunder strategy differs from using a thunder strategy in terms of perceptions of satisfaction and credibility after a crisis. This result was consistent across the four industries. Additionally, high perceived reach was different from low perceived reach in terms of satisfaction after the crisis except for the airline industry. The

results show that using perceived reach when companies decide to steal thunder is helpful to the company. However, it does not have an effect when companies do not decide to preemptively disclose their crisis information.

APPENDICES

Appendix A: Means, and Standard Deviations in terms of Satisfaction and Credibility

Table 12

Means, and standard deviations in terms of satisfaction and credibility

		Satisfaction				Credibility			
		Low reach Thunder	High reach Thunder	Low reach Stealing thunder	High reach Stealing thunder	Low reach Thunder	High reach Thunder	Low reach Stealing thunder	High reach Stealing thunder
Dow	Mean	3.370	3.789	3.820	4.081	3.878	3.876	4.522	4.900
	S.D	1.278	1.031	1.489	1.429	1.593	1.254	1.392	1.218
CDLC	Mean	4.254	4.500	4.459	4.836	4.588	4.725	5.016	5.308
	S.D	1.010	1.198	1.373	1.500	1.127	1.376	1.188	1.413
NSTL	Mean	4.220	4.043	4.228	5.050	4.358	4.057	5.218	5.278
	S.D	1.247	1.221	1.670	1.254	1.383	1.463	1.416	1.543
SWA	Mean	3.947	3.786	4.246	4.312	4.652	4.458	5.324	4.862
	S.D	1.216	1.171	1.584	1.597	1.482	1.645	1.234	1.807

Appendix B: Satisfaction & Credibility Post Hoc Comparison between High Reach Stealing Thunder and Low Reach Thunder for the Four Companies

Table 13

Satisfaction & Credibility Post Hoc comparison between high reach stealing thunder and low reach thunder

	Satisfaction			Credibility		
	Mean Difference	SE	P _{tukey}	Mean Difference	SE	P _{tukey}
DOW	.710	.247	.022*	1.021	.254	.000*
CDLC	.582	.239	.075	.720	.240	.016*
NSTL	.830	.249	.005*	.920	.267	.004*
SWA	.364	.260	.500	.210	.288	.884

* $p < .05$

Appendix C: Differences of Means of Satisfaction & Credibility between the Four Groups

Dow Chemicals

Figure 4

Differences of Means of Satisfaction with Dow between the Four Groups

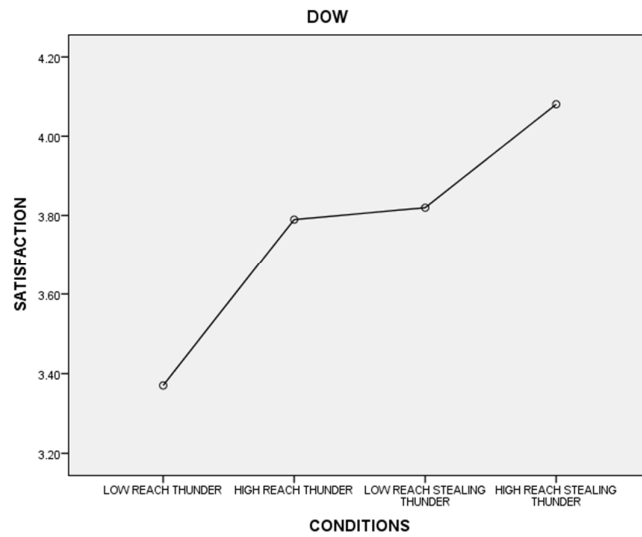
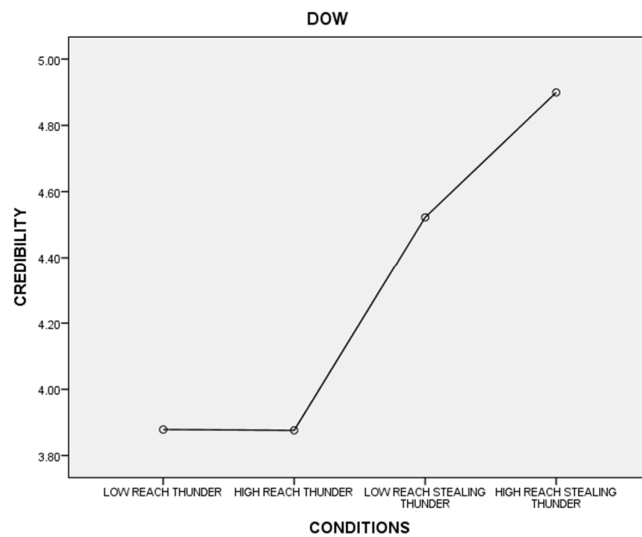


