Covariation-based Approach to Crisis Responsibility Assessment

A Test for Extending Situational Crisis Communication Theory with Covariation Principle

by

Changhua He

Advisor: Josef Pallas

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ABSTRACT

In line with Schwarz’s (2008) suggestion of extending Situational Crisis Communication Theory (SCCT) with Kelley’s covariation principle, the present research aims to further examine the applicability of integrating a covariation-based approach to crisis responsibility assessment into the SCCT framework. Specifically, a content analysis was conducted to verify the basic assumptions for applying a covariation-based approach in crisis communication context. A follow-up experimental study was exercised to test the effect of consensus information – the missing variable in SCCT – on crisis responsibility attributions. The research suggested that a covariation-based approach of crisis responsibility assessment could be legitimately applied in the SCCT framework, and that crisis responsibility assessment in the SCCT framework could be improved, at least in some particular situations, by more consistently and systematically taking into account the three information dimensions in covariation principle as integrated information patterns rather than separately considering the effect of one single information dimension alone.

Keywords: Situational Crisis Communication Theory, Covariation Principle, Attribution Theory, Crisis Responsibility, Organizational Reputation
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Chapter 1 Introduction

1.1 Background and Motivation

It is apparent that organizational crises have become increasingly common in recent years, as nowadays there is not a single day when we navigate through news without seeing reports on organizations being trapped in certain troubles. Actually, it has been more than twenty years since we learned the inevitable fact that no organization, be it commercial or non-profits or governmental, can be immune from crises, just as Mitroff et al. (1987, 291) noted in the late 1980s that “it is no longer the question of whether a major disaster will strike any organization, but only a question of when, how, what form it will take, and who and how many will be affected”. It is now commonly agreed that crisis is a “normal” part of business cycle. It will affect every organization at one time or another (Seeger et al. 2001; Heath 2010).

Equally evident to us is the fact that crises, no matter big or small, will bring unfavorable impacts on focal organizations. Crises can not only immediately affect the organization’s operation and revenues in the short term but also exert even more profound influences on the organization in intangible ways in the long run (Dean 2004). Especially, with the development of social media and mobile technology, the adverse effects of crises can be further intensified, because crises can easily spread through a wider circle of people at a much higher speed now more than ever.

Now that crises are inescapable and can bring potentially ruinous impacts to organizations, crisis management – how to strategically manage a crisis and minimize the negative influences on the organization’s good names – has become a major topic among practitioners and academics of public relations. Crisis communication is definitely one of the most important elements in crisis management, because what organizations say and do after crises is of great significance to the effectiveness of the crisis management effort (Coombs 2010a).

Broadly, crisis communication includes the collection, processing and dissemination of information to deal with a specific crisis situation (Coombs 2010a). It is a
complicated communication activity that requires timely and appropriate conversations with different groups of stakeholders within their specific sociocultural backgrounds. Ineffective crisis communication can exacerbate the damage on organizational reputation, while successful one can protect the benefit of both the affected stakeholders and the focal organization.

A large volume of research work therefore has been produced to look into how proper communication actions can be suitably operated to address different crisis situations. Scholars have provided valuable insights into crisis communication dynamics from a wide range of perspectives such as psychology, sociology, and business management. Experiences and lessons from past crisis cases are documented, while effective communication strategies are recommended to better inform future crisis communication practice.

Timothy Coombs (1996, 2001, 2004, 2006, 2007c), through a series of experimental tests, has developed an influential theoretical framework called Situational Crisis Communication Theory (SCCT) to guide the crisis communication research with regard to how to select appropriate crisis response strategies based on a given crisis situation. SCCT posits that crisis responsibility attributions are pivotal to how people judge the focal organization during a crisis. The more people attribute crisis responsibility to the focal organization, the more negative impressions people place on the organization, and therefore the more reputation threat the organization has to confront with. Moreover, crisis responsibility is also identified as a major determinant for the selection of appropriate crisis response strategies in a given crisis. Crisis managers should employ crisis response strategies that can appropriately accommodate the demands of corresponding crisis responsibility levels.

As a guiding theoretical framework, SCCT has raised broad interests in the field of crisis communication research over recent years. Empirical studies have been carried out to validate and improve the theory. The core relationship in SCCT that higher level of crisis responsibility attributions gives rise to greater reputation threat to the organization has been consistently demonstrated in many researches (e.g. Lee 2004; Dean 2004; Coombs and Holladay 2002, 2004; Coombs 2006).
Since crisis responsibility plays such a critical role in evaluating potential reputational threat faced by the organization and in choosing the proper crisis response strategies when a crisis hits, it becomes a very interesting yet important topic to explore how to accurately determine the level of crisis responsibility attributions in a certain crisis situation. The aim of this research lies right in further investigating the assessment process of crisis responsibility attributions in SCCT.

1.2 Statement of Purpose

Based on attribution theory in social psychology research, SCCT proposes a two-step approach to determine the level of perceived crisis responsibility and reputational threat in crises. The approach first classifies a crisis according to a pre-set list of crisis clusters for a preliminary evaluation of crisis responsibility level, and then adjusts the initial level by taking into account two intensifying factors – the focal organization’s crisis history and prior reputation. The level of crisis responsibility and reputation threat increases if unfavorable signals either in crisis history or in prior reputation are observed (Coombs 2007c, 2009).

However, it is argued that such a simple assessment might not be able to fully capture the complexity of crisis situations (Lee 2004). Specifically, Schwarz (2008) suggests that Harold Kelley’s (1967) covariation principle – a famous theoretical framework derived from attribution theory for explaining people’s causal inferences – might be useful to improve our understanding of how stakeholders perceive crisis responsibility and could be considered as a complement to SCCT for better assessment of crisis responsibility levels, as long as robust empirical support for extending SCCT with covariation principle is found in future studies.

In line with Schwarz’s suggestion, this research aims at further examining the applicability of incorporating such a covariation-based approach to assessing the level of perceived crisis responsibility into SCCT. Specifically, as an initial effort, this research seeks to provide empirical evidence for two prerequisites to applying the covariation-based casual inference framework as an extension to SCCT: (1) Do stakeholders have access to and do utilize the information dimensions suggested in covariation principle to make judgment on crisis responsibility in crisis situations? (2)
Does integrating the covariation-based approach make any significant difference in crisis responsibility assessment from what can be expected in the original SCCT model?

By empirically testing whether stakeholders do take the information dimensions suggested in covariation principle into consideration when judging crisis responsibility and whether these information dimensions can have an additional impact on crisis responsibility attributions besides what has been illustrated in SCCT, this thesis tries to validate Schwarz’s proposal on extending the explanatory power of SCCT with a classic covariation-based model. If the aforementioned questions hold true, then it would be worthwhile to integrate the covariation-based approach into SCCT for an improved construct to predict the perceived crisis causes and responsibility. The advancement in assessing crisis responsibility attributions could refine our understanding of how attributions develop during crisis events and help practitioners more wisely judge crisis situations and choose appropriate crisis response strategies.
Chapter 2 Literature Review

2.1 Crisis Communication Research: Overview

2.1.1 Crisis Defined

Not surprisingly, quite a number of definitions of crisis have surfaced from abundant crisis communication research over the years. The changing trends in these definitions reflect the advancement in understanding the interconnected relationships among crisis events, affected stakeholders and focal organizations. A recent definition offered by Coombs best summarizes the important aspects in this field, and is considered as fundamental to comprehend the theories in this thesis.

Coombs (2009, 99) defines crisis as “the perception of an event that threatens important expectancies of stakeholders and can impact the organization’s performance”. Unlike the old ones that simply treat crisis as an incident that bears negative ramification for an organization (Fearn-Banks 2010, 2; Davies et al. 2003, 99; Mitroff and Anagnos 2001, 34-35), Coombs’s definition puts stakeholders rather than the focal organization in the center of research and particularly stresses the perceptual nature of crises. A crisis occurs when there are events violating the expectations that stakeholders hold about how the focal organization should operate. When it happens, stakeholders become upset and unpleasant, and the relationship between the organization and its stakeholders may run the risk of being impaired. Coombs (2010a) maintains that at any time, only a small portion of the whole crisis story is visible to the outside stakeholders during a crisis event. Utilizing limited information available to them, stakeholders try to understand why the crisis happens, what consequence it brings on, who should take responsibility for it, and what actions can be taken to avoid it in the future. In other words, stakeholders in most cases play a central role in constructing the meaning and the implication of the crisis, which in turn shapes stakeholders’ views towards the focal organization.

This social constructionist perspective on crisis situation interpretation underscores the critical connection between stakeholders’ crisis perception and crisis outcome.
(Penrose 2000). Quite often we observe that similar crises can eventually result in somewhat different ramifications for different organizations, and that contrary to the common conception that a crisis comes only when an organization erroneously does something that violates the standard of legitimacy, crisis could still happen even when the organization performs well and does nothing bad to its major stakeholders – it may create troubles for other organizations (Heath 2010). These observations indicate that the severity of reputational threat to the focal organization in a crisis is to a large extent perceptual (Coombs 2009). How people perceive a crisis event and the causes that give rise to it will largely determine the potential damage to the organization’s good name.

Furthermore, since the overall objective of crisis communication and management is to minimize the negative outcome and protect the organization from reputational damage when a crisis strikes (Coombs 2010a), how to deal with all types of stakeholders in an appropriate and smooth way is apparently the central issue that challenges the organization in this critical business process. Therefore, placing great emphasis on the importance of stakeholders and their perceptions during crises appears to be a logical approach in crisis communication research. Indeed, Coombs’s definition of crisis as well as his stakeholder perspective has been increasingly advocated by many other researchers in crisis communication research (Kent 2010; Lee 2004; Fediuk, Coombs and Boreto 2010).

2.1.2 Crisis Communication Research; A Brief Review

Crisis communication is considered as the essence of crisis management, as it indispensably serves different purposes at different stages throughout the entire process of crisis management (Coombs 2010a). At the pre-crisis stage, crisis communication involves collecting information about potential crisis risks and having proactive conversations with stakeholders in order to prevent possible pitfalls. Communication at the crisis response stage, on the other hand, revolves around disseminating messages to protect and aid affected stakeholders and to mitigate the negative impacts on the organization when a crisis actually happens. Post-crisis communication is often an extension of crisis response communication. It seeks to
provide necessary follow-up information to stakeholders, restore the business and draw lessons from the crisis (Coombs 2007b). Various themes in all the three phases of crisis communication have been researched extensively. Clearly, the crisis response stage has been the most thoroughly examined area due to its great significance to the effectiveness of crisis management.

Crisis communication at crisis response stage features a set of words and actions the organization delivers to combat the negative effects on its operation and stakeholders after hit by a crisis (Coombs 2007b). The SCCT examined in this thesis also belongs to this stage of crisis communication. It is aimed at understanding crisis responsibility attribution, a critical determinant in choosing the appropriate crisis response strategy. Hence, the literature review in this part will mainly focus on the crisis response phase.

2.1.2.1 Case Study in Early Years

At the early stage, crisis communication research in crisis response phase emerged largely from the practice world rather than the academic field. Generally, it aimed at providing hands-on advice for practitioners to deal with intricate crisis situations. Studies at this stage normally put the affected organizations under the spotlight, and were tactical in nature (Coombs 2010a). Case study was clearly the dominant genre of methodology at this stage. A wide range of in-depth crisis analyses were performed to document the evolution process of crisis events, scrutinize social contexts, evaluate managerial decisions and draw lessons for the future (See e.g. Sen and Egelhoff 1991; Hearit 1994; Kaufman 2001; Hoger and Swen 2000; Ulmer 2001; Wahlberg 2004). Based on abundant case investigations, useful experiences and guidelines on how to properly communicate with different types of stakeholders during crises were formulated, often in the form of “dos and don’ts” lists, to help crisis managers solve real-world communication problems. Some effective tactics such as avoiding silence, responding quickly and accurately in the “golden hour”, controlling the communication agenda and speaking with one voice were widely accepted as the best practices for crisis communication among scholars and practitioners (Barton 2001; Brummett 1980; Carney and Jorden 1993; Fearn-Banks 2010; Coombs 2007b; Doorley and Garcia 2011).
2.1.2.2 Case Study with Theoretical Frameworks

Later on, crisis communication scholars advanced crisis communication research by introducing theoretical frameworks into case studies. In this way, they could systematically compare crisis response actions and messages delivered by different organizations during different crisis scenarios, and search for some generic patterns embedded in effective crisis communication strategies. Theories that seek to understand the dynamic communication processes and their corresponding consequences in crisis situations have been applied, tested and developed. Some of them are specific built for public relations and crisis communication research, while others are derived from broader theories in other related areas such as issue management, social psychology and sociology (An and Cheng 2010).

Rhetorical approach has been the most widely applied analytical tool in this line of research. The rhetorical approach mainly concerns the speech style of a spokesperson’s statements and the rhetoric of the messages from the organization during a crisis. The approach attempts to identify what kind of strategies and postures the organization should use in crisis communication (An and Cheng 2010). Corporate Apologia and Image Restoration Theory are the two classic applications of the rhetorical approach in crisis communication.

Corporate apologia studies how an organization could use apologia strategies to defend its reputation and restore its social legitimacy – a critical form of reputation – among the public when a crisis happens (see e.g. Ice 1991; Hearit 1994, 1995; Ihlen 2002). Apologia here refers to “a rhetorical concept that explores the use of communication for self-defense” (Coombs 2010a). There are four apologia strategies the organization can refer to defend its reputation after hit by a crisis: denial, bolstering, differentiation, and transcendence (Ware and Linkugel 1973). Denial is the most straightforward strategy – the organization may simply deny having committed any wrongdoing that led to the crisis. Bolstering seeks to reduce negative impacts by reminding people the positive things had done in the past. These two strategies are reformatory in the sense that they do not invent or alter the audience’s meaning-making process. Differentiation refers to an attempt at dissociating some facts from
their larger context. Attributing the wrongdoing to a few employers or subcontractors and pointing out they are unlike the rest is a typical example of differentiation. The final one, transcendence, is a method of putting the misconduct in a broader, more favorable context where a higher norm is applicable. For instance, the organization may admit that an action was adopted because it best serve the interest of shareholders or taxpayers, although it was a painful decision that the organization would rather avoid. These two are transformative strategies because they seek to reframe audience’s meaning-making by looking at things in new ways. Organizations may use one reformative strategy and one transformative strategy together to build their postures of communication (Ware and Linkugel 1973).

Benoit’s (1995) *image restoration theory*, on the other hand, aims to identify the available communication plans for organizations when facing reputational threats. The theory posits that when an organization is perceived by audiences to be responsible for an offensive action, its image or reputation would be at risk. A goal-directed communication with the central aim of maintaining a positive reputation should be employed to respond to such threats. Built upon apologia and elements from other rhetorical foundations in risk communication and issue management study, image restoration theory sums up crisis response strategies offered by previous studies into “a typology that is more complete than those found in the rhetorical literature while avoiding the extreme detail found in some description of accounts” (Benoit 1995, 74). The typology consists of five categories of image restoration strategies: denial, evasion of responsibility, reduction of the offensiveness, corrective action, and mortification. Benoit (1997) explains them in detail to help practitioners analyze reputational threats in crisis situations and design appropriate messages to retain the positive images. The importance of identifying different audience groups and tailoring messages to address their different interests is also articulated.

In addition to offering effective frameworks of crisis communication strategies, another popular branch at this stage is to investigate how crisis response strategies have been used in real situations. Guided by the frameworks of rhetorical discourse, studies in this branch normally use content analysis to comprehensively examine related news reports, organizational announcements, fact sheets, interview scripts,
and/or internet postings to provide a clearer picture of how certain strategies were being used and, in some cases, how stakeholders reacted to these strategies.

