2011

Corporate apology and crisis communication; The effect of responsibility admittance and sympathetic expression on public anger relief

Surin Chung

Iowa State University

Follow this and additional works at: https://lib.dr.iastate.edu/etd

Part of the Communication Commons

Recommended Citation

Chung, Surin, "Corporate apology and crisis communication; The effect of responsibility admittance and sympathetic expression on public anger relief" (2011). Graduate Theses and Dissertations. 10248.
https://lib.dr.iastate.edu/etd/10248

This Thesis is brought to you for free and open access by the Iowa State University Capstones, Theses and Dissertations at Iowa State University Digital Repository. It has been accepted for inclusion in Graduate Theses and Dissertations by an authorized administrator of Iowa State University Digital Repository. For more information, please contact digirep@iastate.edu.
Corporate apology and crisis communication: The effect of responsibility admittance and sympathetic expression on public anger relief

by

Surin Chung

A thesis submitted to the graduate faculty in partial fulfillment of the requirements for the degree of

MASTER OF SCIENCE

Major: Journalism and Mass Communication

Program of Study Committee:

Suman Lee, Major Professor

Sela Sar

Mack Shelley

Iowa State University

Ames, Iowa

2011

Copyright © Surin Chung, 2011. All rights reserved.
TABLE OF CONTENTS

LIST OF FIGURES........................................................................................................iv

LIST OF TABLES........................................................................................................v

ABSTRACT.....................................................................................................................vi

CHAPTER 1. INTRODUCTION......................................................................................1

CHAPTER 2. LITERATURE REVIEW...........................................................................4

  Crisis and crisis response strategy.................................................................4

  Anger relief.........................................................................................................7

  Components of apology.................................................................................10

  Responsibility.................................................................................................12

  Sympathy.......................................................................................................15

  Four types of apology...............................................................................18

  Pre-existing attitudes...............................................................................22

CHAPTER 3. METHODOLOGY.................................................................................24

  Participants.................................................................................................24

  Procedures.................................................................................................25

  Manipulation of independent variables...............................................26
<table>
<thead>
<tr>
<th>Chapter</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Dependent measures</td>
<td>27</td>
</tr>
<tr>
<td></td>
<td>Pre-existing attitudes</td>
<td>28</td>
</tr>
<tr>
<td>4</td>
<td>RESULTS</td>
<td>30</td>
</tr>
<tr>
<td></td>
<td>Sample Characteristics</td>
<td>30</td>
</tr>
<tr>
<td></td>
<td>Descriptive statistics</td>
<td>32</td>
</tr>
<tr>
<td></td>
<td>Baseline pre-existing attitudes</td>
<td>35</td>
</tr>
<tr>
<td></td>
<td>Baseline anger</td>
<td>37</td>
</tr>
<tr>
<td></td>
<td>Hypotheses testing</td>
<td>38</td>
</tr>
<tr>
<td></td>
<td>Research question</td>
<td>40</td>
</tr>
<tr>
<td>5</td>
<td>DISCUSSION</td>
<td>42</td>
</tr>
<tr>
<td></td>
<td>Significance of the study</td>
<td>42</td>
</tr>
<tr>
<td></td>
<td>Limitations and suggestions for future study</td>
<td>48</td>
</tr>
<tr>
<td></td>
<td>REFERENCES</td>
<td>50</td>
</tr>
<tr>
<td>A</td>
<td>INSTITUTIONAL REVIEW BOARD APPROVAL</td>
<td>58</td>
</tr>
<tr>
<td>B</td>
<td>A NEWS ARTICLE</td>
<td>59</td>
</tr>
<tr>
<td>C</td>
<td>FOUR TYPES OF CORPORATE APOLOGY</td>
<td>61</td>
</tr>
<tr>
<td>D</td>
<td>QUESTIONNAIRE</td>
<td>65</td>
</tr>
</tbody>
</table>
ACKNOWLEDGEMENTS
LIST OF FIGURES

Figure 1. Four types of corporate apology......................................................... 20

Figure 2. Interaction effect of responsibility and sympathy on anger relief.............. 41
LIST OF TABLES

Table 1. Sample characteristics.................................................................31

Table 2. Descriptive statistics.................................................................33

Table 3. One-way ANOVAs for attitudes toward the oil industry and B.P........36

Table 4. One-way ANOVA for anger after reading the news article.................37

Table 5. ANCOVA for the effects of responsibility and sympathy on anger relief...39
This study investigates how corporate apologies can relieve the level of public anger under a crisis situation. A total of 147 undergraduate students read a fictional news story depicting an oil spill accident and they read one of four corporate apology statements as a combination of responsibility admittance (active vs. passive) and sympathetic expression (high vs. low). People’s anger levels toward the company were measured before and after reading apology statement and compared. This study found that an apology statement with active responsibility is more likely to relieve public anger than that with passive responsibility. However, there was no significant difference on public anger relief between the group who read highly sympathetic apology and the one who read low sympathetic apology. There was no interaction effect between responsibility admittance and sympathetic expression of corporate apology on public anger relief.
Chapter 1

INTRODUCTION

Organizations are vulnerable to unpredictable crises in their relationship with the public. For example, product recall, disasters or accidents caused by a manufacturing plant, or a CEO’s corruption are some of those crisis situations organizations can experience. Whenever crisis happens, organizations usually apologize for the situation, admit their mistakes directly or indirectly, and ultimately try to relieve public anger to protect the organization’s reputation. Therefore, how to apologize to the public during crisis situations is an important issue to organizations.

It is widely accepted that an apology is a basic conflict resolution technique serving a crucial social lubrication role (Frantz & Bennigson, 2005). Several studies show that victims feel less angry and have positive impressions toward an offender when they receive an apology (Ohbuchi, Kameda, & Agarie, 1989). A sincere apology also allows the offender not to be required to receive further rehabilitative punishment and alleviates aggression tendencies of the victims toward the offender (Frantz & Bennigson, 2005; Kim, Ferrin, Cooper, & Dirks, 2004; Schlenker & Darby, 1981). Thus, many people utilize an apology as a self-presentation strategy to reduce or resolve interpersonal conflict (Frantz & Bennigson, 2005).

The strategic and effective apology helps organizations deal with various crisis situations. When organizations face problems such as technical-error accidents, human-error accidents, and/or organizational misdeed, effective apologies play a significant role in relieving the public’s anger and resolving a conflict on the issues. For example, Patel
and Reinsch (2003) mentioned that apologies increase the victim’s propensity to forgive in a corporate crisis. Goodwin and Ross (1992) also found that apologies from companies raised consumers’ satisfaction and the perceived fairness of responses to service failures. Similarly, Coombs and Holladay (1996) maintained that an apology serves to protect an organizational reputation after a crisis when organizations adopt a strategic apology response.

All apologies, however, do not have “an ideal and equal” strategic value in a crisis situation. Strategic values of apologies are affected by numerous variables such as accepting responsibility, expression of remorse/sympathy, and compensation (Benoit & Drew, 1997; Cohen, 1999; Fuchs-Burnett, 2002; Patel & Reinsch, 2003). Several studies also indicated that the extent to which an apology contains such components determines the level of forgiveness it achieves, level of anger victims feel, and level of organizational reputation (Combs & Holladay, 2008; Darby & Schlenker, 1982; Scher & Darly, 1997; Tedesci & Riordan, 1981). Accordingly, if an apology does not include proper components, it could be perceived as superficial and insincere.

In this study, two components were selected as important determinants on the effectiveness of corporate apology: (1) responsibility admittance and (2) sympathetic expression. According to Schlenker (1980), “apologies allow an actor to admit blameworthiness for an undesirable event but also attempt to obtain a pardon from the audience by convincing the latter that the event should not be considered a fair representation of what the actor is really like as a person” (p. 154). Robbennolt (2003) mentioned that an apology is viewed as sincere when the offender admits responsibility and shows sympathy for victims. Nadler and Liviatan (2006) also argued that an apology
statement with both responsibility admittance and sympathetic expression is critically important in a crisis situation. For these reasons, this study focuses on how an organization’s apology statements with variations of responsibility admittance and sympathetic expression relieve public anger toward the organization in a crisis situation.
CHAPTER 2

LITERATURE REVIEW

Crisis and crisis response strategy

Scholars have paid much attention to the crisis situations that organizations may face and defined it in many ways. According to Barton (1993), “a crisis is a major, unpredictable event that has potentially negative results, which may significantly damage an organization and its employees, products, services, financial condition, and reputation” (p. 2). Fearn-Bank (2001) defines a crisis as “a major occurrence with a potentially negative outcome affecting an organization as well as its publics, services, products, and/or good name” (pp. 479-485). Coombs (2007) also defines a crisis as “the perception of an unpredictable event that threatens important expectancies of stakeholders and can seriously impact an organization’s performance and generate negative outcomes” (pp. 2-3). While different scholars provide their own definitions on a crisis, it is commonly agreed that a crisis event creates unpredictable and negative impacts on organizations (Coombs & Holladay, 2010).

Communication is the essence of dealing with crisis situations (Coombs & Holladay, 2010). Crises create emergency situations that require rapid and accurate information (Holladay, 2009). Through communication, the information is collected, processed, and shared with others to prevent or lessen the negative outcomes of a crisis (Coombs & Holladay, 2010). According to Coombs and Holladay (2010), “crisis communication can be defined broadly as the collection, processing, and dissemination of information required to address a crisis situation” (p. 20).
Crisis communication research has focused on how to respond to a crisis situation and create messages (Kim, Avery, & Lariscy, 2009). For instance, several scholars pointed out that organizations acquire the credibility and trustworthiness in crisis situations when they strive to respond actively and consistently to the public with information (Dutton & Dukerich, 1991; Huang & Su, 2009; Sillince, 2002). Coombs and Holladay (1996) also mentioned that crisis response strategies serve to protect a reputation after a crisis because an improper crisis response makes the situation worse. For example, the British Petroleum CEO Tony Hayward upset the public by making insensitive comment, “I want my life back,” during the Gulf oil spill crisis. When organizations fail to address a crisis, the public considers the organization to not be in control of the situation and/or as responsible for the accident (Holladay, 2009). An organization’s response to a crisis is a main agenda of crisis communication (Huang & Su, 2009).