Figure 5

Differences of Means of credibility of Dow between the Four Groups



Cadillac

Figure 6

Differences of Means of Satisfaction with Cadillac between the Four Groups

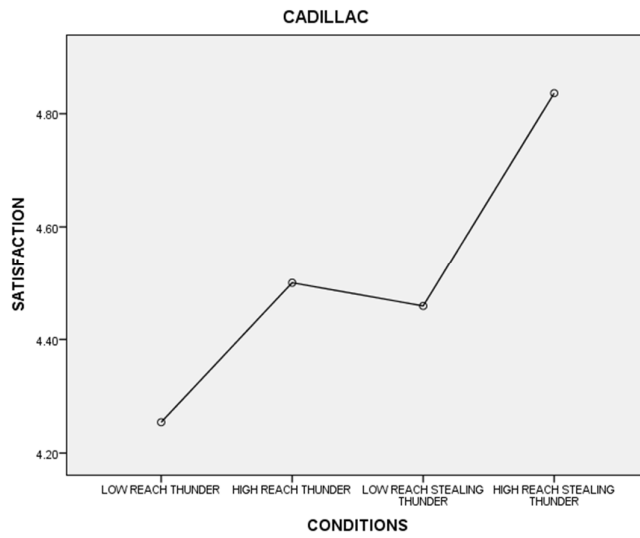
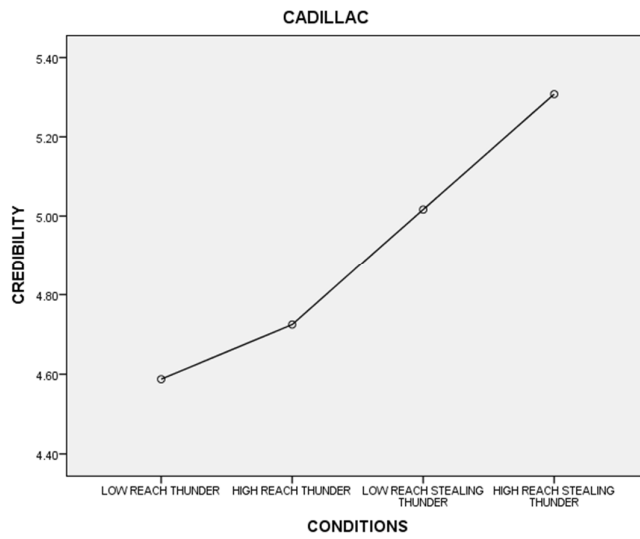


Figure 7

Differences of Means of credibility of Cadillac between the Four Groups



Nestle

Figure 8

Differences of Means of Satisfaction with Nestle between the Four Groups

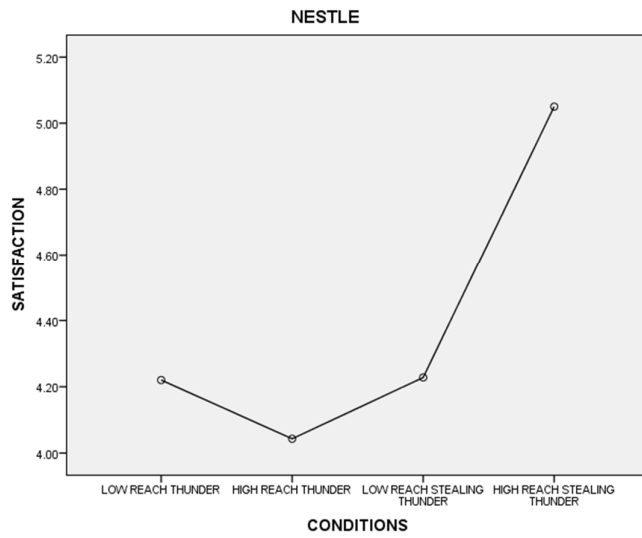
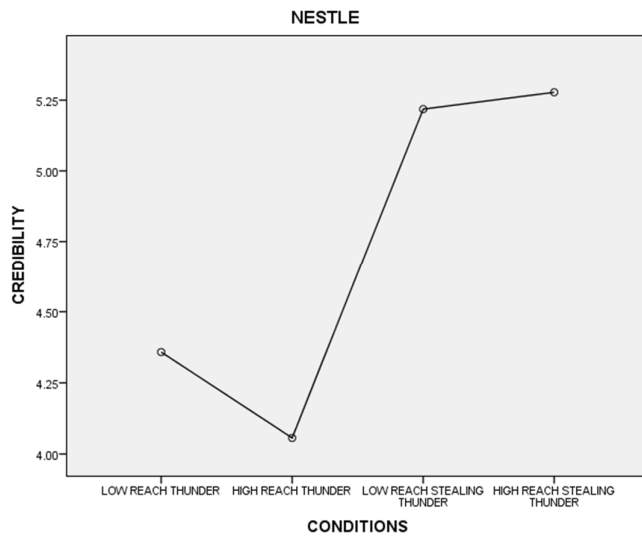