By tracking and framing the organization’s crisis response and the public’s feedback during the entire course of crisis, researchers are able to evaluate the applicability of specific strategies in specific organizational contexts and crisis types. Some of these studies provide critical examinations of the strategies recommended in previous research, while some of them yield insights into the effects of some new elements such as culture, new media, and message wording in crisis response communication (Huang 2006; Taylor and Perry 2005; Stephens and Malone 2009).

However, we also see that different studies sometimes might show inconsistent results. Holladay’s (2010) two studies on the traditional news coverage of chemical accidents, for instance, suggest that the effective crisis communication strategy preached by the academics does not seem to benefit the organization greatly. Based on the analysis of US chemical accidents, she observes that contrary to the common belief that the spokesperson in a crisis should timely and strategically establish a presence with the media in order to have a voice that can positively influence press coverage and crisis framing, spokesperson’s statements were neither prominently featured in the initial media reports, nor regularly included in the follow-up coverage.

Quite differently, after examining the online news coverage of 17 fraud crises, Caldeiro et al. (2009, 225) finds that organizational news releases with direct quote and image repair tactics ‘do appear in print’. The authors conclude that at least for fraud cases, the affected organizations could benefit from incorporating useful quotes and relevant information into their statements, as these releases would be presented in the news stories and chances are good that organizations can have their side of story told by the media.

In fact, the two examples above reflect one of the major limitations of case study approach: the lack of the generalizability from various studies across different crisis situations. Because most case studies adopt an organizational-based perspective and are essentially descriptive post hoc analyses in which researchers bring their own interpretations to the data of some particular crisis situations at some particular time,
very few generalizations can be drawn from one organization in one specific situation to inform other organizations in other situations (Coombs 2007a, 2010a; Stacks 2002; Dean 2004; Kent 2010). Huang’s (2006) study on four political crisis situations and their response strategies, for example, confirms that crisis situations do have an impact on the effectiveness of crisis response strategies, as some strategies are effective just in certain situations but not in the others. This does not suggest that the collected wisdom gleaned from case studies is inherently unjustified or should not be taken seriously. Rather, it raises an important question after we get a set of general rhetorical strategies and a handful of crisis communication guidelines: which of these strategies work more effectively than the others under different circumstances?

2.1.2.3 Evidence-based Study with Empirical Tests

In order to improve the generalizability and effectiveness of crisis communication studies, scholars in recent years urge a shift towards evidence-based research that is rigorously driven by theories and able to produce evidence-proven results to enlighten future practice in a predictive rather than speculative way (An and Cheng 2010; Coombs 2007a, 2010b; Fediuk, Coombs, and Botero 2010).

Evidence-based studies in crisis communication differ from case studies in two major aspects. First, the evidence-based studies normally treat crisis from the standpoint of stakeholders. While early case studies primarily focus on what organizations (should) do and say when hit by crises, the center of evidence-based studies lies in how stakeholders react to crisis events and organizations’ response strategies. Coombs (2010b, 721) outlines four general questions that guide research in such an “audience effects” perspective: 1) how people perceive the crisis situation, 2) how they react to crisis response strategies, 3) how they perceive the organization in crisis and 4) how they intend to behave toward the organization in crisis in the future. Many studies (see e.g. Dean 2004; Lee 2004; Cho and Gower 2006; McDonald, Sparks, and Glendon 2010; Elliot 2010) have been carried out to address these four questions in order to evaluate the effectiveness of crisis response strategies in various situations. Second, methodologically, evidence-based studies tend to employ experimental, quantitative methods while case studies largely use descriptive, qualitative methods. In evidence-
based studies, experimental tests are designed to identify key variables and relationships that affect the outcome of crisis response strategies. Theoretical paradigms and practical advice of crisis communication are established and tested based on scientific collection and analysis of data.

The audience-oriented perspective from evidence-based crisis communication studies advance our understanding of the practical effects of different crisis response strategies to a higher level. The emphasis on a more reliable data collection process also adds objectivity and extensibility to the findings of these studies. Researchers can easily validate propositions concluded in previous research and build upon them to develop their own conceptual frameworks. Situational Crisis Communication Theory, developed by Coombs and his colleagues, is one of the most important conceptual frameworks in this field. This thesis also uses SCCT as the point of departure. The following section will discuss this influential theory in detail to set up the theoretical boundary for the further elaboration in the later part of the research.

2.2 Situational Crisis Communication Theory

2.2.1 Overview

The development of SCCT can be dated back to 1995, when Coombs (1995) noticed that crisis situations could have a major influence on the selection of crisis response strategies but that existing research failed to consider crisis situations and the publics as important factors that determine which strategy works best in a particular situation. In an effort to find the relationship between crisis situations and appropriate response strategies, Coombs and his colleagues began to take a ‘symbolic approach’ (Coombs 1995; Coombs and Holladay 1996) to crisis management and communication, which later has been developed and referred to as SCCT since 2002 (Coombs and Holladay 2002).

Attribution Theory, a social psychology theory that seeks to understand how individuals interpret the causes of events or people’s behavior, serves as the theoretical basis of SCCT for explaining how people perceive crises, the focal organizations and its crisis response strategies. According to attribution theory, when
an important event (especially a negative one) happens, people have an innate desire
to make causal inferences on why the event occurs so as to psychologically make
better sense of the situation. Such inferences occur naturally and sometimes do not
require much evidence. Eventually these causal inferences will influence people’s
responses (including expectancies, emotions and behavior) to the event (Heider 1958;
Martinko et al 2007). Informed by attribution theory, SCCT applies this premise into
the field of crisis communication study: When an (important and negative)
organizational crisis occurs, stakeholders will perceive the organization as a person-
like entity, and make causal attributions about crisis responsibility – who is
responsible for the crisis – just the same way as they make causal inferences on
individual behaviors in the interpersonal context (Lee 2005). More importantly, these
attributions of crisis responsibility to a large extant determine the reputational threat
posed by the crisis and will eventually shape stakeholders’ emotional and behavioral
responses to the focal organization (Coombs 1995, 2007a). The central objective of
SCCT is therefore to understand how people make crisis responsibility attributions
and how the perceptions of crisis responsibility can influence their behavior towards
the organization (Coombs 2010a).

2.2.2 Basics of SCCT

SCCT postulates that the effectiveness of communication strategies is dependent on
some specific characteristics of a crisis situation. By analyzing the crisis situation,
crisis managers can assess potential reputational threat to the focal organization, and
then utilize suitable response strategies that best protect or repair the organization’s
reputation in the given situation (Coombs 2007c). The critical link between crisis
situation and the level of reputational threat is the amount of crisis responsibility
as the linchpin of SCCT.

SCCT proposes a two-step process to assess the level of reputational threat in a crisis.
The initial step is to identify the basic crisis type based on how the crisis situation is
being framed. Enlightened by framing research in mass communication, Coombs
maintains that crisis types – a form of crisis frame – feature important cues that
indicate certain cognitive structures with regard to how stakeholders should interpret the crisis. These information cues bear a significant influence on how much stakeholders attribute crisis responsibility to the focal organization (Coombs 2007c). When an aviation accident happens, for instance, crisis responsibility and reputational threat to the affected airline company could differ greatly on whether the accident is being framed as a weather-related misfortune, a terrorist sabotage or controllable technician negligence.

After several refinements over the years, the latest version of Coombs’s (2009) crisis typology includes a set of three main crisis types that correspondingly represent three different levels of associated crisis responsibility and reputational threat to organizations: *Victim Crises* (minimal crisis responsibility), *Accident Crises* (low crisis responsibility) and *Intentional Crises* (strong crisis responsibility). Table 1

<table>
<thead>
<tr>
<th>Table 1 Crisis typology and level of crisis responsibility (Source: Coombs 2009, 112)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Victim Crises: Minimal Crisis Responsibility</strong></td>
</tr>
<tr>
<td><em>Natural disasters</em>: Acts of nature such as tornadoes or earthquakes.</td>
</tr>
<tr>
<td><em>Rumors</em>: False and damaging information being circulated about your organization.</td>
</tr>
<tr>
<td><em>Workplace violence</em>: Attack by former or current employee on current employees on-site.</td>
</tr>
<tr>
<td><em>Product Tampering/Malevolence</em>: External agent causes damage to the organization.</td>
</tr>
<tr>
<td><strong>Accident Crises: Low Crisis Responsibility</strong></td>
</tr>
<tr>
<td><em>Challenges</em>: Stakeholder claims that the organization is operating in an inappropriate manner.</td>
</tr>
<tr>
<td><em>Technical error accidents</em>: Equipment or technology failure that cause an industrial accident.</td>
</tr>
<tr>
<td><em>Technical error product harm</em>: Equipment or technology failure that cause a product to be defective or potentially harmful.</td>
</tr>
<tr>
<td><strong>Intentional (Preventable) Crises: Strong Crisis Responsibility</strong></td>
</tr>
<tr>
<td><em>Human-error accidents</em>: Industrial accident caused by human error.</td>
</tr>
<tr>
<td><em>Human-error product harm</em>: Product is defective or potentially harmful because of human error.</td>
</tr>
<tr>
<td><em>Organizational misdeed</em>: Management actions that put stakeholders at risk and/or violate the law.</td>
</tr>
</tbody>
</table>
illustrates the concise definitions of these three main types and their subtypes proposed by SCCT. Coombs (2007a, 2007c, 2009) posits that each crisis type generates a specific and predictable amount of crisis responsibility attributed to the focal organization. The reputational threat posed by a crisis is positively related to how much crisis responsibility are being attributed to the focal organization. The threat to an organization’s reputation intensifies as stakeholders attribute more crisis responsibility to the organization. Therefore, by identifying the basic crisis type, crisis manager can roughly anticipate how much crisis responsibility stakeholders will attribute to the organization and thereby establishing the initial level of reputational threat in a crisis.

The second step is to adjust the initial level of reputational threat by reviewing the focal organization’s crisis history and prior reputation, two additional factors that can increase attributions of crisis responsibility and intensify the threat from the crisis. *Crisis history* refers to whether or not an organization has experienced a similar crisis in the past, while *prior reputation* examines the general state of how well or poorly an organization has or is perceived to have treated stakeholders in other contexts (Coombs 2007c, 167). SCCT posits that either a history of similar crisis or a negative prior reputation (i.e. relationship history) will move the reputational threat to a higher level (Coombs 2007a). An unfavorable prior reputation, for example, means stakeholders will treat a victim crisis as an accident crisis and an accident crisis as an intentional crisis (Coombs 2006; Coombs and Holladay 2002).

Based on a thorough evaluation on crisis type, crisis history and prior relationship, the crisis manager will be able to determine the level of perceived crisis responsibility and reputational threat to the organization. SCCT postulates that the key to protecting organizational reputation is to select the appropriate crisis response strategies that match the requisite level of accepting crisis responsibility (Coombs 2007a, 2009). As the level of reputational threat moves higher, more accommodative strategies – as opposed to defensive strategies – should be employed to show concerns for the affected stakeholders and willingness to take responsibility for the crisis (Coombs 2009). The smaller the gap between stakeholders’ perceptions of organizational responsibility and the organization’s initiative of responsibility acceptance, the better
the chance that the organization could reduce negative emotions and communication dynamic among stakeholders and protect organizational reputation from serious damage.

SCCT has generated a list of crisis response strategies as well as several recommended guidelines to match different levels of crisis responsibility attributions with the appropriate strategies (Coombs 2009). The set of crisis response strategies consists of four major postures (denial, diminishment, rebuilding and bolstering) that are arrayed on an accommodative-defensive continuum. Since the current research majorly focuses on the attribution process of crisis responsibility rather than the application of specific crisis response strategies in practice, the rationality and effectiveness of those crisis response strategies will not be further elaborated in this thesis. It is, however, important to note that this does not mean that crisis response strategies are disconnected with the attribution process and reputation damage. As will be discussed in the following section, crisis response strategies themselves are a factor that could shape both the level of crisis responsibility attributions and the level of reputational threat.

2.2.3 Empirical Test of SCCT

A full picture of key variables and their relationships in SCCT model are illustrated in Figure 1. Many studies have been designed to test the validity of these relationships over the years. The main findings of these studies are summarized as follows.

1 Refer to e.g. Coombs 2009, 2010a for a brief discussion on crisis response postures and practical recommendations offered by SCCT
Central in the model are the relationship between crisis responsibility and organizational reputation and the relationship between organizational reputation and behavioral intentions, as indicated by arrow A and D respectively. Both of these relationships have been empirically established. Studies consistently find that the greater crisis responsibility has been attributed to an organization, the greater the threat would be imposed to the organizational reputation (Coombs 2004; Coombs and Holladay 1996, 2002, 2004). On the other hand, research shows that post-crisis reputation has a significant impact on future purchase intentions and support for an organization (Coombs and Holladay 2001).

Figure 1 Model for SCCT Variables (Source: Coombs 2007, 166)

Those two intensifying factors – crisis history and prior reputation – have been identified to both have a direct effect (as represented by B1 and B3 respectively) and an indirect effect (as represented by B2 and B4 respectively) on organizational reputation (Coombs 2007c). A history of crisis will intensify stakeholders’ crisis
responsibility attributions to the focal organization, and because of the 
aforementioned relationship between crisis responsibility and organizational 
reputation, it will indirectly affect organization’s reputation. In addition to this 
indirect effect through the node of crisis responsibility, it is found that there is also a 
direct and even stronger link between crisis history and organizational reputations 
(Coombs 2004). Similarly, studies on prior reputation also strongly indicate that 
organizations that often treated stakeholders badly in the past tend to be attributed 
greater crisis responsibility and suffer more direct reputational damage than 
organizations with neutral or favorable prior reputation among stakeholders (Coombs 
and Holladay 2001, 2002; Klein and Dawar 2004). A recent study from Brown and 
White (2010) evidently demonstrates the negative correlation between prior 
relationship score and responsibility attribution score. On the opposite side, the halo-
effect belief that a positive prior reputation with stakeholders will somehow protect 
the organization from reputational damage, however, holds true only in a limited 
crisis domains and only for organizations with very favorable prior reputation 
(Coombs and Holladay 2006).

Crisis response strategies are expected to protect organizational reputation during 
crises in the following three aspects, as indicated by F1, F2, and F3 respectively: 
shaping attributions of crisis responsibility, changing perceptions towards 
organizational reputation and reducing negative emotions generated by the crisis 
(Coombs 1995, 2007c). The protective effects of crisis response strategies are not 
limited in one single crisis situation in a static manner. Instead, they exert influence 
on crisis attributions and organizational reputation in a more dynamic way, as 
stakeholders would not only interactively make new attributions based on how the 
organization are responding to the crisis but also take in account how the organization 
deal with stakeholders in the current crisis case as prior reputation when the next 
crisis happens.

Finally, emotions are a recently added factor in SCCT. Research finds that certain 
emotions such as anger operate on a similar tack as the route of “crisis responsibility – 
reputational threat – behavioral intention”, as shown by Arrow C and E. (See e.g. 
McDonald, Sparks, and Glendon 2010). Increased attributions of crisis responsibility
will intensify feelings of anger towards the organization and consequently lead to negative word-of-mouth communication as well as reduced purchase intention (Coombs and Holladay 2005, 2007).