Researchers identified and analyzed a variety of crisis responses. For example, Benoit (1997) offered five categories of crisis response strategy in the theory of image restoration: (1) denial; (2) evasion of responsibility; (3) reducing offensiveness of event; (4) correction action; and (5) mortification. According to Benoit (1997), the theory of image restoration focuses on what an organization can say during a crisis. When organizations use denial or evasion of responsibility strategies, they reject or reduce accused’s responsibility for the act in question. Reducing offensiveness is to reduce the perceived offensiveness of the act attributed to the accused, thereby allowing organizations to stress good traits, act less offensive, reduce the credibility of an accuser, and reimburse victims. In corrective action strategy, organizations promise to correct the
current problem as well as to prevent future problems. Finally, mortification strategy tries to restore an image by apologizing and asking forgiveness (Benoit, 1997).

Researchers have emphasized the advantages of apology among a variety of crisis responses (Benoit, 1995; Benoit & Drew, 1997). For example, Thomas and Millar (2008) mentioned that apologies are an important part of social discourse and have a function of reducing anger. When actors admit their responsibility by making an apology, people tend to reduce the amount of punishment against the actors (Darby & Schlenker, 1989; Ohbuchi et al., 1989). Offering an apology leads to more effective reputation restoration than other response strategies in crisis situations (Benoit, 1995; Benoit & Drew, 1997; Bradford & Garrett, 1995; Clays, Cauberghe, & Vyncke, 2010; Dean, 2004). Apologies can also play a significant role in how organizations respond to an angry public and criticisms to defend organization’s image in the crisis (Benoit, 1995). Indeed, an apology has various benefits in a crisis, which makes it a frequently preferred crisis response strategy (Bradford & Garrett, 1995; Dean, 2004).

Among the functions of an apology, anger relief merits special attention in crisis communication. Research has shown that anger has a strong impact on judgment and decision-making (Lerner & Tiedens, 2006). Anger can trigger behaviors such as negative purchase intentions, negative word of mouth intentions, and reducing investment intentions (Coombs & Holladay, 2007; Jorgensen, 1996). Researchers also have demonstrated that people have negative behavioral intentions toward an organization when they get angry in a crisis (McDonald, Sparks, & Glendon, 2010). A main issue of apology function is how effectively an organization relieves anger by its apology. For
these reasons, the current study tries to explore how different apologies contribute to relieving public anger in a crisis situation.

**Anger relief**

Anger is defined as physiological arousals, the cognition of resentment (Novaco, 1994), and feelings ranging from annoyance to rage (Allocorn, 1994). Anger is triggered by comprehensive reasons such as pain, physical restraint, psychological restraint, perceived unfairness, and disgust with others (Izard, 1991). Anger is also an emotion that we experience when we have been unfairly slighted, which causes us both painful feelings and a desire or impulse for revenge (Mitchell, Brown, Morris-Villagran, & Villagran, 2001).

The impact of anger has distinctive characteristic effects on social relations and on the person experiencing this emotion (Lazarus, 1991). For example, angry individuals tend to launch an attack on the agent held to be blameworthy of the offense (Lazarus, 1991). Angry people also cope with their negative emotion by removing reasons for making them angry (Lazarus, 1994). This characteristic of anger makes people active and analytical information processors in their angry state (Lerner, 1990). Nabi (1999) suggested that angry people tend to show a willingness to think about the situation relying on both arguments and heuristics to make judgments. However, other researchers have speculated that people might focus on emotion-relevant thoughts on a persuasive message when they are very angry because the ability or motivation to engage in issue-relevant thinking is debilitated (Smith & Dillard, 1997).
Several crisis communication studies have explored anger as the most influential emotion in a crisis. For example, Choi and Lin (2009) revealed that anger is the strongest emotion related to crisis responsibility among diverse emotions such as worry, fear, and surprise. They also found that there is a significant negative relationship between anger and organizational reputation. Other crisis studies suggest that anger predicts negative purchase intentions (Coombs & Holladay, 2007), as well as negative-word-of-mouth behavior (Coombs & Holladay, 2007), and indirectly reduces investment intentions (Jorgensen, 1996). Thus, it is not surprising that anger can motivate people to show negative attitudes or behaviors toward an organization in a crisis situation (Choi & Lin, 2009).

Public anger is influenced by causes of a crisis situation (Coombs & Holladay, 2007). People try to determine the event cause, and this determination leads to a judgment on the party that is responsible for the crisis (McDonald et al., 2010). If an organization is obviously at fault during a crisis, this is a strong predictor of anger and negative attitudes toward the organization (Coombs & Holladay, 2007; McDonald et al., 2010). In this situation, the only way an organization can resolve public anger is by admitting responsibility for the event.

Scholars have noted Weiner’s (1986) perspective for understanding anger and organizational crisis. Weiner (1986) argued that when an event is negative, unexpected, or important, people are likely to engage in causal attribution processing. To explain causal attribution process, he created the concepts of locus and controllability as main casual attributes. Locus specifies the location of the cause of an event as internal or external to the offender. Controllability refers to whether the prevention of a crisis is
within the control of the offender. According to Weiner (1986), anger is elicited when a personal failure is caused by internally and controllable reasons. On the other hand, when a personal failure is assigned to causes viewed as external and uncontrollable, pity is elicited. With this notion, Lee (2004) confirmed that people who read about an organizational crisis with an internal and controllable cause are more likely to form negative emotions toward the organization than those who read about an organizational crisis with an external and uncontrollable cause. Thus, public anger would be caused by internal and controllable attributes of an organization in a crisis situation.

As prior studies have investigated how public anger is caused, research is needed on how to relieve anger. Although a variety of crisis responses have their own value in resolving a crisis situation, an apology can be regarded as a good way to relieve anger. For example, Scher and Darley (1997) mentioned that the primary function of apologies is to reduce the level of anger felt by people. Similarly, Frantz and Bennigson (2005) argued that apologies tend to reduce negative emotions and to increase positive emotions. On the contrary, failure of apologies sometimes becomes a catalyst for lawsuits in that an implacable resentment makes victims find their way into legal complaints (Rosenbaum, 2004). An apology, therefore, has a strategic value that reduces public anger when an organization is dealing with a crisis.

The empirical evidence for the effect of corporate apologies still has room for development. One area of potential growth is to understand the specific mechanism regarding how apology components can contribute to relieving anger. Thus, this study sheds new light on several components of an apology as determinants for public anger relief. To be specific, this study will examine whether or not an apology, including a
responsible admittance and a sympathetic expression, can properly relieve public anger toward an organization in a crisis. For this study, public anger relief is defined as the degree to which people’s anger is reduced after they are exposed to a corporate apology.

**Components of corporate apology**

An apology can occur across a variety of social situations. Since apologies can serve the function of meeting many needs, diverse components of an apology have been proposed (Patel & Reinsch, 2003). Apology components can vary depending on the seriousness of transgressions, situations, and relationship types (Scher & Darley, 1997).

In corporate apologies, apology components have been investigated in many ways. Sugimoto (1999) found commonly occurring components in US apology texts: (1) a statement of remorse; (2) an account or description of events; (3) a description of damage; (4) an offer of reparation; (5) an explicit statement of responsibility; (6) a request for forgiveness; (7) self-castigation; and (8) a promise not to repeat the same offense. Similarly, Orenstein (1999) explained the attributes of an effective corporate apology: (1) acknowledge the legitimacy of the grievance and express respect for the violated rule or moral norm; (2) indicate with specificity the nature of the violation; (3) demonstrate understanding of the harm done; (4) admit fault and responsibility for the violation; (5) express genuine regret and remorse for the injury; (6) express concern for future good relations; (7) give appropriate assurance that the act will not happen again; and, if possible, (8) compensate the injured party.

What constitutes an apology varies among scholars, but it is largely agreed that there are essential components to a complete corporate apology. First, many scholars
agree that a responsible statement can be a key component of apology to reduce the level of anger felt by victims (Cohen, 1999; Coombs & Holladay, 2008; Darby & Schlenker, 1982). According to Lazare (2004), when the transgressor does not accept their responsibility, this can result in the apology being more destructive than when no apology is offered.

Sympathy is also in the centerpiece of apology. Research indicates that a corporate statement containing sympathy could be an effective tool to relieve victims’ anger about a transgression (Robbennolt, 2003). Coombs and Holladay (2008) also contend that a statement of sympathy has an effect on crisis response equivalent to the effect of a statement of responsibility.

The offer of compensation forms part of the remedial function of apology. Empirically, it has been demonstrated that compensation can lead to a positive outcome on relieving anger (Coombs & Holladay, 2008). Courtright and Hearit (2002) also maintained that an apology can be effective when a statement of responsibility was coupled with some form of compensation.

As a final component, there must be assurances given to the victim by the transgressor that the hurtful act will not be repeated intentionally, or that it will not happen again for an apology to be considered effective (Lazare, 2004). Lee (2004) mentioned that this component represents the responsible attitude of an organization by showing an effort to prevent future crises. As a result, it can foster more positive responses from the public.
While other components can be employed to construct a corporate apology, these four components, responsible statement, sympathy, compensation, and assurances of no future crises, are commonly used for a complete corporate apology. Hence, four components could be added to a corporate apology statement in the experimental design. However, for the purpose of simplification, the current study highlights responsibility and sympathy as main independent variables to examine the effect of apology on public anger relief.