Figure 9

Differences of Means of credibility of Nestle between the Four Groups



Southwest Airlines

Figure 10

Differences of Means of Satisfaction with SWA between the Four Groups

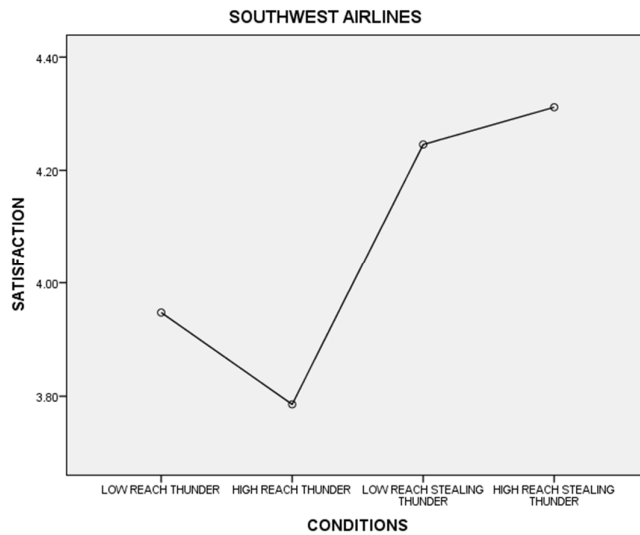
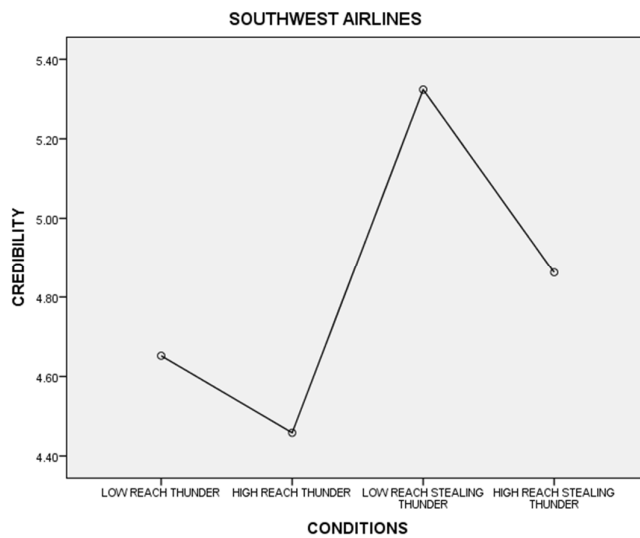


Figure 11

Differences of Means of credibility of SWA between the Four Groups



Appendix D: Satisfaction & Credibility Means, Standard Deviations, and Effect Size for the Four Industries.

1. Stealing Thunder

Table 14

Satisfaction & credibility means, standard deviations, and effect size

		Satisfaction				Credibility			
		<i>M</i>	<i>SD</i>	<i>F</i>	partial η^2	<i>M</i>	<i>SD</i>	<i>F</i>	partial η^2
Dow	Thunder	3.59	1.17	4.41*	.019	3.88	1.42	21.77*	.086
	Stealing thunder	3.95	1.46			4.71	1.32		
Cadillac	Thunder	4.38	1.11	2.39	.010	4.66	1.26	5.93*	.037
	Stealing thunder	4.64	1.44			5.15	1.30		
Nestle	Thunder	4.13	1.23	8.42*	.034	4.20	1.43	30.84*	.116
	Stealing thunder	4.65	1.52			5.25	1.48		
Southwest	Thunder	3.87	1.19	4.97*	.021	4.56	1.56	6.61*	.028
	Stealing thunder	4.28	1.58			5.09	1.57		