2.2.4 Merits and Limitations in SCCT

SCCT has now become one of the most important theories in crisis communication. According to An and Cheng’s (2010) meta-analysis of crisis communication research in the past 30 years, SCCT topped the list of the most frequently cited theories in this field. Compared with previous crisis communication theories, SCCT features some distinct advantages. Firstly, SCCT has provided unique insights into the critical variables and causal relationships in crisis communication. Experimental method has been used throughout the development of SCCT, and interconnections among the key variables such as crisis types, crisis responsibility and crisis response strategies have been scientifically validated. These variables and relationships have established a structured guide map to investigate the dynamic and complex crisis communication processes.

Secondly, the findings from SCCT tend to have greater validity and generalizability than the conclusions in earlier qualitative studies. The framework of SCCT has been continuously refined based on findings from a series of empirical studies over nearly two decades, while the improved framework has in turn been used to guide subsequent research for further theoretical elaboration. Statistically, consistent and replicable research findings from these dynamic explorations have greatly extended the confidence in the legitimacy and generalizability of SCCT framework. Even though the experimental research of SCCT, like all other laboratory experiments, suffers from the weakness of being artificial and is subject to its specific sampling strategies, it offers evidence-based proof to investigate how to choose the appropriate crisis response strategies that work most effectively in a given type of crisis situations. These experimentally-verified evidences would add great practical value to the broad but somehow vague wisdom drawn from the abundant line of crisis case studies.

Finally, SCCT’s attribution-based premise and its audience-oriented perspective act in accord with the perceptual nature of crises. SCCT starts with the attribution process
that stakeholders will take after a crisis happens, and essentially seeks to understand the factors that affect what responsive measures can most effectively protect or restore stakeholders’ perceptions on the organization’s reputation in a specific crisis context. Crisis attribution is dependent on crisis situation, and in turn affects the selection of crisis response strategy. Using how stakeholders perceive crisis responsibility as a node, SCCT creates a meaningful link between crisis situations and the best response strategies in these different situations. This link can help crisis communicators prescriptively evaluate the threat from a given type of crisis and choose the best strategy to deal with it.

However, despite an influential and rigidly-tested theoretical framework in understanding the interaction among perceived crisis responsibility, potential reputational threat and crisis response strategies, SCCT at the current stage is by no means sufficient to capture the whole complexity and ambiguousness of crisis events. In fact, a major critique of SCCT lies in its imperfect assessment of crisis responsibility, which is, according to SCCT, a critical factor in shaping reputational threat evaluation and the selection of appropriate response strategies. It should be noted here that there are other parts of critiques on SCCT such as the effectiveness of its recommended crisis response strategies (Brown and White 2011). However, since this research focuses on the evaluation process of crisis responsibility attributions, limitations in other aspects are not elaborated here.

SCCT identifies crisis type, crisis history and prior reputation as three (one primary and two supplementary) important factors that shape crisis responsibility attributions, and proposes a two-step process to assess the level of perceived crisis responsibility. However, it is argued that this approach may not be well applied to real crisis situations.

More specifically, it is argued that it might be impractical to predict the initial level of crisis responsibility attributions by simply classifying a crisis against SCCT’s crisis type list. Firstly, certain crisis situations just cannot be easily categorized into a handful of pre-set crisis types (or subtypes) demonstrated in SCCT, because quite often, as will be illustrated later in this research, a complex crisis situation may
simultaneously consist of several different aspects that can be grouped into more than one subtype according to the ten crisis subtypes illustrated in Table 1. A fatal air crash accident, for example, could result from a coincidence where a small human mistake (human-error accident – preventable crisis) happened to meet an unusual technical failure (technical error accident – accident crisis) in an extreme weather condition (natural disaster – victim crisis). This is exactly what chaos theory describes – the crisis is highly sensitive to several contingent factors at the same time, and is somehow unpredictable in the long run (Sellnow et al. 2002). When such a complex crisis happens, there can be various media reports and crisis frames available with focuses on one or more causal factors. It may be difficult to tell which media frame(s) individual stakeholder will resort to interpret the crisis event. In such cases, contradictory classification of crisis situation may be produced in crisis type identification – the first step of crisis responsibility assessment in SCCT.

Secondly, new crisis types as well as possible variations of the old ones are continually emerging in this era of globalization and media exploding. As a result, any crisis list might never be exhaustive to enumerate all of the possible crisis scenarios in the real life (Lee 2005). The ten-type list provided in SCCT is no exception. Therefore, for those new crises that have not yet been included in SCCT typology, the preliminary assessment of crisis responsibility suggested in SCCT may be less useful and less determinate.

Thirdly, a crisis is often a dynamic process where stakeholders are involved in an interactive dialogue with the focal organization. Crisis frames and stakeholders’ interpretations may change in a subtle way as the crisis gradually unfolds. Hence, the straightforward but somehow static two-step approach proposed by SCCT sometimes may fail to grab the dynamic evolution of crisis events.

Obviously, all of the situations described above will weaken the applicability of the crisis typology suggested in SCCT when determining the initial level of crisis attributions and reputational threat if a complex and ever-evolving crisis emerges.

In addition, the two intensifying factors suggested in SCCT approach may also be at question. On the one hand, it would be difficult to determine the specific status of
prior reputation and crisis history of an organization. For most organizations, there are normally both negative and positive parts and stages in their previous relationships with the stakeholders. Therefore, the definition of prior reputation – “the general state of how well or poorly an organization has or is perceived to have treated stakeholders in other contexts” – seems to be quite ambiguous. Similarly, severe or minor, recently or long ago, most organizations have inevitably experienced some crises during their operations in the past. Thus what kind of crises count and how much they count as a negative crisis history that can noticeably influence stakeholders’ perceptions of crisis responsibility may not be judged easily. On the other hand, as Schwarz (2008) points out, stakeholders often observe the focal organization over time through a multiple set of situations. When a crisis happens, stakeholders may use much more information to assess the organization’s performance and crisis responsibility than merely apply those two intensifying factors proposed by SCCT.

With these regards, it seems that the attribution assessment approach in SCCT can be further explored to better conceptualize how stakeholders actually interpret a crisis event. Schwarz (2008) suggests that Harold Kelley’s (1967, 1973) covariation principle – an important model in attribution theory in psychology – could be a useful framework to better predict the perceived causes and organizational responsibility in crisis communication studies. The following section will briefly review the key points of covariation principle and its empirical support in social psychology, and then introduce Schwarz’s suggestions on extending SCCT with a covariation-based approach.

2.3 Covariation Principle and Its Extension to SCCT

2.3.1 Basics of Covariation Principle

Based on earlier studies in attribution research, Kelley (1967) developed a seminal theory as to how people make causal inferences for behaviors or events when information of multiple observations is made available. The theory, which later was labeled as covariation principle, posits that “an effect is attributed to the one of its possible causes with which, over time, it covaries” (Kelley 1973, 108). To put it another way, if a certain behavior or event is observed to change correspondingly with
the change in a certain cause, then this cause will be attributed to the behavior or event.

Kelley (1967) follows Heider (1958) in assuming that ordinary individuals make causal inferences in a very similar way as scientists use the statistical model of the ANOVA (Analysis of Variance) to interpret experimental results, where the possible causes of an event constitute the independent variables and the effect of the event constitutes the dependent variable. He specifies three categories of possible causes of an event: Persons, Entities, and Circumstances (or times). Person category refers to causes related to stable disposition or property of the person who carries out the event. Entity category refers to causes related to stable properties of the object with which the person is interacting. Circumstances category refers to causes related to some particular occasions or circumstances – “a package of unspecified but transient causal factors” (Kelley 1973, 110) – under which the effect is being carried out. Tom failed to deliver a specific task on time (the effect), for example, can be attributed either to Tom himself (person category, e.g. lack of effort), or to the task (entity category, e.g. too difficult), or to certain occasional factors (circumstance category, e.g. caught in an unexpected traffic jam). Whether an effect is attributed to the person, to the entity, or to the circumstances depends, as mentioned above, on with which causes the effect covaries.

Correspondingly, Kelley (1967) introduces three general information dimensions with which people use to form causal attributions: Consensus, Distinctiveness and Consistency. These three information dimensions are connected with the covariation between the effect and each of the three cause categories respectively. More specifically, consensus refers to whether an effect covaries with the person. Consensus is high when such covariation is not observed, i.e. the effect does not change even if the person changes; consensus is low when the covariation exists. Distinctiveness reflects the covariation between the entity and the effect. Distinctiveness is low when this covariation is absent (a change of the entity does not result in a change of the effect) and is high when this covariation is present (changes in the effect covaries with the changes in the entity). Finally, consistency concerns with the covariation between the times and the effects. High consistency happens if an
effect always occurs whenever a certain cause occurs, while low consistency indicates that an effect sometimes occurs when the cause is absent and does not occur when the cause is present.

To still use Tom’s failure to complete a task on time as an example. Consensus information refers to how other persons, say, Tom’s peers, perform in the same task. Consensus is high if Tom’s peers normally cannot complete the task on time either. In other words, the cause of this failure is consensual among different persons. Consensus is low if most of his peers can deliver the task punctually. In other words, a change in the person cause (from Tom to his peers) can result in a change of the effect (from task failed to task completed). Distinctiveness information refers to how Tom performs in other similar tasks. If Tom only failed at this specific task but succeeded at other comparable ones, then distinctiveness is high, i.e. the cause of this failure is distinct among different entities. In this case, once the entity cause changes (from this specific task to other similar tasks) the effect changes accordingly (from failure to success). On the other hand, if Tom failed not only at the present task but also at other comparable ones, then distinctiveness is low. Finally, consistency information concerns how Tom has performed the same task over time. If Tom has consistently failed at this specific task for many times, then consistency is high, i.e. the cause of the failure is consistent over time. Conversely, if Tom generally could finish the task on time in the past, then consistency is low, as the cause of the failure covary with time – changes in points of time lead to changes in the effect.

To summarize, consensus information refers to how other persons behave towards the same object under the same circumstances as the focal person encounters, distinctiveness information refers to how the focal person behaves towards different comparable objects under the same circumstances, and consistency information refers to how the focal person behaves towards the same object under different circumstances over time. Kelly (1973, 109) suggests that with information on these three dimensions, people perform “a naïve version” of analysis of variance (ANOVA) to infer the most plausible causes from the observations of covariance between the causes and the effect.
Table 2: Information patterns for the three ideal attributions (Source: Orvis, Cunningham and Kelley 1975, 607)

<table>
<thead>
<tr>
<th>Attribution</th>
<th>Consensus</th>
<th>Distinctiveness</th>
<th>Consistency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Person</td>
<td>Low</td>
<td>Low</td>
<td>High</td>
</tr>
<tr>
<td>Entity</td>
<td>High</td>
<td>High</td>
<td>High</td>
</tr>
<tr>
<td>Circumstances</td>
<td>Low</td>
<td>High</td>
<td>Low</td>
</tr>
</tbody>
</table>

With two scales of degree (high and low) on each of the three dimensions (consensus, distinctiveness and consistency), there are supposed to be eight different combinations of information patterns. However, Kelley (1973; Orvis, Cunningham and Kelley 1975) postulates that only three of them will give rise to a strong, confident attribution to the person, the entity and the circumstances, respectively. These three “ideal” information patterns are summarized in Table 2.

The first pattern illustrates a situation where 1) the effect is observed only when a specific person is present but not observed when other persons are present (low consensus, the effect covaries with the person), 2) for this specific person, the effect is observed across several similar entities (low distinctiveness, the effect does not covary with the entity) and 3) for this specific person, the effect is observed across all points of time (high consistency, the effect does not covary with points of time). According to covariation principle, in such a situation, we are likely to attribute the effect to the specific person. If Tom, for example, has failed to complete a given task for many times (high consistency), and he can’t manage to handle other similar tasks as well (low distinctiveness), but his peers normally can do a good job at the same task (low consensus), then we tend to believe that the cause of his failure on this given task is something related to certain stable disposition of Tom himself such as lack of intellectual ability or reluctance to work hard.

The second pattern indicates a situation in which people are likely to attribute the effect to the entity. In this pattern, the effect is present only when a certain entity is
present but not for the other entities (high distinctiveness, the effect covaries with the entity), while it makes no difference which person interacts with this specific entity (high consensus, the effect does not covary with the persons) or at what time the interaction happens (high consistency, the effect does not covary with the points of time). For instance, if Tom has consistently failed at a given task in the past but he normally does other comparable jobs quite well, and in fact, not only Tom but also his peers cannot complete the given task, then people tend to believe Tom is forgivable in this case; the cause of the failure is probably because the task is inherently too difficult to handle and nobody has found a good way to deal with it.

The last pattern illustrates a little more complicated situation where the effect is observed only when a specific person (low consensus) is interacting with a specific entity (high distinctiveness) at a specific time (low consistency). In other words, the effect covaries with all the three possible causes. People, therefore, are expected to attribute the effect to a certain particular circumstance where several transient and unexpected factors are combined together to make an impact on the effect. If Tom is the only person who failed in a given task among his peers, in the past he generally did a great job on the same task, and he has an excellent record in other comparable tasks, then people are likely to think the failure this time could be an unusual accident, and ascribe the failure to transient factors such as Tom did not sleep well last night or he happened to misread a word in the instruction. If Tom were given another chance, the result could be totally different.

Other than these three confident attribution patterns, the rest five patterns, according to covariation principle, are supposed to lead either to situations where an interaction of two possible causes accounts for the effect, or to situations in which people are unable to make unambiguous attributions to the effect.

### 2.3.2 Empirical Test of Covariation Principle

Many subsequent empirical studies have been carried out to test Kelley’s model. The major empirical findings for the eight possible information patterns in covariation principle are illustrated in Table 3.
Most prominently, as summarized in Försterling’s work (2001, 56-57), these studies have strongly confirmed that high consensus, high distinctiveness and high consistency pattern stimulates 1) attributions to entities more than any of the remaining seven possible patterns does and 2) more attributions to entities than to the other two causes (persons and circumstances). Similarly but in a slightly less strong degree, studies have shown that low consensus, low distinctiveness and high consistency pattern will give rise to person attributions more than the other patterns do and more than to the other attributions. In other words, strong empirical support has found for Kelley’s first two ideal patterns in Table 2.

However, Kelley’s third ideal pattern in Table 2 (low consensus, high distinctiveness and low consistency) does not seem to inspire a clear circumstance attribution, as studies find that circumstance attributions do not always result from one specific pattern; instead, they tend to happen whenever consistency is low (see pattern 5-8 in Table 3).
Moreover, studies also find evidence that low consensus, high distinctiveness and high consistency pattern will lead to more attributions to an interaction of the person and entity than to other attributions, but no definite pattern emerges for the other two-way interactions (person-time interaction and entity-time interaction).

Finally, Hilton and Slugoski (1986) have argued that high consensus, low distinctiveness and high consistency pattern, which according to covariation principle would not lead to any attribution because the effect covaries with none of the three causes, actually can trigger attributions of person-entity interaction, but only in some particular situations.

### 2.3.3 Relationship between SCCT and Covariation principle

Rooted in attribution research, the crisis responsibility assessment approach in SCCT has a strong relationship with Kelley’s covariation model.