**Responsibility**

Extant studies have found that a corporate apology that includes acceptance of responsibility fostered more positive brand attitudes, a stronger corporate image, and more supportive behavior (Coombs & Schmidt, 2000; Griffin, Babin, & Attaway, 1991). Similarly, research found that acceptance of responsibility for a negative event can increase sympathy and forgiveness (Weiner, Graphm, Peter, & Zmuidinas, 1991). Therefore, an organization’s acceptance of responsibility for a negative event may appear honorable, which may reduce the likelihood of anger or negative responses (Lee, 2004).

However, an attorney often discourages or even forbids apologizing to avoid a legal liability if the offender is less clearly at fault or where the resulting injury is less severe (Robbennolt, 2003; Tyler, 1997). Legally speaking, an apology including organizational responsibility can be “an expensive strategy” because it can be used as evidence in a lawsuit that the organization admits the entire responsibility for the crisis. Thus, organizations tend to avoid apologizing when evidence of the offender’s responsibility is ambiguous (Patel & Reinsch, 2003).
Several scholars, however, maintain that it is an improper approach for organizations to be hesitant to apologize due to legal issues. According to Patel and Reinsch (2003), apologies generally do not represent evidence of guilt when considering both formal and common law in the US. They maintained that an appropriately worded apology does not usually create legal liability for the organization, and sometimes it has the potential to make a contribution to rebuilding relationship between two parties. Scher and Darley (1997) also argued that a responsible admission is necessary for an apology because it shows that the organization is aware of the social norms and therefore the organization will be able to avoid the offense in future interactions. Finally, a responsible gesture allows organizations to be forgiven by the public, by reducing the uncertainty of the case and highlighting the organization’s moral attitudes (Patel & Reinsch, 2003; Robbennolt, 2003).

An admission of responsibility can create both positive and negative legal consequences (Robbennolt, 2003). While an apology may mitigate the anger of victims, and may even help a corporation avoid a lawsuit, it cannot be expected to allow an organization to avoid punishment for wrongdoing (Patel & Reinsch, 2003). It is also certain that an apology can help to recover the relationship with victims, and improve perceptions of the situation and the organization. Accordingly, admission of responsibility is the most critical decision for an organization.

Furthermore, a slight linguistic variation from active to passive apology messages can produce very different legal consequences (Patel & Reinsch, 2003). For example, the statement, “I’m sorry for hurting you,” is totally different from the statement, “I’m sorry you were hurt” (Cohen, 1999). The former statement admits one’s fault whereas the latter
does not (Cohen, 1999; Patel & Reinsch, 2003). This study sees the former statement as “active responsibility” and the latter statement as “passive responsibility.” In other words, an apology with active responsibility is defined as a statement that clearly admits a corporation’s responsibility in a crisis. In contrast, an apology with passive responsibility is defined as a statement that does not directly admit that a corporation’s responsibility in a crisis but expresses concern about the crisis situation.

The level of responsibility in a statement can influence the effects of apologies based on situations where wrongdoers are either directly responsible for the guilt or not (Robinson, 2004). Robbennolt (2003) found that an apology statement with active responsibility positively influences the participants’ perceptions of the situation and reduces victims’ negative feelings. Robbennolt (2003) also determined that an apology statement with passive responsibility has no effect on reducing victims’ negative feelings where the responsibility is clear. However, the researcher also argued that although a passive responsibility statement may negatively impact perceptions where responsibility is relatively clear, it had a positive impact on victims’ perceptions where responsibility is relatively less clear (Robbennolt, 2003).

Arguments over whether apologies create legal liabilities for organizations mainly depend on the extent of responsibility in each case. If a finding of guilt is inevitable, the organization’s focus should be on minimizing victims’ anger with an active responsible apology. As Shuman (2000) said, apologies can be meaningful only when the organization acknowledges its responsibility and takes affirmative steps to repair the damage if the fault is clear. On the contrary, a passive responsible apology may not be
likely to resolve disputes in which the extent of each party’s fault is clear (Patel & Reinsch, 2003). Therefore, the following hypothesis is offered:

**Hypothesis 1:** An apology statement with active responsibility is more likely to relieve public anger than an apology statement with passive responsibility.

**Sympathy**

The impact of apologies can be improved by sympathetic expressions in the statement. For example, Hareli and Eisikovits (2006) showed that when a transgressor apologizes for his/her wrongdoing with guilt and/or shame, a victim is more likely to forgive him/her. Some scholars say that expressing genuine regret and remorse for the injury helps rebuild the relationship between the two parties (Orenstein, 1999). Gobodo-Madikizela (2003) also argued that high sympathetic expressions make apologies sincere, and therefore are effective for reconciliation in a conflict situation.

According to Wispe (1986), “sympathy refers to the heightened awareness of the suffering of another person as something to be alleviated” (p. 318). Wispe (1986) pointed out two perspectives of sympathy. First, sympathy intensifies the sensitivity to the emotions of the other person’s predicament. Second, in sympathy, there is a feeling of compassion and the urge to help people who suffer from the same predicament. Thus, an organization that shows its high sympathetic attitude in an apology statement could increase the sincerity of the statement.

In fact, several researchers have maintained that apologies are more effective when they are harmonized with the expression of sympathy (Patel & Reinsch, 2003). In
interpersonal relationships, the expression of sympathy mainly focuses on the victims’ unfortunate situation, and thus it can be a morally valuable characteristic that increases the perceived sincerity of the apology (Weiner, 1986). Similarly, expressing sympathy contributes to resolving cases where the victim’s injury is minimal, or where there is an intention to rebuild the relationship between two parties (Patel & Reinsch, 2003). Accordingly, it would be anticipated that when an organization expresses a high sympathetic apology statement such a statement enables an apology to be more effective than a corporate apology without a sympathetic apology statement.

In addition, an expression of sympathy is regarded as a legally safe crisis response. Some believe that since judges and jurors are able to distinguish between sympathetic expressions and a statement of responsibility, an apology with sympathy would not likely increase the possible of a lawsuit (Robbennolt, 2003). Choi and Lin (2009) further suggested that there is a significant difference in crisis response perception between legal experts and lay people. They found that law experts did see the difference between the statement of responsibility and sympathy responses in judging apologies, whereas lay people did not. Thus, an organization can minimize legal concerns by utilizing high sympathetic expressions in its apology statements.

To examine whether a high sympathetic apology is effective on anger relief, this study suggests conceptual definitions of different levels of sympathy: (1) high sympathy; and (2) low sympathy. A high level of sympathy is defined as an organization’s empathetic feeling (e.g., I feel your pain as mine) toward a crisis situation and people affected by the crisis, whereas a low level of sympathy is referred to as an organization’s awareness and understanding of the crisis situation and people affected by it. Even
though some scholars conceptually differentiate empathy from sympathy, this study sees empathy as a high level of sympathy.

Since an apology with high sympathy can increase the perceived level of sincerity, and thereby may lead members of the public to relive their anger in a crisis situation. According to McCullough, Worthington, and Rachal (1997), people are more likely to grant forgiveness when they believe the partner sincerely apologized in a close interpersonal relationship. Cohen (1999) mentioned that an expression of sympathy immediately following the incident plays a significant role in mitigating tensions between two parties and reduces the threat of litigation. Englehardt, Sallot, and Springston (2004) also studied an exemplary case showing the function of high sympathetic expression in a crisis. A flight company, ValuJet Airlines, successfully utilized compassion strategies without blaming themselves in a crisis situation. Although the apology statement of ValuJet Airlines did not directly accept responsibility, it effectively relieved the public’s anger by releasing a statement containing a high level of sympathy through the mass media.

In their empirical study, Coombs and Holladay (2007) showed that a sympathetic expression produces a favorable reaction in people who are not victims in a crisis. Presumably, people who are directly affected by a crisis are not satisfied with an apology only with a sympathetic expression. However, it is possible that an apology with high sympathy could play some role in relieving public anger. Hence, the following hypothesis is posited:
Hypothesis 2: An apology statement with a high level of sympathy is more likely to relieve public anger than an apology statement with a low level of sympathy.

Four types of apology: Interaction between responsibility and sympathy

Several studies have argued that the expression of sympathy must be coupled with a statement of responsibility. According to Cohen (1999), if there is an expression of sympathy alone, it could be worse than saying nothing at all where there is clear responsibility for an incident. This indicates that mere expression of sympathy might be perceived as some kind of insult to victims when an organization should admit its fault (Cohen, 1999). On the contrary, Robbenolt (2003) found that apologies can be more effective in producing a favorable reaction from victims when the statement of sympathy is combined with a statement of responsibility compared to the statement of responsibility without sympathy. Accordingly, an expression of sympathy would make apologies more effective when it is coupled with the statement of responsibility than when it is not (Nadler & Liviatan, 2006).

Nadler & Liviatan (2006) pointed out that the dual role of responsibility and sympathy has not fully investigated in corporate apology studies although two components were independently studied as core components for effective corporate apology under crisis. Further, the effect of an apology on anger relief with different levels of sympathy and its interaction effect with two types of responsibility have not previously been examined. To contribute to the literature on the dual role of responsibility and sympathy, this study will investigate the interaction effects of different levels of
responsibility and sympathy. To be specific, four types of apologies will be identified for a crisis situation where there are different apology statements of either active responsibility or passive responsibility, and either a high level of sympathy or a low level of sympathy (see Figure 1).