* $p < .05$

2. Perceived Reach

Table 15

Satisfaction & credibility means, standard deviations, and effect size

		Satisfaction					Credibility			
		<i>M</i>	<i>SD</i>	<i>F</i>	partial η^2	<i>r_{pb}</i>	<i>M</i>	<i>SD</i>	<i>F</i>	partial η^2
Dow	Low reach	3.61	1.41	3.64	0.15	.029*	4.22	1.52	1.03	.004
	High reach	3.94	1.26				4.41	1.33		
Cadillac	Low reach	4.36	1.21	3.24	.014	.117*	4.81	1.17	1.31	.006
	High reach	4.66	1.35				5.00	1.42		
Nestle	Low reach	4.22	1.46	3.00	.013	.112*	4.78	1.46	.382	.002
	High reach	4.54	1.33				4.66	1.62		
Southwest	Low reach	4.10	1.41	.038	.000	-.013	5.00	1.40	2.36	.010
	High reach	4.06	1.43				4.83	1.58		

* $p < .05$

Appendix E: Stimuli

1. Dow Chemicals

Figure 12

Low reach thunder tweet for Dow

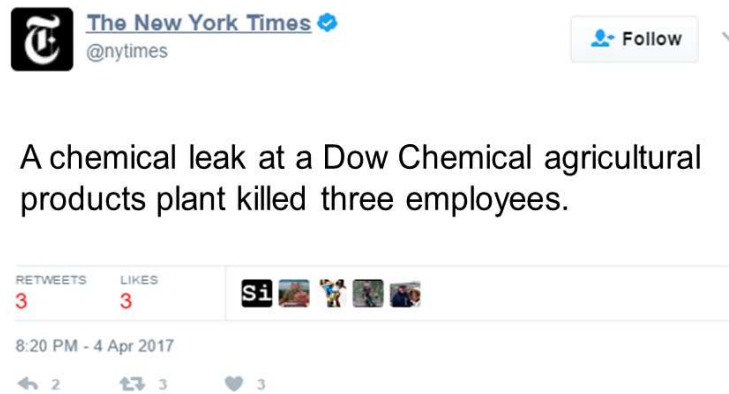


Figure 13

Low reach stealing thunder tweet for Dow



Figure 14
High reach thunder tweet for Dow



Figure 15
high reach stealing thunder tweet for Dow



2. Cadillac

Figure 16

Low reach thunder tweet for Cadillac



Figure 17

Low reach stealing thunder tweet for Cadillac



Figure 18
High reach thunder tweet for Cadillac



Figure 19
High reach stealing thunder tweet for Cadillac



3. Nestle

Figure 20

Low reach thunder tweet for Nestle



Figure 21

Low reach stealing thunder tweet for Nestle



Figure 22

High reach thunder tweet for Nestle



Figure 23

High reach stealing thunder tweet for Nestle



4. Southwest Airlines

Figure 24

Low reach thunder tweet for Southwest Airlines



Figure 25

Low reach stealing thunder tweet for Southwest Airlines



Figure 26
High reach thunder tweet for Southwest Airlines



Figure 27
High reach stealing thunder tweet for Southwest Airlines



Appendix F: Consent Form

Researchers at Michigan State University are conducting a research study about different communication methods. We hope that results will increase our knowledge about the relationship between best communication methods and the attitudes of consumers towards a company in a crisis time.

Background information and Procedures:

During this study, you will be asked to read a series of different communication methods that are used by a company in crisis and respond to questions about your attitude toward each communication scenario.

Benefits and Risks of Being in the Study:

There are no obvious physical, legal, or economic risks associated with participating in this study. You do not have to answer any questions that you do not wish to answer.

Cost and Compensation:

You will be compensated \$0.43 cents for participating in this study.

Confidentiality:

Your privacy will be protected to the maximum extent allowable by law. No personally identifiable information will be reported in any research product. Moreover, only trained research staff will have access to your responses. With these restrictions, results of this study will be made available to you upon request.

Voluntary Nature of the Study:

Participation in this study is voluntary, and you may choose not to participate at all, or you may refuse to participate in certain procedures or answer certain questions or discontinue your participation at any time without penalty or loss of benefits. You may also withdraw your consent to participate at any time without penalty.

Contacts and Questions:

This is a scientific study being conducted by Abdullah Alriyami, a PhD student in the Media and Information Studies Program at Michigan State University. If you have any questions about this study, such as scientific issues, how to do any part of it, or to report an inconvenience, please contact Mr. Alriyami via mail at 577 Communication Arts and Sciences Building, East Lansing, MI 48824, email at alriyami@msu.edu. By clicking to the next page, you agree to participate in this study.