As suggested in SCCT, the initial level of reputational threat posed by a crisis is evaluated on the basis of three main crisis types: victim crises, accident crises and intentional crises. This crisis taxonomy is originally formed by clustering thirteen basic crisis types (i.e. the ten subtypes in Table 1, the original thirteen were merged into ten due to similarities) according to the amount of crisis responsibility attributed to the focal organization entailed in each crisis type (Coombs and Holladay 2002). But actually, the idea of using crisis responsibility as a cluster factor in the cluster analysis is enlightened by the concept of personal control in Weiner’s (1985; Weiner et al. 1971) achievement motivation research (Coombs and Holladay 1996). Weiner applied causal factors in Kelley’s covariation principle (person, entity, and time) to form his own three causal dimensions (personal control, external control, stability) to explain how people make attributions for the focal actor’s behavior. A person, according to Weiner, is held more responsible for an event if the event is perceived as stable and the person has great control over the event. Similarly, the three main crisis types in SCCT are established by clustering to what extent stakeholders consider the crisis stable and controllable by the focal organization (Coombs and Holladay 1996;
Coombs 2004). For example, in a ‘human-error product harm’ crisis (in intentional crisis cluster), stakeholders are more likely to attribute crisis responsibility to the focal organization because the human error that lead to the crisis is supposed to be controllable by the organization, while in a ‘natural disaster’ crisis (in victim crisis cluster), stakeholders are presumed to attribute less crisis responsibility to the focal organization because the organization normally have little control over the causal factor.

In fact, from the perspective of covariation model, the three main crisis types in SCCT are closely related to Kelley’s three categories of possible causes: victim crises type implies attributions of crisis responsibility to certain unexpected and transient circumstances outside the control of the focal organization (e.g. rumors, natural disasters), in which case the organization is viewed as a victim and bears very weak responsibility for the crisis. Accident crises type implies attributions to the entities over which the organization has limited control (e.g. technical errors), in which case the organization is perceived to perform properly in general and is associated with low crisis responsibility. Intentional crises type implies strong person attributions, in which case controllable aspects within the organizations (e.g. human errors, mismanagement) are perceived to be accountable for the crisis, and the organization is perceived to carry inescapable responsibility for the crisis.

Furthermore, Coombs admits that the two intensifying factors that serve to adjust the initial assessment of reputational threat in SCCT approach are also derived from information dimensions in covariation principle. According to Coombs’s own work (2007a), consistency dimension is operationalized as crisis history. Consistency is high if an organization has had similar crises in the past. Distinctiveness dimension is operationalized as organization’s prior reputation. Distinctiveness is low if the organization has generally treated stakeholders badly across a number of domains. As mentioned in Section 2.2.2, Coombs (2004, 2007a) posits that either a crisis history or an unfavorable prior reputation will be sufficient to alter the initial attributions of crisis responsibility and move the reputational threat posed by the crisis to a higher level – “A victim crisis becomes treated as an accident crisis and an accident crisis
becomes treated as an intentional crisis when either consistency is high (crisis history) or distinctiveness is low (negative relationship history)” (Coombs 2007a, 137).

2.3.4 Schwarz’s Suggestions on Extending SCCT with Covariation Principle

According to Schwarz (2008), stakeholders can be assumed to have constant connection with an organization, especially a famous one, in one way or another. They may, for example, follow the related news about the organization, share recent events of the organization within online communities, engage in various organizational activities and even have direct dialogues with the organization. These diversified experiences with the organization enable the stakeholders to observe the organization’s performance and obtain information on different aspects of the organization in multiple situations over a long period of time. Therefore, when a crisis happens to the organization, stakeholders would possibly use information from multiple observations on the organization to judge the situation and infer the causes of the crisis in a dynamic way rather than treat the organizational crisis as an isolated incident. Those various contacts with the organization could shape stakeholders’ intrinsic perceptions on the organization’s reputational image. As a result, they might be crucial factors that influence how stakeholders perceive a specific crisis situation and judge crisis responsibility.

Schwarz further argues that if the assumption that stakeholders have access to and do use information from multiple observations to make crisis responsibility attributions holds true in real crisis situation, then Kelley’s covariation model could be a valuable framework to understand people’s attribution processes in a crisis, because Kelley’s model is specified to explain how people make causal attributions on the basis of multiple observations.

Note that the attribution assessment approach proposed in SCCT itself also relies on this important assumption. As mentioned earlier, the SCCT approach as well as its empirical support suggests that in order to judge crisis responsibility stakeholders do take into account how the organization performed in the past and how the organization treated stakeholders in other contexts. However, the SCCT approach obviously takes a different way to predict the perceived attributions of crisis
responsibility from the one suggested in Kelley’s model. Coombs operationalizes two information dimensions (distinctiveness and consistency) and examines their effects on crisis responsibility attributions separately, while on the contrary, Kelley’s model investigates the causal effects of different information patterns and focuses on the conjoint effect of the three information dimensions as a whole. Schwarz (2008) critically points out that analyzing the effect of information dimensions in an isolated way might be misleading, because the effect of a single information dimension might be interconnected with and dependent on the effect of information in the other two dimensions, especially if it is found that stakeholders do perform covariation-based causal inferences when attributing crisis responsibility. He therefore suggests that a more consistent integration of covariation model into SCCT’s attribution assessment approach would probably enrich the understanding of the pivotal question as to how stakeholders come to the judgment of crisis responsibility in a crisis situation and thus improve the explanatory power of SCCT.

However, such a covariation-based approach to examining the causal attribution process in the contexts of crisis communication still awaits concrete evidence from empirical studies. Schwarz (2008, 55) also notes that even though current studies on stakeholders’ perceptions in organizational crises have clearly demonstrated great potential for integrating attribution models into crisis communication research, his suggestion of extending SCCT framework with “a covariation-based perception of crisis causes” is still at a hypothetical stage and has to be further tested and elaborated. More specifically, there are two important questions future research in this field should work on: Does the model of covariation-based causal attributions in social psychology befit the organizational crisis contexts in crisis communication research? And if it does, how does it relate to and can be integrated into the existing framework of SCCT?

This thesis follows Schwarz’s track of exploring possible refinements of SCCT. It seeks to shed light on these two questions by collecting and analyzing empirical data on the people’s crisis responsibility attributions under the framework of covariation-based causal inferences.
Chapter 3 Theoretical Framework

In line with Schwarz’s suggestion, this research is aimed to further examine the applicability of covariation principle as an extension to SCCT in explaining the perceived crisis responsibility in crisis communication. This chapter will first outline the assumptions and research questions for the integration of covariation model into SCCT and then discuss the empirical case for subsequent studies.

3.1 Covariation-based Approach to Crisis Responsibility Assessment

Based on the guideline of covariation principle, a covariation-based approach to assessing crisis responsibility attributions can be operationalized as follows.

Since crisis is defined as “the perception of an event that threatens important expectancies of stakeholders”, the dependent variable “effect” in covariation principle can be transferred into crisis communication as “the organization threatens/violates important expectancies of stakeholders in a certain event”. Correspondingly, the independent variable “person” in Kelley’s model refers to the focal organization in crisis, and the “entity” refers to the events or aspects wherein the focal organization fails to meet stakeholders’ expectancies.

Furthermore, based on the “person” and the “entity” definition above, the three information dimensions in covariation principle can be transferred into crisis communication context in the following way:

Consensus information is regarded as how other organizations perform in the same situation as the focal organization encounters. Consensus is high when other organizations also fail to live up to the stakeholders’ expectations in the same aspect, and is low if the others perform somewhat better in the same situation. Distinctiveness information refers to how the focal organization performs in other comparable aspects or events besides the current one. Distinctiveness is low when the focal organization also does not meet the stakeholders’ expectancies in other similar aspects or in other similar events, while distinctiveness is high when the focal organization generally performs well in the other contexts. Consistency information refers to how the focal
organization has performed in a certain aspect over time. Consistency is high when the focal organization has repeatedly failed to achieve stakeholders’ requirement in a given aspect for many times, and is low when the focal organization normally keeps a good operation record in the area examined in the past.

As mentioned in the previous chapter, Schwarz (2008, 41) proposes that if the covariation model of causal inference were to be applied to determine the perceived attributions of responsibility in crisis communication, the following assumption should have to be validated first.

**Assumption 1:** people have access to and do take into account information regarding consensus, distinctiveness and consistency from multiple observations to make attributions of crisis responsibility.

As long as this basic prior condition is fulfilled, a covariation-based approach to assessing crisis responsibility attributions can be employed in crisis communication. The assessment procedure includes two steps. The first is to investigate what kind of information dimensions (high vs. low in consensus, distinctiveness and consistency) media/stakeholders use to frame the crisis situation. The second step is to use covariation model to infer the causal categories on the basis of information patterns. If, for example, evidence shows that stakeholders sharply contrast the unsatisfied performance of the focal organization with the excellent job done by its main competitors under the same situation (low consensus), refer to some other flaws that the focal organization did in other business areas (low distinctiveness), and also tend to dig up some past incidents of the focal organization (high consistency), it can be expected, according to covariation model, that stakeholders will largely attribute heavy crisis responsibility to the focal organization, and therefore a high level of reputation threat is anticipated.

Schwarz (2008, 42) stresses that in order to make meaningful prediction on crisis responsibility attributions, it has to be proved that people do use information patterns to make causal attributions in crisis situations in the same way as expected by covariation principle.
Assumption 2: Using available information patterns, people perform covariation-based causal inferences to attribute crisis responsibility just the same way as expected by covariation principle.

It should be noted that Kelley’s model does not require that all of the three information dimensions need to be simultaneously made available before an individual can start to make attributions (Försterling 2001, 54). However, it does require that using available information, individuals do follow a quasi-ANOVA way to make causal inferences. That is, people do attribute crisis responsibility to the causes with which the crisis event covaries over time.

These two assumptions above are considered as the essential prerequisites to extending SCCT with a covariation-based causal inference framework. They have to be verified before integrating covariation principle into SCCT model; otherwise, other attribution models may be taken into consideration to understand the attribution process in crisis situations. Note that if the Assumption 2 is proved to be valid, then according to covariation principle, there are theoretically five possible outcomes regarding the attributions of crisis responsibility: 1) attributions to the focal organization (the person attribution), 2) attributions to certain objective aspects of the crisis event (the entity attribution), 3) attributions to unexpected, transient factors in the crisis context (the circumstance attribution), 4) attributions to the interactions of the two or three causes above, and 5) unable to form a unanimous attribution.

The third assumption for integrating covariation-based approach into SCCT model is that the person, the entity and the circumstance attribution in crisis events are linked with strong, low and minimal level of crisis responsibility attributions to the focal organization respectively and that each of them represents a corresponding level of reputational threat.

Assumption 3: Attributions to the focal organization result in strong perceived responsibility and reputational threat to the organization, attributions to certain objective aspects of the crisis event result in low perceived responsibility and reputational threat to the organization, and attributions to
circumstances result in minimum perceived responsibility and reputational threat to the organization.

If this assumption is empirically validated, then the covariation-based approach of crisis responsibility assessment can be integrally associated with the other parts of SCCT such as organizational reputation and crisis response strategies. Hence, with regard to crisis response strategies, the first three outcomes mentioned in the above paragraph can be dealt with as the three basic crisis types in the SCCT approach, as explained in Section 2.3.3; the last two outcomes can inspire even more efforts, as these are important places where crisis response strategies can weigh in to tilt crisis responsibility attributions towards the favorable side. The practical implications of the covariation-based approach of crisis causal attributions will be discussed in the later part of the thesis.

3.2 Research Questions

Based on the discussion of the relationship between SCCT and covariation principle in Section 2.3.3, the two-step approach to assessing crisis responsibility and reputational threat proposed by SCCT can be framed in the language of covariation-based causal inferences as follows: the first step is to initially determine the most likely crisis cause category (persons, entities or circumstances) by analyzing how the crisis situation is being framed or interpreted by the public/stakeholders. Different cause categories will lead to different levels of crisis responsibility attributions and organizational threat. The second step is to adjust the initial level of crisis responsibility attributions by examining two important information dimensions: distinctiveness and consistency. If information indicating either low distinctiveness or high consistency is present, then the initial cause category would be changed as a circumstance attribution becomes an entity attribution and an entity attribution becomes a person attribution. The reputational threat embedded also moves to a higher level correspondingly.

It is easy to discern that there are two major differences between the original SCCT approach and the covariation-based casual inference approach in determining the level of crisis responsibility attributions. The first aspect is that the SCCT approach does
not take into consideration the effect of *consensus* information. As proposed in covariation principle, individuals take into account information with regard to how other people behave in the same situation when making causal inferences to interpret the causes of a certain effect. In a similar vein, if the covariation-based causal inferences could be applied in crisis communication, then when making inferences of crisis responsibility during a crisis event, stakeholders of the focal organization are reasonably supposed to consider how other comparable organizations such as its competitors in the same industry perform in the similar situation as the focal organization encounters. However, while Coombs (2004, 271) acknowledges that crisis history is a form of consistency information and performance history (i.e. prior reputation\(^2\)) is a form of distinctiveness information, he does not seem to consider consensus information a relevant variable for the SCCT framework. As a result, unlike the other two information dimensions, consensus information dimension is not included in the crisis responsibility assessment approach in SCCT.

A possible reason for the missing of consensus information in the SCCT approach is that although stakeholders do use consensus information when judging crisis responsibility, the effect of consensus information on responsibility attributions and reputational threat is either negligibly small or can be explained by the effect of the remaining two information dimensions (distinctiveness and consistency) that has already been incorporated in the SCCT approach.

The second difference is that the covariation-based approach emphasizes the integrity of the three information dimensions as a whole, while the SCCT approach examines the effect of distinctiveness information and consistency information in an isolated way. The SCCT approach documents the effect of two single information dimensions and posits that either low distinctiveness or high consistency information can increase the level of crisis responsibility attributions and intensify reputational threat as a

\(^2\) ‘Performance history’ here, according to Coombs (2004, 271) means how the organization behaves in various settings. Coombs changed this term to ‘relationship history’ or ‘prior reputation’ in the later version of SCCT (e.g. Coombs 2007a).
victim crisis will be treated as an accident crisis and an accident crisis will be treated as an intentional crisis. However, the covariation-based approach claims, according to covariation principle, that it is the information pattern – namely, the interaction of three information dimensions rather than a single information dimension – that shapes individual’s judgment on the causes of the effect. In other words, all of the three information dimensions are supposed to play certain roles in determining the level of crisis responsibility attributions, despite that their degrees of importance to the overall attributions may vary. More importantly, their effects on attributions are assumed to be integrally linked with one another and interwoven together as a whole. If, for example, the effects of distinctiveness and consistency information on crisis responsibility attributions are found to be influenced by the effect of consensus information, then assessing the perceived crisis responsibility through the SCCT approach would run the risk of missing a bigger picture of how stakeholders make use of several information dimensions at the same time to judge crisis responsibility in crisis situations.

These two differences between the SCCT approach and the covariation-based approach trigger the central question in this research as to the role of consensus information as an integral part of information patterns in shaping how stakeholders judge crisis responsibility. If consensus information is proven to be used by stakeholders and do have an additional impact on crisis responsibility attributions besides the effects of distinctiveness and consistency, then the critical step of assessing crisis responsibility in SCCT could be advanced by incorporating a covariation-based perspective that takes into account the effects of consensus, distinctiveness and consistency information together as interconnecting parts in information patterns.

Importantly, it should be noted that the single versus pattern discrepancy between the two approaches does not mean that the validity of Coombs’s empirical studies is at issue, as several experimental studies from Coombs and his colleagues have already confirmed that single information dimension such as low distinctiveness and high consistency can significantly affect the attributions of crisis responsibility and the potential threat from a crisis (Coombs 2004; Coombs and Holladay 2001, 2002). On
the contrary, the empirical tests of covariation principle show strong support for Coombs’s findings. In fact, if covariation principle can be successfully transferred into the SCCT model, the existing findings regarding the effect of prior reputation (distinctiveness) and crisis history (consistency) on crisis responsibility attributions in SCCT can be well explained by the empirical tests of covariation principle.