The apology statement with active responsibility and high sympathy will be considered to be “a full apology.” It is anticipated that a full apology will be the most effective crisis response for reliving public anger among the four types of apology. The public will perceive a full apology as the most sincere and moral gesture from an organization among the four types of apology. Without a doubt, a full apology is regarded as an exemplary strategy in a crisis situation, but sometimes an organization might avoid using it due to legal liability.

A committed apology will be defined as an apology statement with active responsibility and low sympathy. This apology would show more positive effects on relieving public anger than an arrogant apology because it shows responsible attitudes toward a crisis situation. However, this apology has a weak point in that some people may perceive it as a weak gesture from an organization.

A compassionate apology will be defined as an apology statement with passive responsibility and high sympathy. According to Hareli and Eisikovits (2006), the increased sincerity of apologies enhances the perceived reliability of a given message wherein emotional expressions allow the message to be perceived as sincere. This finding leads us to anticipate that a compassionate apology will have the effect of anger relief in a crisis.
Figure 1. Four types of corporate apology
An arrogant apology includes a passive responsible statement and low sympathetic expression. Presumably, an arrogant apology would be the least effective among four types of apology or could make a crisis situation worse for the reason that an organization does not show any sincere attitudes or gestures toward the public.

Among the four types of apologies, we can easily predict that a committed apology is more likely to relieve public anger than an arrogant apology in a crisis. A compassionate apology would be also more likely to relieve public anger than an arrogant apology. However, it is hard to predict whether a committed apology or a compassionate apology will be more effective in relieving public anger in a crisis.

Simply, we can anticipate that a compassionate apology might have a more positive effect on reliving public anger than a committed apology because an emotional expression enables an apology statement to be sincere. Yet, Robbennolt (2003) proposed evidence that the statement of passive responsibility can be detrimental to the transgressor when the resulting injury is severe or when there is strong evidence of their responsibility. This means that people are not willing to accept the statement of passive responsibility because it is perceived as a dismissive behavior.

As there are some mysteries regarding the effect of the difference between a committed apology and a compassionate apology, this mystery calls for the examination of the effect of each corporate apology on public anger relief. Therefore, the following research question is proposed:

Research question 1: Is there an interaction effect between the levels of responsibility and sympathy of a corporate apology on public anger relief?
Pre-existing attitude

To examine the effect of corporate apologies on public anger relief, an oil spill accident was simulated to induce anger in respondents for this study. The alleged accident was caused by Marco Oil & Energy, a fictional company, due to its internal reasons such as negligence and a violation of safety requirements. After reading a news article that portrayed the accident, respondents were asked to answer questions regarding their levels of anger toward Marco Oil & Energy.

Regarding the oil spill accident scenario, people’s evaluation toward the oil industry may be influenced by pre-existing attitudes toward the oil industry. According to 2010 survey results by the Gallup Organization, the oil and gas industries unfailingly have ranked as the least positively viewed industries among 20 business and industry sectors in the United States. Between 2001 and 2009, the oil and gas industries’ ranking near the bottom of the list remained fairly consistent. These results indicate that pre-existing negative attitudes toward the oil and gas industries might affect the respondents’ evaluation of the crisis by Marco Oil & Energy.

The British Petroleum (BP) incident may also influence the public’s evaluation toward Marco Oil & Energy. As the largest accidental maritime oil spill, most Americans might have negative attitudes toward the BP incident. Further, many people remember the insensitive comment, “I want my life back”, by Chief Executive Officer Tony Hayward during the Gulf oil spill crisis. This insensitive and irresponsible attitude of Tony Hayward made most Americans very angry and the BP incident the worst oil spill case in the U.S. history. Since the BP case is the intense event that recently happened in
the U.S., respondents in this study might be affected by the BP incident when they evaluated the oil spill accident by Marco Oil & Energy.

In sum, when respondents answer questions regarding their levels of anger toward Marco Oil & Energy their answers might be affected by both their pre-existing attitudes toward the oil industry and previous experiences regarding the BP incident. For these reasons, this study will control pre-existing attitudes toward the oil industry in general and BP in particular.
Methodology

To examine the impact of corporate apology on public anger relief, a quasi experiment was conducted. The experiment contains a fictional news article describing a crisis situation, apology statements, and questionnaires. The experiment was constructed as a $2 \times 2$ factorial design of factors (active-passive responsibility) vs. (high-low sympathy) with between-subjects comparison. Based on two levels of each independent variable, the four types of apology statement were created for this study: (1) active responsibility and high sympathy (full apology); (2) active responsibility and low sympathy (committed apology); (3) passive responsibility and high sympathy (compassionate apology); and (4) passive responsibility and low sympathy (arrogant apology).

Participants

Participants were sampled from about 27,000 undergraduate students who enrolled in the spring semester of 2011 at a large research university in the Midwest. To select the sample, a complete list of e-mail addresses of undergraduate students was acquired from the registration office of the university. A total of 5,000 students were randomly selected from the complete list of e-mail address through a random number selecting function in Microsoft Excel. The invitation e-mail was sent out to a total of 5,000 undergraduates through Opinio, the online survey software, and a reminder email was sent three days after the initial email. There were 165 responses stored in the online survey server and the response rate was 3.3 percent. Among the stored 165 responses, 11
responses were deleted for the reason of incomplete data and 7 responses were not used for the reason that respondents answered the questions within one minute. After deleting the incomplete responses, 147 responses were valid and used for further analysis.

**Procedure**

Students received an invitation email that explained the purpose of the study, guarantees of confidentiality, voluntary participation, and benefits of the study. Links to the study and the informed consent document also were given to them in the e-mail message. To encourage participation, the students were told that they could leave their e-mail address at the end of the experiment if they would like to be in a random drawing for three twenty dollars gift cards.

When subjects clicked the link of the online experiment website after reading the invitation email, they directly entered into the website. If participants chose to participate in the study, they were asked to answer questions about their overall attitude toward the oil industry and their specific attitude toward British Petroleum (BP). Then they read a fictional news article about an oil spill accident by a company called Marco Oil & Energy. The fictional news article included a description of the accident, the scope of damage, and reactions from civic groups. Four photo images were also attached in the news article. Among the four photo images, two images depicted the shores of California as devastated by an oily mess and seagulls covered in oil, and the other two photos depicted a totally broken Marco's oil tanker. Captions for the images were provided. After reading the news report, all participants were asked to answer questions related to their feeling of anger toward Marco Oil & Energy.
Subsequently, the subjects read one of four types of corporate apology statements randomly assigned by the website. These apology statements were news releases issued by Marco Oil & Energy dated one day after the accident happened. Each apology statement reflected a specific combination of responsibility admittance (active vs. passive) and an expression of sympathy (high vs. low). After reading the apology statements, the subjects were then asked to answer the same questions about their feelings of anger toward the company as they did after reading the news article.

The questionnaire also included demographic questions that asked participants’ age, gender, and college year. Subjects were thanked and then exited from the experiment. The administration of the experimental questionnaire took about 15-20 minutes per student.

**Manipulation of independent variables**

*Four types of apology statements.* To provide a complete apology for subjects in the experiment, each of the four apology statements contains four components of apology: (1) responsibility; (2) sympathy; (3) compensation; and (4) assurance. While compensation and assurance were controlled with the same statement, both responsibility (active vs. passive) and sympathy (high vs. low) were manipulated into two levels respectively. Four statements were constructed as follows: (1) active responsibility and high sympathy (full apology); (2) active responsibility and low sympathy (committed apology); (3) passive responsibility and high sympathy (compassionate apology); and (4) passive responsibility and low sympathy (arrogant apology).
In the active responsibility statement, it was clearly mentioned that the organization was responsible for the crisis and took its responsibility for the misdeed. On the contrary, in the passive responsibility statement, the organization expresses its concern about the crisis situation and made perfunctory responsibility statements instead of directly admitting its responsibility.

In the high level of sympathy statement, the organization expressed emotional words that it felt as if the victim’s feelings were its own and tried to relate to many of the same feelings victims might be experiencing. On the other hand, in the low level of sympathy statement, the organization expressed its understanding of what the problems were in the crisis and what maybe bothering the victims.

All four types of apology statements were six to eight lines long and contained a similar number of words. Appendix B shows the news stories and appendix C contains the four types of apology statements used in the study.

**Dependent Measure**

_Anger relief._ The degree of anger participants felt toward Marco Oil and Energy was measured by averaging of five items: (1) angry; (2) mad; (3) irritated; (4) annoyed; and (5) outraged. After reading a news article, the participants answered the question “To what extent do you feel _____ toward Marco Oil and Energy?” Ratings were made on seven-point scales anchored at the extremes ranging from “1=not at all” to “7=very much.” Subsequently, participants were asked to answer again “To what extent do you feel _____ toward Marco Oil and Energy?” after they read an apology statement from Marco Oil and Energy. The degree of anger participants felt was also measured by the
same five items. These measures were adapted from Thomas and Millar (2008) and McDonald et al. (2010). A Cronbach alpha reliability check showed a value of .94 after reading the news report and .96 after reading of the apology statement. The degree of anger relief was calculated by the D-score of two average anger levels measured after reading a news article and apology statements, respectively. The D-score was calculated in the way that the average anger value after reading the news report minus the average value after reading the apology statement. Zero means no anger relief, a positive score means anger relief, and a negative score means that anger increased.

**Pre-existing attitudes**

*Attitude toward the oil industry.* Three questions were created to examine respondents’ attitude toward the oil industry. The overall attitude toward the oil industry was measured by answering the following statements: (1) “Overall I feel negatively toward the oil industry;” (2) “The oil industry has a negative impact on our society;” (3) “I do not have favorable thoughts toward the oil industry.” Answers were measured by seven-point Likert scales ranging from “strongly disagree=1” to “strongly agree=7.” Cronbach alpha reliability was .89, and the average score of the three items was used in subsequent analysis.