Appendix G: Survey

Part A:

A. The following is a tweet from Twitter.com that was re-tweeted, replied to, and liked by less than 8 viewers. Please look at the tweet carefully and answer the questions that follow.
(One of eight low perceived reach random stimuli is shown)

B. The following is a tweet from Twitter.com that was re-tweeted, replied to, and liked by more than 130,000 viewers. Please look at the tweet carefully and answer the questions that follow.

(One of eight high perceived reach random stimuli is shown)

Part B:

- Based on the tweet you have seen, please choose the likelihood that this twitter account followers have reacted the following to the tweet:

	1 Extremely unlikely	2	3	5	6	7 Extremely likely
Re-tweeted it						
Liked it						
Replied to it						
Viewed it						

- Reading the tweet, I believe that [name of company] is:

	1 Strongly agree	2	3	5	6	7 Strongly disagree
Dishonest						
Untrustworthy						
Insincere						

3. To ensure you are paying attention to the survey, please click on "strongly disagree" among the following choices:

	Strongly agree	Agree	Somewhat agree	Neither agree nor disagree	Somewhat disagree	Disagree	Strongly disagree
	☐	☐	☐	☐	☐	☐	☐

4. In your opinion, the presentation of the information in this tweet is:

Confusing	☐	☐	☐	☐	☐	☐	☐	Not confusing
Not easy to read	☐	☐	☐	☐	☐	☐	☐	Easy to read

5. In your opinion, the information provided in the tweet was:

Not at all believable	☐	☐	☐	☐	☐	☐	☐	Highly believable
Not at all true	☐	☐	☐	☐	☐	☐	☐	Could be true
Not at all acceptable	☐	☐	☐	☐	☐	☐	☐	Could be acceptable

6. Dow Chemicals manufactures plastics, chemicals, and agricultural products [Nestlé's products include baby food, medical food, bottled water, breakfast cereals, coffee and tea, confectionery, dairy products, ice cream, frozen food, pet foods, and snacks]. Please rate your agreement with the following statements about the company:

Given the chance, I intend to purchase from [Company name].

Given the chance, I predict that I will purchase from [Company name] in the future.

It is likely that I will buy products from [Company name] in the near future.

I expect to purchase from [Company name] in the near future.

7. Reading the tweet that broke the crisis information, who wrote that tweet?

- ☐ [Company name]
- ☐ New York Times

8. *Please rate how likely you would do the following actions regarding this company:*
Say positive things about the brand

Recommend this brand to others

Recommend this brand to someone else who seeks my advice

9. *Please rate how likely you would do the following actions regarding this company:*
Warn my friends and relatives not to buy this brand

Complain to my friends and relatives about this brand

Say negative things about this brand to other people

10. *How satisfied are you with the way the company is handling the crisis?*

Extremely dissatisfied

Extremely satisfied

(1)

(7)

Part C:

Are you Spanish, Hispanic, or Latino or none of these?

- ☐ Yes
- ☐ None of these

Choose one or more races that you consider yourself to be:

White

Black or African American

American Indian or Alaska Native

Asian

Native Hawaiian or Pacific Islander

Other _____

Information about income is very important to understand. Would you please give your best guess? Please indicate the answer that includes your entire household income in (previous year) before taxes:

- ☐ Less than \$10,000
- ☐ \$10,000 to \$19,999
- ☐ \$20,000 to \$29,999
- ☐ \$30,000 to \$39,999
- ☐ \$40,000 to \$49,999
- ☐ \$50,000 to \$59,999
- ☐ \$60,000 to \$69,999
- ☐ \$70,000 to \$79,999
- ☐ \$80,000 to \$89,999
- ☐ \$90,000 to \$99,999
- ☐ \$100,000 to \$149,999
- ☐ \$150,000 or more

What is the highest level of school you have completed or the highest degree you have received?

- ☐ Less than high school degree

- High school graduate (high school diploma or equivalent including GED)
- Some college but no degree
- Associate degree in college (2-year)
- Bachelor's degree in college (4-year)
- Master's degree
- Doctoral degree
- Professional degree (JD, MD)

What is your sex?

- Male
- Female

What is your year of birth?

Which statement best describes your current employment status?

- Working (paid employee)
- Working (self-employed)
- Not working (temporary layoff from a job)
- Not working (looking for work)
- Not working (retired)
- Not working (disabled)
- Not working (other) _____
- Prefer not to answer

Thank you

Please note that the crisis situation is hypothetical.

Please help the researcher by noting any comments or thoughts you have had while taking the survey:

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