Take the effect of high consistency information on intensifying crisis responsibility attributions as an example. The definition of covariation principle specifies that the effect is attributed to the cause with which it covaries over time. In other words, the principle suggests that the presence of high consistency information is an important part for making a causal attribution. Moreover, as summarized in Table 3, the empirical tests of covariation principle also have verified that ambiguous circumstance attributions seem to be made whenever consistency is low, whereas fairly confident attributions would appear only when high consistency information is observed (i.e. low consensus – low distinctiveness – high consistency pattern, high consensus – high distinctiveness – high consistency pattern and low consensus – high distinctiveness – high consistency pattern). The only exception in which the presence of high consistency information does not lead to a confident attribution is high consistency – low distinctiveness – high consistency pattern (pattern 3 in Table 3), which theoretically indicates that the effect does not covary with any of the potential cause and that individuals are unable to make causal attributions if the ANOVA-like way of causal attribution is strictly followed. Nevertheless, there is still evidence suggesting that in some cases this pattern may also lead to attributions to the interaction of person and entity (Hilton and Slugoski 1986).

Therefore, it is quite reasonable to believe that high consistency information can have a major influence on increasing attributions of crisis responsibility to the focal organization, because not only does high consistency information serve as a critical necessary condition for “upgrading” an ambiguous circumstance attribution to a confident attribution to person or entity or interaction of both, but it also can been seen as a sufficient condition – with only a minor exception – that will trigger a confident attribution to person or entity or interaction of both. It is clear that situations with the presence of high consistency information represent much stronger perceived
crisis responsibility to the focal organization in the crisis communication context, compared with the low levels of crisis responsibility associated in low consistency situations (ambiguous circumstance attribution).

With this in mind, this thesis will particularly center on examining the interactive effects of consensus information and distinctiveness information under the setting of high consistency. The reasons for focusing on this narrow aspect of covariation model are twofold. First, the empirical findings in social psychology for low consistency conditions are mixed and somehow inconsistent. More theoretical frameworks are needed to advance the understanding of casual attribution process under low consistency conditions. As a result, exploring low consistency situation in the crisis communication setting may suffer from some fundamental errors given that there is a lack of robust theoretical support in attribution theory. Second, as discussed above, high consistency conditions normally represent stronger attributions of crisis responsibility and greater reputational threat to the focal organization compared with low consistency conditions. Focusing on high consistency situation, therefore, could ideally have greater practical implications for organizations to deal with severe crisis situations, because the more vexing crisis situation and higher reputational threat, the more critical for the organization to wisely assess crisis responsibility and carefully select appropriate crisis response strategies.

As a result, the present research is specifically intended to address the following two questions:

RQ1: Do stakeholders use an ANOVA-like way of causal attribution in general and take into account consensus information (i.e. how other comparable organizations perform in the same context) in particular when judging crisis responsibility in an organizational crisis situation?

RQ2: Will consensus information integrally make a significant impact on stakeholders’ attributions of crisis responsibility together with the effect of distinctiveness information when high consistency information is perceived by stakeholders?
By searching for answers to these two questions, this research attempts to explore 1) whether it is legitimate to apply a covariation-based causal attribution model to assess organizational crisis responsibility, and 2) whether the application of such a covariation-based model can improve the explanatory power of the original SCCT model in determining perceived crisis responsibility in crisis situations. Based on these two points, the reasonableness of integrating covariation principle into SCCT will be discussed.

3.3 Methodology

Two studies will be carried out to address these two research questions. The first study aims to gain a general view on how stakeholders use the three information dimensions to make attributions of crisis responsibility. More specifically, the first study concerns with a real crisis situation and seeks to examine what kind of information stakeholders actually used when judging crisis responsibility in the crisis event. By doing so, the framework of covariation-based approach will be further explained and the limitation of the SCCT approach will be discussed.

Utilizing the content analysis approach, this study qualitatively analyzes the news reports and user comments regarding a recent organizational crisis happened in China – Hewlett-Packard overheating laptop crisis in 2010. This specific organizational crisis case is selected for several reasons. First, this case is considered to fulfill an important requirement set in Assumption 1. As one of the world largest PC brand, Hewlett-Packard makes fairly frequent appearances in a wide range of media reports. The same holds true for other large brands in the PC manufacturing industry. Stakeholders of HP (especially when they are deemed as a whole rather than individuals) therefore can be reasonably assumed to have access to abundant information on how the organization performs in various aspects across a long period of time, and be able to compare the performance of HP with other comparable competitors. Second, media presentation of this complex case featured information cues for several possible crisis framing, which might result in unclear and discordant classifications of crisis type according to the crisis type list proposed in SCCT. Third, this crisis case happened in manufacturing industry, an industry that was frequently
referred to for building crisis scenarios in previous experimental studies of SCCT (see Coombs 2004; Coombs and Holladay 2006). Choosing a crisis case from manufacturing industry can facilitate comparisons between a real case event and virtual situations used for theory development and would be helpful to connect findings in this research with those in previous studies.

The second study is aimed to quantitatively measure the effect of consensus information on stakeholders’ attributions of crisis responsibility as well as the potential threat imposed on organizational reputation under the high consistency setting. An experiment will be designed to create simulative crisis scenarios that reflect different information patterns. Subsequent survey will be delivered to assess individuals’ perception on crisis responsibility and their views towards organizational reputation after they read the material about the simulative crisis scenarios. High consistency information will be provided in all stimuli, while manipulation will be placed on consensus information and distinctiveness information. Comparisons on different levels of crisis responsibility and organizational reputation will be conducted between the presence and absence of consensus information under different distinctiveness conditions. If statistically significant differences on levels of perceived crisis responsibility and organizational reputation emerge between the presence and absence of consensus information, then it is suggested that consensus information could make an impact on crisis responsibility attributions besides the effect of distinctiveness information under high consistency settings. Consequently, it would be helpful to improve the explanatory power of SCCT by incorporating consensus information into SCCT and employing a covariation-based construct to predict perceived crisis responsibility.

3.4 Case Presentation

3.4.1 Case Briefing: HP Overheating Laptop Crisis

Early in March 2010, several Chinese lawyers collectively filed an official complaint on behalf of more than 170 individual customers against Hewlett-Packard Corporation, strongly requesting that the Chinese government investigate product quality of HP laptop in accordance of related laws and regulations and mandate the company to
recall those allegedly faulty laptops and compensate for consumers’ inconvenience and losses.

This faulty laptop issue could be dated back to as far as 2007, since when laptop users of more than 40 models under HP brands had repeatedly reported overheating problems as well as defective screens on a massive scale. These laptop malfunctions were largely caused by the globally-affected faulty graphic chips produced by NVidia Corp. – the world’s leading graphic chip supplier, whose products are widely found in laptops from top PC brands like HP, Dell, Sony, and Apple. After publicly acknowledging the defect in “a certain die/packaging material set” inside the chips, NVidia took responsibility of the faulty products and announced an initial one-time charge ranging from $150 million to $200 million in July 2008 to cover the anticipated warranty, repair, and return cost for those affected PC brands in global markets.

In response to this technical issue, HP launched a so-called “enhanced product support program” in the Chinese market. The program offered services such as free home repair, free replacement and extension of warranty periods, but these services were available only for a limited number of laptop models rather than for all the affected ones. As a consequence, customers were not satisfied with these solutions because their problems were not thoroughly solved. Many customers still suffered from the annoying problems even after several overhauls, while others were asked for service fees due to expired warranty or ineligible models for free service.

3 See http://english.cctv.com/program/bizchina/20100315/102029.shtml for an overview.

4 http://www.ft.com/cms/s/2/cab3f206-2bae-11df-a5c7-00144feabdc0.html

5 http://www.nvidia.com/object/io_1215037160521.html

considered HP’s responsive measures “insincere” and strongly demanded a national-wide product recall of all affected laptops to settle the problem completely\(^7\).

The event had then received nation-wide attention since Mar 15, as CCTV (China Central Television) exposed the extensive dissatisfaction over HP’s laptop quality and after-sale service as well as the company’s irresponsible attitude towards the issue in a special TV broadcast for the World Consumer Right Day\(^8\). In a video clip taped in late 2009, a HP customer-experience manager denied all those design-defect accusations, and ascribed the overheating problems and other malfunctions to the dusty environment around the consumers themselves. The manager’s cockroach remark in the clip – “we could do nothing about it [the problem]; it’s those cockroaches in students’ dorms. They are horrible.” – was sarcastically quoted in numerous news reports and individual blogs the next day as an illustration of how HP irresponsibly treated customers and the media\(^9\).

HP China issued a statement on the following day, in which HP expressed its apology to customers and promised to take new managerial initiatives to improve their services\(^10\). It is worth pointing out that despite the widely-held allegation of laptop design flaws that leaded to extreme inefficiency in heat dissipation and malfunction in other component parts, HP did not officially admit to having design or other technical glitches on any of these products until the government authority officially released a product quality report on the problematic products later on. Instead, in several official statements and interviews before the release, HP attributed the crisis largely to their management process such as lack of decision-making support system to accurately


\(^8\) See [http://tech.163.com/10/0315/21/61RJ9MCT000915BD.html](http://tech.163.com/10/0315/21/61RJ9MCT000915BD.html) for the video program and transcript [in Chinese]

\(^9\) [http://english.cctv.com/program/bizchina/20100316/103877.shtml](http://english.cctv.com/program/bizchina/20100316/103877.shtml)

\(^10\) [http://tech.qq.com/a/20100316/000364.htm](http://tech.qq.com/a/20100316/000364.htm) [in Chinese]
identify the scope of problem, insufficient training to service staff, ineffective user service record tracking system and imperfect customer service incentive plan\textsuperscript{11}.

3.4.2 Case Discussion

Consider this case within the SCCT framework.

If the SCCT approach of attribution assessment were to be applied to determine the perceived attributions of crisis responsibility to the organization in this case, one could be caught in a dilemma at the very first step. Apparently, it was HP’s products and services with which the stakeholders were deeply unsatisfied. Consequently, stakeholders almost unanimously attributed crisis responsibility to the organization HP on the ground that the laptop maker not only designed flawed products that caused great inconvenience to consumers but also made little effort to completely solve the problem, and if anything, its responsive communication made the situation even worse as it was perceived as a representation of the lack of responsibility and sincerity towards stakeholders and public media.

Furthermore, given that many consumers also expressed their discontent with HP’s after-sale service policy in addition to flawed laptops, and that HP later did admit that there were errors occurred in their customer service link and their poor management should be held responsibility, it is reasonable to expect that stakeholders could blame the crisis for HP’s ill management on customer care service.

With these regards, this crisis event should, according to SCCT crisis typology in Section 2.2.2, be classified as \textit{intentional crisis}, because the crisis was perceived as \textit{human-error product harm} (product is defective or potentially harmful because of human error) from the stakeholder side and as an \textit{organizational misdeed} (management actions that put stakeholders at risk and/or violate the law) from the organization side. Hence, a strong attribution of crisis responsibility to the organization and a high level reputational threat would be expected. In effect, crisis

\textsuperscript{11} \url{http://www.chinanews.com/it/it-itxw/news/2010/03-16/2173150.shtml} [in Chinese]
frames of human-error product harm and organizational misdeed were both present in the media, and strong responsibility attributions to the focal organization do have been witnessed in the crisis situation.

However, is intentional crisis the only possible type for categorizing this crisis event against SCCT’s crisis typology and definitions of crisis subtypes?

Technically speaking, this crisis was principally caused by NVidia’s defective chip material set. As one of the largest product crisis in the global IT industry, NVidia’s faulty-product issue as well as responses from a wide range of PC makers had been covered extensively on various media channels since 2008. A number of stakeholders therefore could be assumed to have some additional context information on HP’s crisis. More importantly, many related news reports on HP’s issue also clearly stated that those overheating and abnormal screen problems found on HP laptops were primarily a result of NVidia’s chip failure. In other words, media reports, especially reports at the early stage, did offer information cues for the public to frame the crisis in other ways. This would allow for a possibility that the stakeholders would perceive the crisis as technical error product harm (equipment or technology failure that causes a product to be defective or potentially harmful) under Accident Crisis type in SCCT crisis typology and supposedly attribute moderate crisis responsibility to the organization.

Moreover, in a less strict but possible sense, HP could even be seen as a victim of NVidia’s fault. The crisis, hence, could be interpreted as product tampering under Victim Crisis type in SCCT crisis typology, provided that NVidia’s defective chips were to be perceived by HP stakeholders as an external agent that caused damage to HP.

12 See [http://news.cnet.com/8301-13554_3-10020782-33.html](http://news.cnet.com/8301-13554_3-10020782-33.html) for a brief overview

Clearly, the possibility of multiple types of crisis responsibility attributions demonstrated in the HP’s case indicates that in a complex crisis situation where several factors all play certain roles in moving the crisis forward, the initial crisis identification step in SCCT might not be as clear and straightforward as the theory suggested it would be. Especially, when a crisis is still at its early stage, there can be various information cues available for different kinds of crisis interpretations. Quite often, there can be several rounds of talks and interactions among the organization, media and the stakeholders before any predominant frame of crisis story emerges. Moreover, it is argued that there is no strict boundary between different crisis classes (and subtypes as well) in that a complex crisis usually contains certain properties that can be classified to more than one subtype. Therefore, due to the uncertain and dynamically evolving nature of crisis events, it may not only be difficult to “determine the frame stakeholders are using to category the [crisis] process” (Coombs 2010a, 39) but also be unworkable to group a crisis into one of the ten major crisis types shown in Table 1.

The following two studies will consider this crisis within the covariation-based framework and seek to test the possibility of employing the covariation-based approach to assess the perceived attributions of crisis.
Chapter 4 Study 1: Content Analysis

4.1 Research Questions and Assumptions

The purpose of this content analysis is to look into RQ1 in section 3.2 by examining what kind of information stakeholders of HP actually used to judge crisis responsibility in the HP overheating laptop crisis. By analyzing the news reports and user comments in a real crisis situation, this study is aimed to investigate how information dimensions were used in the context of crisis responsibility attributions. More importantly, it seeks to provide concrete evidence to verify the first two assumptions proposed in Section 3.1 (i.e. stakeholders have access to and do use information regarding consensus, distinctiveness and consistency to make causal attributions of crisis responsibility in crisis situations, and they make the causal attributions the same way as expected by covariation principle). The implication for the further experimental study will also be discussed.

As a big incident with famous player in it, HP overheating laptop crisis had received wide media attention and sparked a large number of media reports and user comments. Besides news update on the latest development of the crisis issue, many of these reports and comments also mentioned reasons as well as supportive evidence as to why people felt this or that way towards the whole crisis issue in general and HP Corporation in particular. For example, a piece of news report might contain words like this:

*It is reported that many consumers did not accept the HP’s recent apology. “It is nothing more than a repetition of the service terms they made two years ago; we want a solution that can permanently resolve our problems, not just extending the warranty”, a consumer told the reporter.*

Take another example, a user might post a comment after a media report like this:

HP just sucks. I bought it last year; it broke down only after three weeks. Up to now, I have used the laptop for less than two months in this entire year; it has been under repair all the time...^{15}

These paragraphs featured important messages as to why a representative group of HP stakeholders felt that HP did not meet their expectations and how they perceived crisis responsibility in this crisis issue. More importantly, these messages were delivered to a broad public through media presentation and in turn offered important information cues for the public to make sense of the crisis event and judge crisis responsibility.