*Attitude toward British Petroleum (BP).* Three questions were created to examine respondents’ attitude toward British Petroleum (BP). The overall attitude toward BP was measured by answering the following statements: (1) “Overall I feel negatively toward BP;” (2) “BP has a negative impact on our society;” and (3) “I do not have favorable thoughts toward BP.” Answers were measured by seven-point Likert scales ranging from
“strongly disagree=1” to “strongly agree=7.” Cronbach alpha reliability equaled .87 and the average score of the three items was used for subsequent analysis.
CHAPTER 4

RESULTS

Sample characteristics

Table 1 shows the demographic statistics of gender, age, and college year. Among all respondents, male respondents were 46.9 ($N = 69$) and female respondents were 53.1 percent ($N = 78$). On the contrary, the percentages of male undergraduates who are registered at the university in 2010 are 56.3 percent and the percentages of female undergraduates who are registered at the university in 2010 are 43.7 percent respectively. This shows that female respondents may have higher interest in this study than male respondents.

The majority of the respondents were in the age group of 18 to 25 (94.6%, $N = 139$). To be specific, the percentages of three age groups were as follows: (1) the age group 18 to 20 ($N = 77$) was 52%; (2) the age group 21 to 25 ($N = 62$) was 42%; (3) the age group 26 or over ($N = 8$) was about 6%. Respondents’ age ranged from 18 to 47 years ($M = 20.86$ years, $SD = 4.49$ years).
Table 1. Sample characteristics

<table>
<thead>
<tr>
<th>Variables</th>
<th>Count</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Gender</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>69</td>
<td>46.90</td>
</tr>
<tr>
<td>Female</td>
<td>78</td>
<td>53.10</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>147</td>
<td>100%</td>
</tr>
<tr>
<td><strong>Age</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18 – 20</td>
<td>77</td>
<td>52.40</td>
</tr>
<tr>
<td>21 – 25</td>
<td>62</td>
<td>42.20</td>
</tr>
<tr>
<td>26 – 30</td>
<td>4</td>
<td>2.70</td>
</tr>
<tr>
<td>Over 31</td>
<td>4</td>
<td>2.70</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>147</td>
<td>100%</td>
</tr>
<tr>
<td><strong>College year</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Freshmen</td>
<td>4</td>
<td>2.70</td>
</tr>
<tr>
<td>Sophomore</td>
<td>29</td>
<td>19.70</td>
</tr>
<tr>
<td>Junior</td>
<td>47</td>
<td>32.00</td>
</tr>
<tr>
<td>Senior</td>
<td>58</td>
<td>39.50</td>
</tr>
<tr>
<td>Others</td>
<td>9</td>
<td>6.10</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>147</td>
<td>100%</td>
</tr>
<tr>
<td><strong>Responsibility</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Active</td>
<td>81</td>
<td>55.10</td>
</tr>
<tr>
<td>Passive</td>
<td>66</td>
<td>44.90</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>147</td>
<td>100%</td>
</tr>
<tr>
<td><strong>Sympathy</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>High</td>
<td>79</td>
<td>53.70</td>
</tr>
<tr>
<td>Low</td>
<td>68</td>
<td>46.30</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>147</td>
<td>100%</td>
</tr>
<tr>
<td><strong>Responsibility and Sympathy</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Active and High (Full apology)</td>
<td>45</td>
<td>30.60</td>
</tr>
<tr>
<td>Active and Low (Committed apology)</td>
<td>36</td>
<td>24.50</td>
</tr>
<tr>
<td>Passive and High (Compassionate apology)</td>
<td>34</td>
<td>23.10</td>
</tr>
<tr>
<td>Passive and High (Arrogant apology)</td>
<td>32</td>
<td>21.80</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>147</td>
<td>100%</td>
</tr>
</tbody>
</table>
There were 4 freshmen (2.7%), 29 sophomores (19.7%), 47 juniors (32.0%), 58 seniors (39.5%), and 9 others (6.1%). This frequency of college year was not typical of what would be expected from random sampling. One plausible reason is that this experiment was conducted in the summer of 2011, while the subjects were recruited from the list of students present during the spring semester of 2011. Many students who otherwise might be classified as freshmen were highly likely to identify themselves as sophomores because their first academic year had already ended. Students of other college years likely did the same. Because of this inaccuracy, this variable was excluded from further analysis.

**Descriptive statistics**

Table 1 also shows how many students were exposed to each of the four types of apology statements. Among 147 respondents, 55.1% were exposed to an apology statement with active responsibility \((N = 81)\), 44.9% of respondents were exposed to an apology statement with passive responsibility \((N = 66)\), 53.7% of respondents were exposed to an apology statement with high sympathy \((N = 79)\), and 46.3% of respondents were exposed to an apology statement with low sympathy \((N = 68)\).

Table 1 shows that 30.6% of respondents were exposed to a full apology statement with active responsibility and high sympathy \((N = 45)\), 24.5% of respondents were exposed to a committed apology statement with active responsibility and low sympathy \((N = 36)\), 23.1% of respondents were exposed to a compassionate apology statement with passive responsibility and high sympathy \((N = 34)\), and 21.8% of respondents were exposed to an arrogant apology statement with passive responsibility.
Table 2. Descriptive statistics ($N = 147$)

<table>
<thead>
<tr>
<th>Variables</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attitude toward the oil industry</td>
<td>4.86</td>
<td>1.35</td>
</tr>
<tr>
<td>Overall I feel negatively toward the oil industry.</td>
<td>5.02</td>
<td>1.38</td>
</tr>
<tr>
<td>The oil industry has a negative impact on our society.</td>
<td>4.64</td>
<td>1.53</td>
</tr>
<tr>
<td>Overall I do not have favorable thoughts toward the oil industry.</td>
<td>4.93</td>
<td>1.57</td>
</tr>
<tr>
<td>Attitude toward British Petroleum (BP)</td>
<td>4.72</td>
<td>1.42</td>
</tr>
<tr>
<td>Overall I feel negatively toward BP.</td>
<td>4.90</td>
<td>1.57</td>
</tr>
<tr>
<td>BP has a negative impact on our society.</td>
<td>4.50</td>
<td>1.63</td>
</tr>
<tr>
<td>Overall I do not have favorable thoughts toward BP.</td>
<td>4.76</td>
<td>1.59</td>
</tr>
<tr>
<td>Anger after reading the news article</td>
<td>5.49</td>
<td>1.25</td>
</tr>
<tr>
<td>To what extent do you feel irritated toward Marco Oil &amp; Energy?</td>
<td>5.82</td>
<td>1.15</td>
</tr>
<tr>
<td>To what extent do you feel mad toward Marco Oil &amp; Energy?</td>
<td>5.49</td>
<td>1.34</td>
</tr>
<tr>
<td>To what extent do you feel annoyed toward Marco Oil &amp; Energy?</td>
<td>5.64</td>
<td>1.34</td>
</tr>
<tr>
<td>To what extent do you feel angry toward Marco Oil &amp; Energy?</td>
<td>5.40</td>
<td>1.40</td>
</tr>
<tr>
<td>To what extent do you feel outraged toward Marco Oil &amp; Energy?</td>
<td>5.11</td>
<td>1.65</td>
</tr>
<tr>
<td>Anger after reading the apology statement</td>
<td>5.04</td>
<td>1.49</td>
</tr>
<tr>
<td>To what extent do you feel irritated toward Marco Oil &amp; Energy?</td>
<td>5.29</td>
<td>1.39</td>
</tr>
<tr>
<td>To what extent do you feel mad toward Marco Oil &amp; Energy?</td>
<td>5.04</td>
<td>1.56</td>
</tr>
<tr>
<td>To what extent do you feel annoyed toward Marco Oil &amp; Energy?</td>
<td>5.24</td>
<td>1.55</td>
</tr>
<tr>
<td>To what extent do you feel angry toward Marco Oil &amp; Energy?</td>
<td>4.97</td>
<td>1.69</td>
</tr>
<tr>
<td>To what extent do you feel outraged toward Marco Oil &amp; Energy?</td>
<td>4.67</td>
<td>1.81</td>
</tr>
<tr>
<td>Anger relief</td>
<td>.45</td>
<td>1.04</td>
</tr>
</tbody>
</table>

a. Attitude toward the oil industry is the average value after adding each response from three questions on the oil industry.
b. Responses were coded 1 = strongly disagree to 7 = strongly agree.
c. Attitude toward BP is the average value of three items on BP.
d. Anger after reading the news article is the average value of five questions on feelings toward Marco Oil & Energy.
e. Responses were coded 1 = not at all to 7 = very much.
f. Anger after reading the apology statement is the average value of five questions on feelings toward Marco Oil & Energy.
g. The degree of anger relief = (Average anger after reading the news report) - (Average anger after reading the apology statement). Zero means no anger relief, a positive score means anger relief, and a negative score means that anger increased.
and low sympathy ($N = 32$). An apology statement with active responsibility and high sympathy recorded the highest exposure rate, whereas an apology statement with passive responsibility and low sympathy recorded the lowest exposure rate. Further, the respondents’ exposure rate to an apology statement with active responsibility and low sympathy is higher than the respondents’ exposure rate to an apology statement with passive responsibility and high sympathy. Overall, over 30 subjects were exposed to each apology statement.

As for the dependent variables, Table 2 shows means and standard deviations of each variable. The variable of anger after reading the news article was calculated as the average value of five items, including irritated ($M = 5.82$, $SD = 1.15$), mad ($M = 5.49$, $SD = 1.34$), annoyed ($M = 5.64$, $SD = 1.34$), angry ($M = 5.40$, $SD = 1.40$), and outraged ($M = 5.11$, $SD = 1.65$). The level of anger after reading the news article ranged from “$5.11 =$ minimum value” to “$5.82 =$ maximum value” ($M = 5.49$, $SD = 1.25$), which was over the mid-point on the seven-point Likert scale. Thus, respondents’ anger was properly induced after they read the news article in the experiment.