This study presumes that stakeholders in a broad sense utilized these messages presented in media reports and user comments to make crisis responsibility attributions. Although people could also refer to many other sources such as personal preference, expert knowledge, or interpersonal communication to interpret the crisis event, it is argued that information from those sources did not essentially differ too much from the information presented in media reports and user comments, because if any new and influential information cue emerged, no matter what source it came from, it is very likely to be covered in the mass media in a short time. Therefore, by focusing on these media reports and user comments, this content analysis is assumed to be able to capture what information stakeholders in general used to interpret the crisis situation and judge crisis responsibility in the HP crisis issue.

Assumption: Evidence and arguments expressed in related media reports and user comments with regard to how certain stakeholders thought of HP and how they interpreted the crisis event represent how stakeholders in general viewed the crisis and made inferences of crisis responsibility.

Based on this assumption and in line with the general RQ1 proposed in Section 3.2, the following two research questions are formulated to guide the content analysis.

RQ1a: What kind of information did stakeholders actually use to support their attributions of crisis responsibility in the HP issue?

RQ1b: Does the information used by stakeholders represent any information pattern suggested in covariation principle? If certain information pattern in covariation principle is matched, did stakeholders make the same attributions of crisis responsibility as proposed in covariation principle?

4.2 Method

4.2.1 Materials

News articles and user comments in the thematic coverage section of “HP deeply encumbered by quality complaints” on the website sina.com.cn, one of the most influential news portals in China, were used as raw materials in this content analysis. All the news articles were skimmed through twice and then filtered so that only reports and reviews that expressed (or imply) judgmental opinions and used relevant evidence or arguments to support these opinions were remained for the study. Purely descriptive articles that were only intended to update the public either on how the issue was going on or on how HP exactly was responding to the issue were excluded.

Website users could post commentary remarks after each of these news articles. All of the comments are available in the comment database of this thematic coverage section. Due to the huge number of comments (11,287 pieces / 565 pages), a systematic sample was performed. Comments on the 56th page of every one hundred pages (chronological order) in the comment database were selected. Again, these selected comments were browsed and filtered so that comments that revealed

16 The list of all the articles is available at http://roll.tech.sina.com.cn/s_hpzl_all/index.shtml [in Chinese]

17 Refer to http://comment4.news.sina.com.cn/comment/skin/default.html?channel=kj&newsid=2-52-4174&style=1&page=1 for the whole comments available. [in Chinese]
evidences, experiences or reasons were remained for content analysis, and those which simply expressed emotions or future intentions without giving any reason or fact were excluded.

Finally, the materials used in the content analysis include 82 pieces of news articles and 50 pieces of user comments.

4.2.2 Coding Categories

Coding categories are developed based on the framework of covariation principle.

The first two are “the person” and “the entity” categories. Messages in the sampling articles and comments featured information cues as to how stakeholders felt about HP in this crisis event and why they felt this way. Coders try to format all these relevant information cues into standard patterns by answering the questions who failed to meet the expectations of stakeholders in what aspect? By doing so, coders are able to determine the two important dependent variables in the covariation model. In the HP crisis case, “the person” variable is normally the organization of HP, but values of “the entity” variable may differ, because HP may fail to live up to stakeholder’s expectations in several aspects such as products (laptops), after-sale services, response toward the crisis, and so forth.

In the second step, coders try to identify the three information dimensions in covariation model from the relevant messages stakeholders used to support their arguments regarding why they believe HP failed to meet their expectations in certain aspects. Based on the framework proposed in section 3.1, the three information dimensions can be operationalized in the following ways.

Consensus dimension refers to how other organizations performed when dealing with the same entity as HP encountered. Consensus is high if messages suggested that other organizations also did not perform well towards the same entity, while consensus is low if it has been suggested that other organizations behaved in a better way towards the same entity. The same entity here is treated in a less strict sense and it means the same general aspect or context (e.g. product, service, response, etc.). For example, if people mentioned that they were discontented with HP’s refusal to recall
flawed laptops while pointed out that other large companies such as Toyota honestly admitted the defect of their automobiles and started a global recall immediately, then this message is treated as the consensus dimension in this study. However, it should be noted that strictly speaking, consensus information in covariation principle requires exactly the same entity as the one the focal actor is interacting with (laptops rather than automobiles, in this example), whereas Toyota’s recall on automobiles could only be classified as what Pruitt and Insko (1980) called ‘comparison object consensus’, that is, how other actors behave towards other comparable entities.

Distinctiveness dimension refers to how HP performed towards other equivalent entities or across other comparable aspects within one entity. Distinctiveness is low if messages indicated that HP had also disappointed stakeholders in several different aspects. For example, if not only had stakeholders reported dissatisfaction with HP’s low quality laptop but they also had frequently expressed angry towards HP’s bad after-sale services, or if messages emphasized that stakeholders had various problems with a wide range of laptops, then distinctiveness of product is considered as low. Distinctiveness is high if it has been revealed that HP let down the stakeholders only in a specific aspect but not in the others.

Consistency dimension refers to how well HP could meet stakeholders’ expectations in a certain aspect over time. Consistency is high if messages signaled that HP had repeatedly failed to meet stakeholders’ needs in a certain aspect. For example, if stakeholders bemoaned the fact that their laptops still malfunctioned even after several repairs, then consistency is considered as high, because the faulty problem with the product is stable. Consistency is low if messages indicated that the unsatisfactory event with HP was a new and unusual one that seldom happened in the past.

Coders are supposed to try their best to record all the information dimensions and their value (high/low) inferred from information cues in every piece of the messages. If a message did not give any information on these three information dimensions, i.e. stakeholders used other types of information to support their judgments, the message will be marked as others for further examination. For example, stakeholders could
claim that HP was an irresponsible company on the ground that it did not abide by the related laws and regulations when dealing with customer complaints. In such a case, stakeholders did not compare HP either with how other similar organizations behaved, or with how HP behaved on other aspects or with how HP behaved over time. Thus, such an information cue was labeled ‘others’ in the analysis. Note that disobeying industrial rules can be interpreted as low consensus information, since it is commonly expected that good organizations should abide by the ethical code and follow related laws and regulations when doing their businesses. However, in order to avoid inconsistent logical inference between different coders, messages that do not contain direct information cues on the three information dimensions will be treated in a separate category in this content analysis.

4.2.3 Coding Procedure

Two coders were involved in the coding procedure. Prior to coding, one coder skimmed all the media articles to draft an initial value list of the entity categories. The

<table>
<thead>
<tr>
<th>Variables</th>
<th>Krippendorff's Alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Media Reports</strong></td>
<td></td>
</tr>
<tr>
<td>Entity</td>
<td>0.918</td>
</tr>
<tr>
<td>Consensus information</td>
<td>0.873</td>
</tr>
<tr>
<td>Distinctiveness information</td>
<td>0.811</td>
</tr>
<tr>
<td>Consistency information</td>
<td>0.771</td>
</tr>
<tr>
<td><strong>User Comments</strong></td>
<td></td>
</tr>
<tr>
<td>Entity</td>
<td>0.766</td>
</tr>
<tr>
<td>Consensus information</td>
<td>0.861</td>
</tr>
<tr>
<td>Distinctiveness information</td>
<td>0.820</td>
</tr>
<tr>
<td>Consistency information</td>
<td>0.816</td>
</tr>
</tbody>
</table>
two coders were then trained with the coding scheme that explains the variables and categories and coded all the materials independently. 20 media reports (24% of the total reports) and 24 user comments (48% of the total comments) were randomly selected and coded twice to test intercoder reliability. Krippendorff's Alpha (nominal, 2 coders only) is used as the measure of intercoder reliability, and is calculated by the online application tool Recal218 (Freelon 2010). The values of intercoder reliability ranged from 0.776 to 0.918 for different variables, as illustrated in Table 4. All of these values were considered as acceptable (Krippendorff 2006). Discrepancies between coders were reconciled by rereading the materials and discussing the proper coding categories. If a certain message did not fit in any existing category on the list, a new category was created after discussion.

4.3 Results

4.3.1 Research Question 1a

The study recorded 199 pieces of messages from 82 media reports and 45 pieces of messages from 50 user comments. The finding revealed that stakeholders used all the three information dimensions in covariation principle as well as other relevant information to support their attributions of crisis responsibility.

More specifically, it was found that stakeholders normally were discontented with three general aspects (i.e. entities) of HP’s performance: product (laptop), customer services and response towards stakeholders’ appeal of product recall.

4.3.1.1 Product Category

A total of 94 messages (62 from media reports and 32 from user comments) expressed stakeholders’ dissatisfaction with HP’s low quality laptops. Consistency information was the most used information dimension in this category for stakeholders to make

18 http://dfreelon.org/utils/recalfront/recal2/
the judgment that HP should be blamed for the flawed laptops. Among the consistency information, 17 messages indicated that the annoying problems with the defective laptops occurred to a great number of consumers (i.e. spatially stable), 10 messages indicated that the problems with their laptops happened repeatedly even after several times of maintenances (i.e. temporally stable), and 16 messages expressed both cues.

Distinctiveness information was the second most mentioned information dimension in this category. There were five messages emphasizing that problems had occurred to different component parts in their laptops (not only screen and graphic cards, but also memories, hard drives, etc.), and 16 messages suggesting that quality problems were observed across many different models of HP laptops. One message indicated both reasons above. Moreover, three messages revealed that stakeholders referred to the fact that not only HP laptops but also other products from HP such as desktops, servers, and even cameras were not of good quality, while another two messages expressed that in additional to the inferior laptops, HP’s after-sale service was also disappointing.

Consensus information was used at least in the product category compared with the other two information dimensions. There were 17 messages mentioned that laptops from other brands had less problems than HP did, while three messages indicated that other laptops had better product design for heat dissipation. One message revealed both reasons above.

Finally, three messages from user comments were added into the ‘others’ category, as the messages pointed out that stakeholders did not trust HP’s products because they believed that using inferior materials to reduce production costs was an phenomenon across the entire industry and that they had no faith in any brand in this market.

4.3.1.2 Customer Service Category

There were 30 messages in total (24 from media reports and 6 from user comments) suggesting that stakeholders were disgruntled about HP’s poor customer service. 11 messages stressed the consistency dimension, as these messages indicated that there
were a large number of stakeholders complained about being treated irresponsibly when resorting to customer services of HP laptop (e.g. technicians in HP spent little effort in trying to repair the faulty laptops). Five messages concerned about the consensus dimension, as they suggested that other laptop brands provided better customer service than HP did.

With no messages indicating the distinctiveness dimension, the remaining information cues in the messages were counted as ‘others’ category. Among these, eight messages claimed that customer service employees had conducted unethical behaviors (e.g. suspiciously using secondhand spare parts to replace the failed ones or offering consumers free service in exchange for withdrawals of the allegations), while six messages asserted that some articles of HP’s customer service policy did not meet the industrial requirement set by the related laws and regulations.

4.3.1.3 Crisis Response Category

The remaining 75 messages (68 from media reports and 7 from user comments) expressed why stakeholders believed HP did not meet their expectancies in terms of HP’s crisis response. Again, consistency information was the most used information dimension in this category. 32 messages stated that stakeholders were unsatisfied with HP’s response towards the crisis issue because HP had never provided an effective solution that is intended to cover all the affected models and resolve the laptop problems permanently in several rounds of conversations with the stakeholders during recent years. 9 messages stated that in its crisis responses during the last two years, HP had never explained the reasons as to why these low quality problems happened to such a large scale of consumers and why those problems could not be solved even after several repairs.

Consensus information was the second most cited information dimension. There were 20 messages counted as consensus information, of which 10 messages mentioned that other companies (including companies in other industries such as Toyota) actively recalled their defective products when similar crises happened, 9 messages indicated that stakeholders felt discriminated in that HP offered better responsive solutions towards the faulty laptop issue in the US market (e.g. allow to return the product,
more models eligible for the recall policy), and one messages mentioned both reasons above. Note that HP performing differently in other markets here was considered as consensus information rather than distinctiveness information because despite strange, the entity variable – response towards low quality laptop – did not changed in this situation and different branches of HP were treated as different ‘organizations’.

Four messages were included in distinctiveness dimension as they indicated that HP had initiated several recalls in other similar situations such as faulty cameras recall and harmful laptop batteries recall in the past. Note that these previous recalls were not considered as consistency information in either product or response category because judged by the contexts these messages were not intended to illustrate that HP had repeatedly been involved in product crises; rather, the messages were perceived to emphasize that HP could have responded better in the current crisis given its performance in dealing with similar defective product issues in the history.

Finally, 10 messages were labeled as ‘others’. Four of them demonstrated the so-called discounting principle\(^{19}\) in crisis communication research (Dean 2004), as they indicated that stakeholders doubted the sincerity of HP’s crisis response because HP’s response came immediately after the governmental authority’s announcement to investigate this issue. Three messages revealed that stakeholders believed that HP management was irresponsible in the crisis response. Two messages suggested that stakeholders were unsatisfactory because they were supposed to be offered additional compensation due to their large losses and inconveniences caused by HP’s faulty laptops. One message indicated that HP suspiciously used unethical strategy in response to the crisis issue.

A complete list of the identified information cues used by stakeholders to judge crisis responsibility in the HP crisis case was summarized in Appendix A. Note that relative frequencies of the information cues were not calculated in the table, because this content analysis is intended to investigate the diversity of the information used in

\(^{19}\) When making attributions of crisis responsibility, people tend to "discount" the role of a dispositional factor when an obvious situational cause is present.
crisis responsibility attributions rather than to compare the significance of effects of different information cues or dimensions on crisis attributions.

4.3.2 Research Question 1b

The answer to the second research question is mixed, as a further examination on these messages revealed that these messages largely tended to match the low consensus, low distinctiveness and high consistency pattern that would lead to a strong attribution to the person (i.e. the organization of HP in this case), but there were still some interesting exceptions in each of the three categories worth further discussing.

The low-low-high pattern was most prominently found in the product category. As indicated by the messages, stakeholders observed that the “faulty product” effect did covary with the focal organization HP, because other laptop brands tended to have less problems compared with HP. Also, it was found that the effect did not covary with any specific entity as the defective problems existed across different component parts of the laptop, across different laptop models and across other comparable HP products. Finally, it was obvious that the effect did not covary with the time (or transient factors) as the faulty problems happened to many different individuals across a long period of time. Consequently, taking into account all these information cues, stakeholders blamed the organization of HP rather than certain particular faulty parts of the laptop or certain unfortunate circumstance factors for the low quality of laptops. Such a strong person attribution to the focal organization from the low-low-high information pattern is consistent with what has been suggested in the theoretical framework of covariation principle.

However, the study revealed that information in the low-low-high pattern was not the only information that led to crisis responsibility attributions towards HP. In fact, there were messages showing that some stakeholders extended their distrust of the entire industry to HP and claimed that HP definitely used substandard materials in those defective laptops because this was a common, tacit way for those profit-seekers to cut the product cost and achieve their sales targets. This pessimistic view can be seen as a result of the frequent observations of high consensus misdemeanors across the
industry. It could add more complexity to understand stakeholders’ perceptions towards the crisis event, because on the one hand high consensus information theoretically could reduce crisis responsibility attributions to HP as a single organization, while on the other hand, stakeholders’ distrust and low expectancies towards the entire industry may lower their default impressions towards HP’s reputation and thus make it more difficult for HP to restore from the crisis. No matter which of the two possibilities is more likely to be the case for the broad public in the HP crisis, it is nevertheless shown here that consensus information is an important form of information stakeholders would take into consideration to interpret the crisis situation, and that the effect of consensus information is mixed and worth of further investigation.