The level of anger after reading the apology statement was calculated by the average value of the same five items including irritated ($M = 5.29$, $SD = 1.39$), mad ($M = 5.04$, $SD = 1.56$), annoyed ($M = 5.24$, $SD = 1.55$), angry ($M = 4.97$, $SD = 1.69$), and outraged ($M = 4.67$, $SD = 1.81$). The values of the variable of anger after reading the apology statement ranged from “$4.67 =$ minimum value” to “$5.29 =$ maximum value” ($M = 5.04$, $SD = 1.49$), which was still over the mid-point on the seven-point Likert scale.
The degree of anger relief was calculated by subtracting the average value of anger after reading the apology statement from the average value of anger after reading the news article. As Table 2 shows, respondents’ anger relief is a positive value \((M = 0.45, SD = 1.04)\), which indicates that respondents’ anger was relieved in the experiment even though the absolute value of D-score was not very high.

As for the control variables, two variables were created in the experiment to measure the respondents’ pre-existing attitudes regarding the oil spill accident. The first variable was attitude toward the oil industry \((M = 4.86, SD = 1.35)\), which was calculated by the average value of three items: (1) “Overall I feel negatively toward the oil industry” \((M = 5.02, SD = 1.38)\); (2) “The oil industry has a negative impact on our society” \((M = 4.63, SD = 1.53)\); and (3) “Overall I do not have favorable thoughts toward the oil industry” \((M = 4.93, SD = 1.57)\). Values of the variable of attitude toward the oil industry ranged from “minimum value = 4.63” to “maximum value = 5.02”.

The second variable was attitude toward British Petroleum \((M = 4.72, SD = 1.42)\), calculated by the average value of three items: (1) “Overall I feel negatively toward British Petroleum” \((M = 4.90, SD = 1.57)\); (2) “British Petroleum has a negative impact on our society” \((M = 4.50, SD = 1.64)\); and (3) “Overall I do not have favorable thoughts toward British Petroleum” \((M = 4.76, SD = 1.59)\). Values of the variable of attitude toward British Petroleum ranged from “minimum value = 4.50” to “maximum value = 4.90”.

**Baseline pre-existing attitudes**
The one-way analysis of variance (ANOVA) test was employed to examine whether the randomly assigned four groups showed similar mean levels of attitude toward the oil industry and British Petroleum before they read the news article and the apology statement.

As Table 3 shows, there was no significant difference among the four groups of subjects on attitude toward the oil industry, $F (3, 143) = .84, p = .48$. Means and standard deviations of each group were as follows: (1) active responsibility and high sympathy ($M = 4.66, SD = 1.36$); (2) active responsibility and low sympathy ($M = 5.08, SD = 1.44$); (3) passive responsibility and high sympathy ($M = 5.00, SD = 1.39$); and (4) passive responsibility and low sympathy ($M = 4.76, SD = 1.18$).

Table 3. One-way analyses of variance (ANOVAs) for attitudes toward the oil industry and B.P.

<table>
<thead>
<tr>
<th>Variables</th>
<th>Type of Apology Statement</th>
<th>Full apology mean (SD)</th>
<th>Committed apology mean (SD)</th>
<th>Compassionate apology mean (SD)</th>
<th>Arrogant apology mean (SD)</th>
<th>$F$</th>
<th>$df$</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attitudes toward the oil industry</td>
<td></td>
<td>4.66 (1.36)</td>
<td>5.08 (1.44)</td>
<td>5.00 (1.39)</td>
<td>4.76 (1.18)</td>
<td>.84</td>
<td>3</td>
<td>.48</td>
</tr>
<tr>
<td>Attitudes toward BP</td>
<td></td>
<td>4.72 (1.34)</td>
<td>4.77 (1.48)</td>
<td>4.79 (1.52)</td>
<td>4.58 (1.44)</td>
<td>.14</td>
<td>3</td>
<td>.94</td>
</tr>
</tbody>
</table>

* $P < .05$
** $P < .01$
*** $P < .001$
Table 3 also shows that there is no significant difference among four groups of subjects on attitude toward British Petroleum, $F(3, 143) = .14, p = .94$. Means and standard deviations of each group were as follows: (1) active responsibility and high sympathy ($M = 4.72, SD = 1.34$); (2) active responsibility and low sympathy ($M = 4.77, SD = 1.48$); (3) passive responsibility and high sympathy ($M = 4.79, SD = 1.52$); and (4) passive responsibility and low sympathy ($M = 4.58, SD = 1.44$).

**Baseline anger**

One-way analysis of variance (ANOVA) was employed to examine whether the subjects of the randomly assigned four groups showed similar levels of anger before they read one of the four types of apology statements. Baseline anger was the average anger score after reading the news article.

<table>
<thead>
<tr>
<th>Baseline Anger</th>
<th>Full apology mean (SD)</th>
<th>Committed apology mean (SD)</th>
<th>Compassionate apology mean (SD)</th>
<th>Arrogant apology mean (SD)</th>
<th>$F$</th>
<th>$df$</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>5.39 (1.37)</td>
<td>5.69 (1.13)</td>
<td>5.47 (1.37)</td>
<td>5.44 (1.09)</td>
<td>.44</td>
<td>3</td>
<td>.73</td>
</tr>
</tbody>
</table>

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

As Table 4 shows, there was no significant difference in anger level among the four groups after reading the news article, $F(3, 143) = .44, p = .73$. Means and standard
deviations of each group were as follows: (1) active responsibility and high sympathy ($M = 5.39$, $SD = 1.37$); (2) active responsibility and low sympathy ($M = 5.69$, $SD = 1.13$); (3) passive responsibility and high sympathy ($M = 5.47$, $SD = 1.37$); and (4) passive responsibility and low sympathy ($M = 5.44$, $SD = 1.09$).

**Hypotheses testing**

Hypothesis 1 stated that an apology statement with active responsibility is more likely to relieve public anger than is an apology statement with passive responsibility. To test this hypothesis, analysis of covariance (ANCOVA) test was employed. As Table 5 shows, the result of the $F$ test indicated that there was a significant difference in mean anger relief ($F= 9.04, p=.003$) between the group given an active responsibility statements ($M = .69$, $SD = 1.28$) and the group given a passive responsibility statements ($M = .16$, $SD = .54$) after controlling for the two covariates (attitude toward the oil industry and attitude toward British Petroleum). None of the pre-existing attitudes toward the oil industry, $F(1, 146) = .38, p = .54$; and BP, $F(1, 146) = .40, p = .53$, affected anger relief. Hypothesis 1 was confirmed.

Hypothesis 2 stated that an apology statement with a high level of sympathy is more likely to relieve public anger than an apology statement with a low level of sympathy. To test this, analysis of covariance (ANCOVA) was employed. As Table 5 shows, the result of the $F$ test indicated that there was no significant difference in anger relief, $F(1, 146) = .53, p = .47$, between the group given a high sympathy statement ($M = .53$, $SD = 1.21$) and the group given low sympathy statements ($M = .36$, $SD = .80$) after controlling for two covariates (attitude toward the oil industry and attitude toward British
Table 5. Analysis of covariance (ANCOVA) for the effect of responsibility and sympathy on anger relief

<table>
<thead>
<tr>
<th>Main effects and interaction</th>
<th>Anger relief</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
</tr>
<tr>
<td>Covariates</td>
<td></td>
</tr>
<tr>
<td>Attitude toward the oil industry</td>
<td>.38</td>
</tr>
<tr>
<td>Attitude toward BP</td>
<td>.40</td>
</tr>
<tr>
<td>Factors</td>
<td></td>
</tr>
<tr>
<td>Main effect of responsibility</td>
<td>9.04</td>
</tr>
<tr>
<td>Active responsibility</td>
<td>.69</td>
</tr>
<tr>
<td>Passive responsibility</td>
<td>.16</td>
</tr>
<tr>
<td>Main effect of sympathy</td>
<td>.53</td>
</tr>
<tr>
<td>High sympathy</td>
<td>.53</td>
</tr>
<tr>
<td>Low sympathy</td>
<td>.36</td>
</tr>
<tr>
<td>Interaction between responsibility and sympathy</td>
<td>2.20</td>
</tr>
<tr>
<td>Active and high (Full apology)</td>
<td>.87</td>
</tr>
<tr>
<td>Active and low (Committed apology)</td>
<td>.47</td>
</tr>
<tr>
<td>Passive and high (Compassionate apology)</td>
<td>.09</td>
</tr>
<tr>
<td>Passive and low (Arrogant apology)</td>
<td>.23</td>
</tr>
</tbody>
</table>

*P < .05
**P < .01
***P < .001
Petroleum). None of the pre-existing attitudes toward the oil industry, $F(1, 146) = .38, p = .54$; and BP, $F(1, 146) = .40, p = .53$, affected anger relief Hypothesis 2 was not confirmed.

In sum, the main effect of responsibility in an apology statement was supported, whereas the main effect of sympathy in an apology statement was not supported.

**Research question**

The research question was about whether there is an interaction effect between responsibility and sympathy of corporate apology on public anger relief. To examine the research question, analysis of covariance (ANCOVA) was employed. Four types of apology statements were entered as the interaction terms in the final block of Table 5. The results of the $F$-test indicate that there was no interaction effect between responsibility and sympathy of apology statement on respondents’ anger relief, $F(1, 146) = 2.20, p = .14$. The full apology group with active responsibility and high sympathy ($M = .87, SD = 1.45$) showed the highest mean anger relief among the four groups. The committed apology group with active responsibility and low sympathy ($M = .47, SD = .99$) showed higher anger relief than did the arrogant apology group with passive responsibility and low sympathy ($M = .23, SD = .50$). The compassionate apology group with passive responsibility and high sympathy showed the lowest mean anger relief ($M = .09, SD = .56$) among the four groups.