In the customer service category, while no distinctiveness information was recorded in this content analysis, the remaining two information dimensions were present and, as expected, increased stakeholders’ negative impressions towards HP. As reflected in the messages, stakeholders perceived that HP’s customer service was not as good as services from other brands (low consensus) and such poor performance was stable (high consistency). In addition, as mentioned in Section 4.2.2, the messages indicating that HP had suspiciously conducted unethical behaviors and fallen short of meeting the required industrial standards in certain customer service policies could be regarded as low consensus information in some degree. Therefore, HP’s failure to meet these common expectations could be perceived by the stakeholders as abnormal and unacceptable.

Like messages in the customer service category, messages in the crisis response category exhibited low consensus dimension and high consistency dimension, as they indicated that stakeholders took into account how other organizations dealt with similar defective product crises and whether HP’s disappointing responses to the crisis had been a consistent letdown over time.

However, distinctiveness information in this category did not suggest that HP failed to perform well in other comparable crisis responses either. Quite the opposite, there were messages indicating that HP somehow had “good” records in product recalls. It
appeared that some stakeholders could understand that it was quite normal for such a
large information technology company to make some technical mistakes now and
then. What made they feel unacceptable was that HP had never provided an effective
solution to address stakeholders’ concerns, and their discontent had been aggravated
by the fact that other organizations and even HP themselves had done much better
when dealing with faulty product issues in the past and in other markets. In other
words, stakeholders did not interpret this high distinctiveness information in the
expected way that high distinctiveness information normally leads to an entity or a
circumstance attribution. Instead, stakeholders considered HP’s failure to respond
satisfactorily in this crisis but not in the others as a somewhat intentional action rather
than as an unusual exception. This perceived intentionality (or even “discrimination”
in the term of some messages) strongly intensified stakeholders’ angry feelings and
crisis responsibility attributions to the focal organization HP.

In fact, this example corresponds to the findings of earlier studies – a favorite prior
reputation in the past does not necessarily protect the organization from strong
responsibility attributions in the current crisis, especially in the situation where the
organization does not respond to the current crisis in an appropriate way (Coombs and
Holladay 2002; Klein and Dawar, 2004; Dean 2004). Furthermore, it also partially
explains Coombs and Holladay’s (2006) experimental finding that favorite prior
reputation might act as a shield to prevent increased reputation threat but works only
for organizations with very positive prior reputation. It seems that for organizations
with ‘mediocre’ favorite prior reputation such as HP in this case, stakeholders might
consider the organization’s highly distinctive substandard performance as an
intentional action in which the organization is capable of but reluctant to do the right
thing for some reasons.

Nevertheless, the observed low-high-high pattern in this category was slightly
different from what covariation principle suggests, because theoretically low-high-
high pattern should lead to an attribution to the interaction of the person and the entity
(i.e. HP had some particular difficulties in dealing with this particular laptop issue),
whereas in this crisis case, this pattern still led to a strong attribution to the person but
not to the entity.
4.4 Discussion

This brief content analysis on a mixed technical-error and human-error crisis situation raised more questions than answers. To begin with, Assumption 1 that people have access to and do use information regarding consensus, distinctiveness and consistency to make crisis responsibility attributions seems to hold true. It was found that stakeholders in this crisis did consider how other organizations performed in the similar situations as HP encountered, how HP performed in other comparable aspects, and how HP had acted in the discussed areas over time to support their judgments of crisis responsibility. Particularly, consensus information – the missing information dimension in the SCCT approach – was somewhat frequently referred to in stakeholders’ crisis attribution process, as some stakeholders tended to judge the crisis situation by contrasting the focal organization’s performance with those of the other comparable organizations.

It should be noted that although all these three information dimensions were used in stakeholders’ crisis attribution process, seldom had they been simultaneously presented together in one single message. Rather, it was shown in the media reports that stakeholders normally referred to one or two of the information dimensions to make their judgments about the crisis issue. However, for those broad public who regularly followed the media reports and related comments, these three information dimensions could be seen as available to them simultaneously. Therefore, two important questions are raised: 1) how would stakeholders make attributions of crisis responsibility if all the three information dimensions are presented and 2) to what extent does each of three information dimensions contribute to the decisions of crisis attribution. The following study will try to look into the first question, while for the second questions, it seemed that consistency information is the most powerful one among the three, since the analysis indicated that quite often a constantly malfunctioning laptop would be more than enough to make the affected stakeholder hold a strong negative impression towards HP.

Secondly, in regard to Assumption 2, the study found that under most circumstances, stakeholders in general did make crisis responsibility attributions the same way as
expected in the covariation model, especially when the ideal configuration of information dimensions were presented. However, some deviations were also observed in the study. More specifically, in the product category some stakeholders perceived the consensual use of defective design as an unspoken agreement and thus intensified the distrust towards HP even when high consensus messages were present. In the service category the stakeholders made crisis attribution to the focal organization without distinctiveness information. Finally, in the crisis response category the stakeholders interpreted high distinctiveness information in a different way from what is expected in the covariation model. Moreover, it should be noted that in both service category and crisis response category, there were many additional information cues identified, as labeled under the “others” information category. These information cues could play important roles in crisis attribution process. For example, these additional cues could be the reason for stakeholders to make the person attribution rather than the person-entity-interaction attribution in the response category. Nevertheless, this content analysis only offered partial support to validate Assumption 2. More analyses are definitely needed to examine the effect of information patterns and explain those deviations.

Thirdly, it was found that when making crisis responsibility attributions, stakeholders often referred to concrete and detailed information rather than some general aspects suggested in SCCT approach. Take distinctiveness information in the product category as an example. The analysis showed that stakeholders alluded to information on different component parts in the laptop, different models of the laptops, different product lines (desktops, cameras) and different business chains (product, after-sales services) to make judgments. On the contrary, the two intensifying factors proposed in SCCT approach – prior reputation and crisis history – are rather broad items that focus on assessing the general state of the relationship between the organization and its stakeholders in various contexts or over time. Such operationalization may run the risk of underestimating the abundance and complexity of stakeholders’ information on the crisis situation and missing the real picture of how stakeholders perceive crisis responsibility. For example, as illustrated in the content analysis, stakeholders may not need to know whether or not the organization had similar crises in the past to reach the conclusion that the crisis issue was a stable problem for the organization;
instead, they may consider the crisis a highly consistent one and thus attribute more responsibility to the organization simply because they observed that many people also experienced the crisis problem and that they had experienced this problem for a long period of time.

To summarize, despite crude and may suffer from the partiality that news reports and user comments were more likely to reproduce and amplify the negative information of an organization in crisis than to provide relative information in an objective way, the content analysis here still showed that stakeholders did take into account a variety of information including but not limited to the three information dimensions in covariation model when judging crisis responsibility. More importantly, it offered empirical support to verify the two basic assumptions for the integration of covariation principle into SCCT to determine the perceived crisis responsibility. However, the content analysis only demonstrated that stakeholders made use of consensus, distinctiveness and consensus information when interpreting the crisis event, but it did not examine either the relationship as well as the interactive effect among these information dimensions in general, or the effect of consensus information on the other two information dimensions, as discussed in Section 3.2, in particular.

With these regards, an experimental study was conducted to further investigate whether consensus information – an integral part of Kelley’s covariation principle besides the distinctiveness and consistency information – can make a significant impact on stakeholders’ causal attributions in organizational crises.
Chapter 5 Study 2: Experimental Study

Now that the assumptions for using covariation principle as an extension to SCCT in explaining perceived crisis responsibility in crisis communication seem to hold true, an experimental study was designed to go forward to investigate the interactive effect of the three information dimensions. As explained in Section 3.2, because more empirical support of Kelley’s covariation principle is found in the high consistency situations than in the low consistency situations, and because more stake of organizational reputation is embedded in the high consistency situations than in the low consistency situations, this experimental research is specifically aimed to examine the effect of consensus information on stakeholders’ attributions of crisis responsibility under the setting of high consistency.

5.1 Research Questions and Hypotheses

5.1.1 Research Questions

This experimental study seeks to look into the general RQ2 proposed in Section 3.2. More specifically, it is aimed to examine the effect of consensus information on crisis attributions in two different situations. First, a crisis happened to an organization that has experienced a similar crisis before but generally has a favorable organizational reputation among its stakeholders. Second, a crisis happened to an organization that not only has experienced a similar crisis before but also has an unfavorable organizational reputation among its stakeholders. The first condition shows the “high distinctiveness – high consistency” pattern while the second condition shows the “low distinctiveness – high consistency” pattern.

The study seeks to add consensus dimension – the missing dimension in SCCT – into these two patterns to see if consensus information can make a significant influence on crisis attributions besides the effect of distinctiveness information and consistency information. A major emphasis was placed in this study that the effect of consensus
information is evaluated alongside the existing effect of distinctiveness and consistency information rather than assessed as an isolated information dimension.

Based on the RQ2, the research questions in this part of experimental study are formulated as follows:

**RQ2a:** Will the presence of consensus information make a significant impact on stakeholders’ crisis attributions when a crisis happened to an organization that has experienced a similar crisis before but generally has a favorable organizational reputation?

**RQ2b:** Will the presence of consensus information make a significant impact on stakeholders’ crisis attributions when a crisis happened to an organization that not only has experienced a similar crisis before but also has an unfavorable organizational reputation?

Note, to which crisis class in SCCT the crisis belongs to (i.e. whether the crisis is a victim crisis, an accident crisis or an intentional crisis) is not distinguished, because it is often difficult to accurately assign a crisis to one of the crisis classes due to the complexity of crises and the imperfect classification of the crisis typology, as explained in section 2.4.

### 5.1.2 Hypotheses of the Study

Consider the first situation that a crisis happened to an organization that has experienced a similar crisis before but generally has a favorable organizational reputation. This condition involves the interactive effect of high consistency information and high distinctiveness information. Since consensus information is absent, the information pattern in the condition is denoted as NHH (No consensus, High distinctiveness and High consistency) for the convenience of discussion.

Previous studies on SCCT have shown that a negative crisis history (high consistency) is able to move crisis responsibility attributions to a higher level regardless of the crisis types (Coombs 2004, 2007a), and that prior organizational reputation has an asymmetrical effect on crisis responsibility attributions – A negative reputation (low
distinctiveness) can heavily intensify the level of crisis attributions, while a positive reputation (high distinctiveness) does NOT decrease the level of crisis attributions significantly in most cases (Coombs and Holladay 2001, 2006; Klein and Dawar 2004). As a result, although there is no empirical study examined the joint effect of distinctiveness and consistency altogether, it is still reasonable to assume that stakeholders in the NHH condition would attribute relatively strong crisis responsibility to the focal organization, because a crisis history moves crisis responsibility attributions up to a higher level, but a favorable reputation may not be able to counteract the negative impact of crisis history to drag the level down.

However, according to the covariation-based causal attribution framework, if stakeholders in this NHH condition are to be given information that some other comparable organizations have also experienced similar crises in their operations (i.e. high consensus information that other organizations also fail to perform well on the same entity), then stakeholders may do an ANOVA-like analysis and attribute the causes of crisis to some uncontrollable properties of the crisis itself, because the information available has now formed a clear HHH pattern that would theoretically result in a strong entity attribution. Possibly, such an entity attribution could significantly reduce perceived crisis responsibility attached to the focal organization and thus make reputational score in this HHH condition significantly higher than in the original NHH condition.

On the other hand, if stakeholders in NHH crisis condition are provided with low consensus information that other comparable organizations normally did much better than the focal organization on the same thing, it is predicted that stakeholders tend to attach higher crisis responsibility to the focal organization and rate reputational score lower, because the information available has now formed a LHH pattern. LHH pattern, according to the covariation-based approach, would lead to a relatively strong attribution to the interaction of the person and the entity (i.e. attribution that focal organization has specific difficulty in dealing with this specific problem in the crisis).

Therefore, the first set of hypotheses that addresses the first situation (RQ2a) is proposed as follows:
Hypothesis 1a: When given high consensus information, stakeholders in the “negative crisis history – favorable prior reputation” group will attribute less crisis responsibility to the organization than those who are not given high consensus information in the same group.

Hypothesis 1b: When given high consensus information, stakeholders in the “negative crisis history – favorable prior reputation” group will rate the reputational score of the organization higher than those who are not given high consensus information in the same group.

Hypothesis 2a: When given low consensus information, stakeholders in the “negative crisis history – favorable prior reputation” group will attribute more crisis responsibility to the organization than those who are not given high consensus information do in the same group.

Hypothesis 2b: When given low consensus information, stakeholders in the “negative crisis history – favorable prior reputation” group will rate the reputational score of the origination lower than those who are not given high consensus information in the same group.

Similarly, consider the second situation that a crisis occurred to an organization that not only has experienced a similar crisis in the past but also has an unfavorable organizational reputation among its stakeholders. As suggested in SCCT (Coombs 2004; Coombs and Holladay 2001), because of the dual effect of negative crisis history (high consistency) and negative prior reputation (low distinctiveness), it is reasonable to reckon that the organization would be stuck in a very unpropitious situation as its stakeholders would likely to assign considerable crisis responsibility to the organization, although extant empirical tests of SCCT only confirm the effect of these two intensifying factors separately rather than in an interactive way. The information pattern in this condition is denoted as NLH (No consensus, low distinctiveness and high consistency), as consensus information is not present.

The covariation-based approach predicts that when stakeholders in the NLH condition are being provided with high consensus information that other organizations equally
underwent similar crises just like the focal organization did, a HLH information pattern emerges, in which case, if stakeholders follow the covariation-based way of causal attribution, there may be mixed results on their judgments of crisis responsibility. As shown in Pattern 3 Table 3, stakeholders in this setting may either attribute crisis responsibility to a combination of the organization and certain properties of the crisis context, or not be able to arrive at confident attributions of crisis responsibility. Both of the cases above could in some degree alleviate the negative influence imposed by crisis history and unfavorable prior reputation on crisis responsibility attributions, and the reputational score is supposed to be higher in this HLH condition than in the NLH condition.

On the other hand, if stakeholders in the NLH condition are offered messages that other organizations generally did better jobs in the same contexts and seldom had similar crises happened to them, it is anticipated by the covariation principle that stakeholders will attribute a maximum of crisis responsibility to the focal organization due to the prominent LLH information pattern and the negative impact on the organizational reputation will be further exacerbated. According to the covariation-based approach, the highest level of crisis responsibility attributions and the lowest level of reputational score from stakeholders are expected in this LLH condition.

Accordingly, the second set of hypotheses that concerns with RQ2b are formulated as follows:

**Hypothesis 3a:** When given high consensus information, stakeholders in the “negative crisis history – unfavorable prior reputation” group will attribute less crisis responsibility to the organization than those who are not given high consensus information in the same group.

**Hypothesis 3b:** When given high consensus information, stakeholders in the “negative crisis history – unfavorable prior reputation” group will rate the reputational score of the organization higher than those who are not given high consensus information in the same group.
Hypothesis 4a: When given low consensus information, stakeholders in the “negative crisis history – unfavorable prior reputation” group will attribute more crisis responsibility to the organization than those who are not given high consensus information in the same group.

Hypothesis 4b: When given low consensus information, stakeholders in the “negative crisis history – unfavorable prior reputation” group will rate the reputational score of the origination lower than those who are not given high consensus information in the same group.

The answers to Hypotheses 1a to 4b can be helpful to evaluate the effect of consensus information on stakeholders’ crisis responsibility attributions as an interconnected dimension along with distinctiveness and consistency information.

In addition to these eight hypotheses that are aimed to examine the effect of a potential newcomer to SCCT, the study will also try to check again the pivotal correlation between crisis responsibility attributions and organizational reputation.