Figure 2 visually depicts means for the effect of the four types of apology statements on anger relief even though the mean differences were not sufficient to detect a statistically significant interaction effect. However, it is interesting to note that the two
slopes crossed each other on passive responsibility condition, because anger relief of the arrogant apology group was slightly higher than that of the compassionate apology group, in contrast to predicted expectations.

![Figure 2. Interaction effect of responsibility and sympathy on anger relief](image_url)
Chapter 5

Discussion

In crisis communication research, the empirical evidence of the effects of crisis response strategies has not been fully studied (Coombs & Holladay, 2008). This study examined the effects of corporate apologies on anger relief, to develop empirical evidence about crisis responses. This study also tried to include the four components of apology in one study by manipulating responsibility and sympathy after controlling compensation and assurance. In manipulation, the different levels of responsibility and sympathy were proposed and then tested for this crisis communication study. Finally, the combination of levels of responsibility and the two types of sympathy was posited to find whether there is an interaction effect between responsibility and sympathy.

Significance of the study

This study proposed two hypotheses to test the main effects of admission of responsibility admittance and sympathetic expression on public anger relief. The first hypothesis stated that an apology statement with active responsibility is more likely to relieve public anger than an apology statement with passive responsibility. As the results showed, when Marco Oil & Energy actively admitted its responsibility in the oil spill accident, respondents’ anger levels were more likely to be reduced. Thus, the conclusion can be drawn that when an organization takes active responsibility for a crisis, public anger levels are reduced.

Regarding responsibility admission, this study showed results that are consistent
with those from several previous studies even though they used different dependent variables. For example, Ohbuchi and Sato (1994) emphasized the effect of acceptance of responsibility for past wrongdoings on repairing relations and promoting reconciliation in interpersonal conflicts. Robbennolt (2003) also found that respondents are more willing to forgive an offender who gave an active responsibility admission than one offering a passive responsibility admission. Nadler and Liviatan (2006) found that people perceived the speaker’s attitudes as more constructive to the resolution of conflicts when the speaker announced responsibility admission than when he did not. Finally, Coombs and Holladay (2008) found that responsibility admittance has a significant effect on positive evaluations toward an organization in a crisis.

Interestingly enough, however, this study showed that respondents sensitively detected the difference between active responsibility and passive responsibility even though the two values were only slightly different in linguistic expression (see Appendix C). After reading each apology, respondents sensitively noticed a subtle difference between the two statements. According to Robbennolt (2003), an apology statement with passive responsibility does not have any effects on reducing negative feelings of victims when there is a clear fault to an offender whereas an apology statement with active responsibility has a significant effect on reducing negative feelings of victims. This finding allows one to assume that respondents critically evaluated an apology statement by examining causes of a crisis. Since the oil spill accident was clearly caused by Marco Oil & Energy, an apology statement with passive responsibility may appear defensive or morally bad in the eyes of the respondents. Therefore, it can be concluded that the public responds critically and negatively to an organization’s apology when the organizational
responsibility is apparent in a crisis.

The second hypothesis stated that an apology statement with high sympathy is more likely to relieve public anger than an apology statement with low sympathy. As an apology with high sympathetic expressions did not significantly relieve respondents’ anger compared to an apology with low sympathetic expressions, this hypothesis was not supported.

In regard to the main effect of sympathy, this study is not consistent with previous studies. As sympathetic expressions tend to make an apology more sincere, the other studies demonstrated the meaningful effects of sympathy. For instance, Coombs and Holladay (2008) found that a sympathetic expression has a significant effect on positive evaluations toward an organization when respondents feel low level of anger in a crisis. They also found that both sympathetic expressions and responsible admittance produced the same amount of respondents’ anger and negative word-of-mouth intention. Nadler and Liviatan (2006) found sympathetic expressions make an apology sincere and responsible. Their research showed that when respondents who were exposed to a speech with empathetic expressions perceived the speech more responsible than did those who listened to the speech without empathy.

The effect of sympathetic expressions on anger relief could be affected by other factors. In close interpersonal relationships, people tend to forgive other people when they hear a sincere apology. However, in organization-public relationship, they may not show the same mercy to the organization as they do to other people. As people generally do not trust big corporations, they may cast doubt on a corporation’s sympathetic
apology. Also, respondents may be inclined to have a cynical attitude toward the organization, as the oil spill accident was caused by Marco Oil & Energy. When the attribution of a crisis is so obvious, people might see a corporation’s sympathetic expressions as a poor excuse.

Along with these two hypotheses, this study examined whether there is an interaction effect between responsibility and sympathy. Results showed that there is no significant interaction between responsibility and sympathy. Although a research question was not supported, there are noteworthy findings.

ANOVA test indicated that full apology is the most effective way to relieve public anger among four types of corporate apology, and the effect of committed apology was ranked as the second highest. Both compassionate apology and arrogant apology showed relatively small effect sizes with anger relief. Apology statements with active responsibility are more effective than apology statements with passive responsibility. Therefore, the impact of the variation of responsibility is more influential than the variation of sympathy on anger relief.

Results also showed that the anger relief of a compassionate apology is lower than the anger relief of an arrogant apology. The current study suggested that when an organization passively accepts its responsibility in a crisis, high sympathetic expressions rarely contribute to public anger relief and sometimes might be worse than low sympathetic expressions on public anger. On the contrary, a high sympathetic expression helps an apology be more effective in public anger relief when an organization takes active responsibility in a crisis. As a result, a high sympathetic expression might have a
boomerang effect when an organization does not actively accept its responsibility. This is a different result from the expectation, which invites future studies.

One research result has suggested that a compassionate apology has the lowest effect on anger relief. According to Nadler and Liviatan (2006), the expression of empathy created more positive attitudes than no expression of empathy when trust was high between two parties. When trust was low, there was an adverse effect. On the contrary, the level of trust did not show any moderating role in responsible statements. This study enables one to assume that if there is high level of distrust toward an organization, an apology with sympathetic expressions may not work on public anger relief.

There is the possibility why respondents considered Marco Oil & Energy untrustworthy when it used a compassionate apology. As the oil spill accident was clearly caused by internal faults of Marco Oil & Energy, respondents may have judged Marco Oil & Energy untrustworthy when they received passive responsibility admission even with high sympathetic expressions. Another plausible explanation is that since people tend to have a critical or suspicious attitude toward a company in a crisis, they may cynically respond to a compassionate apology from Marco Oil & Energy.

The findings of the current study have implications for crisis communication. First, the current study brings in new elements to the traditional crisis communication research by introducing elaborated variations of two key apology components: (1) active vs. passive responsibility admission; (2) high vs. low sympathetic expression. Previous studies did not elaborate the levels of responsibility admission and sympathetic
expression. The most common way to measure these variables in other studies was dummy coding (existence or non-existence of responsibility admission and sympathetic expression).

Second, the current study demonstrates that active responsibility admission is an important and viable action when an organization has clear fault in a crisis. Since an angry people can sensitively detect the difference between active responsibility and passive responsibility, evading responsibility or passively accepting responsibility is perceived as unethical. This in turn negatively influences the reputation of the organization.

Third, the current study suggests practical strategies of corporate apology to the public relations practitioners and crisis managers. When an organization is involved with a crisis for internal reasons, a full apology with active responsibility and high sympathy would be the best policy to relieve public anger. However, public relations practitioners and crisis managers have to consider the adverse effect of high sympathetic expressions. If they unwisely choose a committed apology in a crisis, it might be perceived as a hypocritical action of the organization. Accordingly, an organization has to carefully consider the influence of high sympathy in a crisis.

Fourth, the current study introduced anger relief to the literature of corporate apology research. By measuring people’s anger levels twice (after reading a news report and after reading an apology statement), this study adopted quite a different approach on anger measurement from previous studies which either directly measured anger at one point in time, or asked respondents’ forgiveness about the organization after they
received an apology. In a crisis situation, the level of the public’s anger toward an organization changes over time and this study paid attention to whether corporate apology can reduce the public’s anger over time.

Finally, this study adopted multiple items to measure anger level such as irritated, annoyed, mad, angry, and outraged differently from previous studies that mostly used a single item. This improved both internal reliability and external validity in anger measurement.

**Limitations and suggestions for future study**

The current study has several limitations. First, this study examined only the effects of corporate apology on anger relief based on the scenario that an organization was obviously at fault in a crisis. This has oversimplified the nature of organizational crises. In many situations, causation of a crisis is unclear and sometimes disputable. Future research should explore crisis situations in which the crisis situation is ambiguous. In particular, it would be interesting study to examine the effect of a compassionate apology on anger relief when organization’s fault is ambiguous.

Second, the manipulation of sympathetic expression has a limitation in the news release form. The current study tried to manipulate high sympathy as organizational efforts to “share” victims’ predicaments and low sympathy as organizational efforts to “understand” victims’ predicaments. Although conceptual and operational definitions were proposed, it was a challenge to operationalize them in appropriate phrases and sentences. To overcome this limitation, it would be good to utilize multimedia that are appropriate to transmit human emotions through visual images and music.
Third, the apology timing did not properly reflect a real time experience. In the experimental setting, all respondents read the apology statement right after they read the news article about the crisis even though the two documents were dated one day apart. It is unclear how this apology - timing gap between the experimental setting and the real world may have affected the results; however, it is noteworthy for future studies.

Fourth, there is a possibility that the geographic distance of the accident might have influenced respondents’ anger levels in the study. As all respondents were undergraduates in the Midwest and the news article described an oil spill accident in California, the accident may have been considered to be irrelevant to their daily lives.
References


Darby, B. W., & Schlenker, B. R. (1989). Children’s reactions to transgressions:


Gonodo-Madikizel, P. (2003). Remorse, forgiveness, and re-humanization:
Stories from South Africa. *Journal of Humanistic Psychology, 42*, 7-32.


Appendix A

Institutional Review Board

IOWA STATE UNIVERSITY
OF SCIENCE AND TECHNOLOGY

Date: 5/17/2011
To: Surin Chung
2410 Aspen Rd, Unit 203
Ames, IA 50010

From: Office for Responsible Research

Title: The Effect of Corporate Apology on Public Anger Relief

IRB Num: 11-211

Submission Type: New

Exemption Date: 5/16/2011

The project referenced above has undergone review by the Institutional Review Board (IRB) and has been declared exempt from the requirements of the human subject protections regulations as described in 45 CFR 46.101(b). The IRB determination of exemption means that:

- You do not need to submit an application for annual continuing review.
- You must carry out the research as proposed in the IRB application, including obtaining and documenting informed consent if you have stated in your application that you will do so or if required by the IRB.
- Any modification of this research should be submitted to the IRB on a Continuing Review and/or Modification form, prior to making any changes, to determine if the project still meets the federal criteria for exemption. If it is determined that exemption is no longer warranted, then an IRB proposal will need to be submitted and approved before proceeding with data collection.

Please be sure to use only the approved study materials in your research, including the recruitment materials and informed consent documents that have the IRB approval stamp.

Please note that you must submit all research involving human participants for review by the IRB. Only the IRB may make the determination of exemption, even if you conduct a study in the future that is exactly like this study.
Appendix B

A news article

California’s coast has been seriously damaged by Marco Oil & Energy - the Company’s negligence of safety standards has been revealed -

WASHINGTON, March 23rd - A black slick from the worst oil spill in U.S history hit California's coast on March 22nd, threatening the livelihoods of local residents and deepening environmental concerns at a major tourist destination. The US government said the oil spill affected a 300-mile-long stretch of the coastline, 15 beaches, 35,000 acres of fish farms, and 40,000 households.

The spill, gushing 10,500 tons of crude oil, occurred when an oil tanker owned by Marco Oil & Energy was wrecked on rocks off California’s coast. According to official reports, Marco Oil & Energy failed to properly maintain the Collision Avoidance System (CAS) radar, which would have indicated an impending collision. “The tanker's radar was already disabled and inoperable before the disaster,” said Bob Pickard, an official marine inspector.

An oily mess is washing up on the shores of California and a seagull sits covered in oil (Photo: AP).
The Marco’s oil tanker was totally broken due to its weak hull, which led to a massive oil spill on the Pacific ocean (Photo: AP).

Environmental groups criticized the fact that Marco Oil & Energy committed a terrible error to save money. “Marco failed to fix their CAS radar because the company thought it was just too expensive to fix and operate. It is insane”. Mr. Andrew Chang, the president of the Better Environment for the Future Organization, said.

Marco Oil & Energy also violated a standard requirement regarding the strength of an oil tanker’s hull for the purpose of cost saving. In the design of an oil tanker, a double hull of ship surface is standard to avoid any possible risk of explosion and external shock. However, Marco Oil & Energy violated this requirement by using a vessel with only a single hull. "If the tanker had been a double hull, not a single hull, the possibility of the oil spill could have been greatly reduced," said Mr. Andrew Chang.

Environmental groups called on Marco Oil & Energy, involved in the worst-ever oil spill, to apologize. Mr. Andrew Chang said, “California’s coast has been totally destroyed by Marco’s negligence and greed. If Marco does not show a responsible attitude toward this terrible incident, we will take legal action and boycott against Marco Oil & Energy.”

Reported by Paul Doggett and Brian Austen of California
Appendix C

Four types of corporate apology

Active responsibility and high sympathy condition

Marco Oil & Energy offers an apology regarding the oil spill on California’s coast

(Huston, March 24th, 2011) – We at Marco Oil & Energy want to express our deep sorrow and genuine concern for those affected by this accident. There are no words to adequately express the emotion we feel for the people who are suffering from this environmental disaster. We would like the people of California to know that your loss is our loss too and that we are also devastated by this accident. We fully realize that we made a mistake and we will take full responsibility for the accident. We promise that compensation will be provided to those affected by this accident and that something like this will not happen again.

All reports on Marco Oil & Energy can be found at www.marco-energy.com
MEDIA RELATIONS, P.O. Box 13087, Huston, Texas, 78712, 512-239-5000
Marco Oil & Energy offers an apology regarding the oil spill on California’s coast oil spill

(Huston, March 24th, 2011) – We at Marco Oil & Energy should not deny the consequences of this tragic accident. This is a terrible experience for all of us to deal with the environmental damage. We want the people of California to know that we understand how you feel, and that we are also saddened by this accident. We fully realize that we made a mistake and will take full responsibility for the accident. We promise that compensation will be provided to those affected by this accident and that something like this will not happen again.

All reports on Marco Oil & Energy can be found at www.marco-energy.com

MEDIA RELATIONS, P.O. Box 13087. Huston, Texas, 78712, 512-239-5000
Passive responsibility and high sympathy condition

MARCO OIL & ENERGY

NEWS RELEASE

FOR IMMEDIATE RELEASE
March 24th, 2011

Contacts
• Address: 2410, SE Frank Phillips Blvd, Huston, Texas, USA
• TEL: (512) 540 – 1010
• FAX: (512) 509 – 6745
• E-mail: media@marco.com

Marco Oil & Energy offers an apology regarding the oil spill on California’s coast

(Huston, March 24th, 2011) – We at Marco Oil & Energy want to express our deep sorrow and genuine concern for those affected by this accident. There are no words to adequately express the emotion we feel for the people who are suffering from the environmental disaster. We would like the people of California to know that your loss is our loss too and that we are also devastated by this accident. We are sorry that this accident happened in the region. We promise that compensation will be provided to those affected by this accident and that something like this will not happen again.

All reports on Marco Oil & Energy can be found at www.marco-energy.com

MEDIA RELATIONS, P.O. Box 13087. Huston, Texas, 78712, 512-239-5000
Marco Oil & Energy offers an apology regarding the oil spill on California’s coast

(Huston, March 24th, 2011) – We at Marco Oil & Energy should not deny the consequences of this tragic accident. This is a terrible experience for all of us to deal with the environmental damage. We want the people of California to know that we understand how you feel, and that we are also saddened by this accident. We are sorry that this accident happened in that region. We promise that compensation will be provided to those affected by this accident and that something like this will not happen again.

All reports on Marco Oil & Energy can be found at [www.marco-energy.com](http://www.marco-energy.com)
**Appendix D**

**Questionnaire**

To what extent do you agree or disagree with each of the following statements?

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly disagree</th>
<th>...</th>
<th>...</th>
<th>...</th>
<th>...</th>
<th>...</th>
<th>Strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Overall I feel negatively toward the oil industry.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Strongly agree</td>
</tr>
<tr>
<td>2. The oil industry has a negative impact on our society.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Strongly agree</td>
</tr>
<tr>
<td>3. Overall I do NOT have favorable thoughts toward the oil industry.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Strongly agree</td>
</tr>
<tr>
<td>4. Overall I feel negatively toward British Petroleum (BP).</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Strongly agree</td>
</tr>
<tr>
<td>5. British Petroleum (BP) has a negative impact on our society.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Strongly agree</td>
</tr>
<tr>
<td>6. Overall I do NOT have favorable thoughts toward British Petroleum (BP).</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Strongly agree</td>
</tr>
</tbody>
</table>
For each of the following five questions, please indicate your feelings toward Marco Oil & Energy. Please choose the one response on the range from “Not at all” to “Very much” that best represents your reaction.

1. To what extent do you feel *mad* toward Marco Oil & Energy?
   Not at all ______ : ______ : ______ : ______ : ______ : ______ : ______ Very much

2. To what extent do you feel *irritated* toward Marco Oil & Energy?
   Not at all ______ : ______ : ______ : ______ : ______ : ______ : ______ Very much

3. To what extent do you feel *annoyed* toward Marco Oil & Energy?
   Not at all ______ : ______ : ______ : ______ : ______ : ______ : ______ Very much

4. To what extent do you feel *angry* toward Marco Oil & Energy?
   Not at all ______ : ______ : ______ : ______ : ______ : ______ : ______ Very much

5. To what extent do you feel *outraged* toward Marco Oil & Energy?
   Not at all ______ : ______ : ______ : ______ : ______ : ______ : ______ Very much
Please indicate your gender. ______ Male ______ Female

Please indicate your age. ______ (You must be over 18 to complete the survey)

Please indicate your current student classification.

_____ Freshman _____ Sophomore _____ Junior _____ Senior _____ Graduate

Thank you for participating in this study. Your assistance is greatly appreciated.
Acknowledgements

First and foremost, I would like to express my sincere gratitude to my advisor Prof. Suman Lee for his continuous support of my graduate studies and research, for his patience, motivation, enthusiasm, and immense knowledge. His guidance helped me with my research and the writing of this thesis. I could not have imagined having a better advisor and mentor for my graduate studies.

Besides my advisor, I would like to thank the rest of my thesis committee: Prof. Sela Sar and Prof. Mack Shelley for their insightful comments and advice.

Last but not least, I would like to thank my family: my parents for giving birth to me in the first place and supporting me spiritually throughout my life.