Hypothesis 5: There will be a significant negative correlation between the level of crisis responsibility attached to the organization and the level of reputational score. A higher level of crisis responsibility attributions will lead to a lower reputational score towards the focal organization, and a lower level of crisis responsibility attributions will lead to a higher reputational score.

5.2 Method

5.2.1 Experiment Design and Material

To test the hypotheses, a 3 (consensus: low, high, not present) × 2 (distinctiveness: low, high) × 1 (consistency: high) between-subject design was created. The six conditions in the design were NHH, HHH, LHH, NLH, HLH, and LLH. The stimuli for these six conditions were a group of mock news stories that an overheating battery from a HP laptop suddenly burst and caused a dangerous fire in Dresden, Germany. This crisis scenario was borrowed from an actual news report appeared in the German
magnets produce, however the focal organization of the actual crisis was purposefully replaced with HP in the stimuli.

A real organization rather than a fabricated one was used to build the crisis scenario in this study, because the study needed to examine the effect of consensus information in both favorable and unfavorable reputation conditions, and it is argued that when using a virtual organization, it may not be easy to artificially produce two comparable situations where people have equal levels of positive and negative perceptions towards the organization (Coombs and Holladay 2001, 2006). The reason is that people normally weigh negative information more strongly than positive one. In other words, one set of messages may be well enough to create an unfavorable organization image but far from enough to establish a favorable organizational reputation.

Furthermore, the specific organization HP was selected as the focal organization of the crisis in the study because it seemed that stakeholders’ perceptions towards HP are apt to two extremes. On the one hand, as one of the world’s largest IT Company, HP retains global leadership in a variety of business domains and has a positive organizational image among a large group of people. On the other hand, because of the defective products problems (as shown in Study 1) and recall issues recently, unfavorable organizational impressions are spread in the recent years and some affected users even have particularly aversions to the organization. In fact, in two online polls delivered on TechRepublic last year regarding “which PC vendor makes the most and the least reliable laptops”, HP was prominently ranked the second place at the both ends, as 21% of participants rated HP in the least reliable group while 18% rated it in the most reliable group 21. Such a contrasting organizational reputation among stakeholders made HP a suitable subject for building those comparative conditions in the experiment. In other words, instead of using a virtual organization


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and setting up the favorable and unfavorable reputation conditions by offering participants different sets of stimulating messages, this study employed the real organization HP as the subject and created different reputation conditions by simply differentiating between participants who held positive perceptions towards HP and those who held negative perceptions towards HP.

The differentiation of prior-reputation groups was achieved by asking participants “what is your overall impression of Hewlett-Packard Company (HP)?” at the beginning of the survey. Despite a crude measure, such a global evaluation on prior impression provides a general idea of how participants viewed organizational reputation (Coombs and Holladay 2006). By using a seven-point Likert scale ranging from 1 – very unfavorable to 7 – very favorable, participants were allocated into two conditions, with 1-3 falling into the unfavorable organizational reputation condition and 4-7 into favorable organizational reputation condition.

The mock news stories in six conditions began with a description of the HP battery burst accident. A Chinese news article about a similar battery accident happened on Apple laptop22 was referred to for the narrative style of the description. The stories then explicitly pointed out that the causes to the accident had not been identified yet as more investigations from HP as well as the battery supplier were needed, and that various factors (e.g. the quality of the battery itself, the design of related components in the laptop, inappropriate way of charging/discharging, and the environmental factors during usage) could potentially lead to battery burst.

The difference among the stimuli lied in the last part where different information cues were drafted to reflect the six information patterns. Firstly, the universal high consistency information that “HP made a global recall of 162,000 laptop batteries that could potentially bring safety trouble this May. This actually has been the third global recall of HP laptop battery since 2009 with the earlier two calling back 54,000 and 70,000 batteries respectively” was included in all of the six conditions.

Secondly, for the favorable reputation conditions, participants with positive attitude towards HP (i.e. rated 4-7 in the global reputation evaluation) were provided with high distinctiveness information that “Hewlett-Packard, as one of the top IT company on Fortune 500, has outstanding performance across a wide range of product lines such as personal computers, printers, storage devices and enterprise software”. For the unfavorable reputation conditions, participants with negative attitude towards HP (i.e. rated 1-3 in the global reputation evaluation) were offered low distinctiveness information that “PC giant Hewlett-Packard seemed to get in endless trouble during these years. The large defective video card crisis in Chinese market last year has just faded away”. These distinctiveness information cues were intended to reinforce participants’ positive/negative perceptions in each group to ensure that participants had concrete impressions on how HP performed in other comparable contexts in addition to laptop batteries.

Finally, in the high consensus conditions, high consensus information that “It is reported that many top laptop brands have been caught in battery quality issues such as battery explosions and mass product recalls over recent years. Apple, Lenovo, Dell, Asus, Toshiba and Acer together have recalled a total of three million laptop batteries in the past five years” were added in the news story. In the low consensus conditions, low consensus information that “It is reported that after the mass Sony battery recall in 2006, other brands across the industry have had much fewer battery overheating or explosion accidents” was provided in the story. In the “no consensus information” condition, no information about other comparable organizations was mentioned in the story; instead, a brief background description that “Safety issues of laptop battery have raised increasing attention worldwide, as the unexpected danger of battery overheating may potentially cause tremendous loss and damage” was added in order to keep the length of stories relatively equal among each condition.

5.2.2 Measures

In order to keep consistent with extant studies on SCCT, the measures of crisis responsibility and organizational reputation were developed from previous experiments performed by Coombs and his colleagues (Coombs and Holladay 1996,
Crisis responsibility was measured using a five-item scale that consists of two items from Griffin, Babin and Darden’s (1992) blame and responsibility research and three items from McAuley, Duncan and Russell’s (1992) revised Causal Dimension Scale (CDSII). The same instrument was used in Coombs and Holladay’s (2006, 2010) latest studies. Griffin et al. (1992) review previous operationalization of evaluating three causal dimensions of Kelley’s covariation principle and simplify the earlier measures of blame and responsibility into two scales: towards the manufacturer and towards the situation. These two scales were adapted to the overheating battery scenario in this experiment. The corresponding items of statements were: (1) “The battery explosion accident was very much likely caused by some uncertain factors in the user’s house at that time; it did not have much to do with HP”; (2) “HP should take major responsibility for this issue”.

McAuley et al. (1992) further develop the first version of Causal Dimension Scale (Russell 1982) regarding how individual perceive causes, and formulate a revised twelve-item version (CDSII) for a more reliable and valid measurement of causal dimensions. This study selected three items regarding personal control and external control from CDSII, and again changed them to reflect the current crisis scenario. The three items were: (3) “The overheating battery issue was caused by factors that HP could have controlled better”; (4) “The causes of the issue were something over which HP did not have power”; and (5) “The issue was due to something that was not manageable by HP”.

Earlier studies using the combination of these five items in crisis responsibility evaluation have reported acceptable reliabilities ranging between .80 and .91 (Cronbach’s alpha) (Coombs and Holladay 2001, 2002, 2006, 2010; Coombs 2004; Elliot 2010).

For the evaluation of organizational reputation, a five-item version of the organizational reputational scale adapted from McCroskey’s (2005) character
instrument scale\textsuperscript{23} was employed. The character scale assesses the degree to which the source is trustworthy and concerned with the interests of others. Coombs and Holladay (1996, 174-175) admits that character instrument scale may not be a perfect measure for organizational reputation, but it is still useful in this context because trustworthiness is often considered as one of the most important elements in organizational reputation and is a common factor used in various commercial reputational measures. In line with the previous experimental studies from Coombs and Holladay, the five items included in the current study were: (1) “Under most circumstances, I would like to believe HP is concerned with the well-being of its customers”; (2) “I do not believe HP will disclose the truth about the causes of this issue”; (3) “Generally speaking, I believe HP is a responsible organization towards the public”; (4) “Basically, I consider HP a dishonest organization”; (5) “Under most circumstances, I would like to believe what HP says about its products in the future”. In previous research (Coombs and Holladay 2002, 2006, 2010; Coombs 2004; Elliot 2010), this five-item organizational reputation scale had an internal consistency between .81 and .87 (Cronbach’s alpha).

Manipulation check was placed at the end of the survey in order to minimize any potential bias in the evaluation of crisis responsibility and organizational reputation. One item was used for the manipulation check on the perceived consensus information dimension. Participants in each prior reputation group were compared on the term “Compared with HP, other laptop makers rarely had battery problems”. Distinctiveness information dimension was not checked for difference because distinctiveness information itself had already been used as the key factor for dividing conditions. An additional statement with regard to crisis history – “HP had stuck into laptop battery issues for several times in the past” – was used to confirm the perceived level of consistency information.

\textsuperscript{23} Refer to \textit{Scales for the Measurement of Ethos} \url{http://www.jamesmccroskey.com/publications/22.htm} for a quick review.
All of the statement items above were assessed on seven-point Likert-type scales ranging from 1 – “strongly disagree” to 7 – “strongly agree”. Participants were asked to what extent they agree or disagree with the certain statements regarding the overheating battery issue after they read the news story stimuli.

5.2.3 Procedures and Participants

The survey was instructed in Chinese and online. Given that it was impossible to obtain a calculated probability sample of HP stakeholders for this study, convenience sampling and snowball sampling were used for collecting participants. Links of the questionnaire form were delivered on public forums, in discussion groups and through interpersonal communication tools such as IM and Emails. In the invitational message, participants were invited to voluntarily cooperate in an academic survey regarding perceptions of corporate responsibility, which involved reading a 600-word article and then finishing a 15-question survey. In the instruction part on the first page of survey, participants were kindly requested to answer the questions with truthfulness, patience and conscientiousness in order to generate meaningful data for the research. After participants responded to the first question of the global evaluation of their holistic perceptions towards HP, they were randomly assigned to different news stories reflecting either high consensus or low consensus or no consensus condition in their corresponding reputation groups. Before they started, they were instructed again to read the article carefully and answer the questions based on their real perceptions towards the crisis scenario they had just read.

Finally, 158 responses were collected in this study. Of the participants, 53.2% (n=84) were women and 46.8% (n=74) were men. A great majority of the participants were young people; 51.9% (n=82) of the participants aged between 25 and 34, and 41.1% (n=65) fell in the range of 18-24. The one-way analyses of variance (ANOVA) were performed to test the influence of the demographics. No significant difference was found between women and men on the organizational reputation scores, $F(1, 156) = 3.33, p = .070$, but difference on the significance level of .05 was observed between genders on the crisis responsibility scores, $F(1, 156) = 4.13, p = .044$. Moreover, no significant difference was found between different age groups either for
organizational reputation, \( F(3, 154) = 0.683, p = .564 \), or for crisis responsibility, \( F(3, 154) = 2.56, p = .57 \). The statistical fact that men were more likely than women to attribute higher crisis responsibility to the organization should not significantly affect the effects of information dimensions in this study, because follow-up ANOVAs found no difference in gender distribution within each information condition and no difference in perceptions towards either of the three information dimensions between genders.

5.3 Results

5.3.1 Reliabilities

Reliability analysis was performed to check the internal consistency of the scales for crisis responsibility and organizational reputation. It was shown that scale for crisis responsibility evaluation had a Cronbach’s alpha of .76 (\( M=25.6, SD=4.60 \)) and scale for organizational reputation evaluation had a Cronbach’s alpha of .79 (\( M=23.1, SD=4.27 \)). These two values were slightly lower than those reported in previous experimental studies, but both of the two reliability scores fell within the acceptable range for later analysis (Nunnally 1978). The decrease might result from the subtle difference in wordings when translating the original English statement items into Chinese ones. Actually, for example, when excluding one somehow ambiguously-phrased item in the scale of organizational reputation, the rest of four items yielded a Cronbach’s alpha of .85.

In line with the past studies in SCCT (e.g. Coombs 2004; Coombs and Holladay 2006), the items in both scales were then summed to create composite scores for crisis responsibility and organizational reputation for future analyses. Some items were reversely adjusted based on their meanings so that the composite scores could represent the same direction in terms of levels of degree. The high the score on crisis responsibility, the more participants attributed the responsibility to the organization; the high the score on organizational reputation, the more positively participants rated the organization’s reputation.
5.3.2 Manipulation Check

A series of one-way ANOVA tests as well as post hoc analysis were performed to test the robustness of manipulation across different crisis conditions. The results of the analyses were illustrated in Table 5. With regard to the control of consensus information, in the favorable reputation group (including NHH, HHH, and LHH conditions), participants in the low consensus condition (LHH) rated the consensus check significantly lower than those in the no consensus condition (NHH) and in the high consensus condition (HHH) (Using LSD method, $p = .04$ and $p = .00$, respectively). However, participants in high consensus condition (HHH) did not rate consensus check significantly high than those in no consensus condition (NHH) (LSD, $p = .54$). Similar things happened in the unfavorable reputation group as well (including NLH, HLH, and LLH). Participants in the low consensus condition in this group (LLH) also rated consensus check significantly lower than those in the no consensus condition (NLH) and in the high consensus condition (HLH) (LSD, $p = .02$ and $p = .02$, respectively), but there was no significant difference on the rating of consensus check between participants in no consensus condition (NLH) and in high consensus condition (HLH) (LSD, $p = .67$).
Ideally, the manipulation on consensus information should have created significant differences on both ends, that is, both between no consensus conditions and high consensus conditions (NHH versus HHH, NLH versus HLH) and between no consensus conditions and low consensus conditions (NHH versus LHH, NLH versus LLH). However, the results here seemed to indicate that participants had an asymmetrical perceptions towards high consensus information and low consensus information. Explicitly stating that other competitors also had poor records on laptop battery issues did stimulate the perceptions that other competitors were no good than HP but only in a limited degree, while on the contrary, noting that other competitors had less similar problems could immensely trigger the perceptions that HP was much worse compared with the other brands. This asymmetrical cognition between negative and positive information was also observed in previous studies regarding crisis history (Coombs 2004) and prior reputation (Coombs and Holladay 2001, 2006).

Nevertheless, it is important to point out that the tendency of weighing the negative consensus information more heavily than the positive one could also, at least partially, be the result of the consistency information from the stimuli. It is quite reasonable to understand that HP’s consecutive recalls in the past could well lead to the perceptions that other PC makers were better than HP. Because the effects of different information dimensions are interactive in nature, the influence from the high consistency information in the case should not be neglected. Since the manipulation check was only partially successful, analysis proceeded on but cautions must be observed in the interpretation.

The first question in the survey asked about participants’ overall impressions towards HP, and participants were then divided into favorable and unfavorable reputation group based on their answers. This item served as a successful check for the manipulation of distinctiveness information ($p = .00$).

The last item assessed participants’ perceived levels on consistency information in a simple and rough manner. ANOVAs were also conducted to examine participants’ perceived levels of distinctiveness and consistency information. It was found that there was no significant difference in participants’ overall impressions on reputation
either among the three conditions within the favorable reputation group, \( F(2, 99) = 1.02, p = .36 \), or among the three conditions within the unfavorable reputation group, \( F(2, 53) = .57, p = .95 \). Also, no significant difference was observed on participants’ perceived levels of crisis history either among the three conditions within the favorable reputation group, \( F(2, 99) = 1.32, p = .27 \), or among the three conditions within the unfavorable reputation group, \( F(2, 53) = 1.95, p = .15 \).

### 5.3.3 Test of Hypotheses

A series of MANOVAs were used to test Hypothesis 1a - 4b, in which the composite scores of crisis responsibility and organizational reputation were served as dependent variables and the six conditions were served as factor variables.

Hypothesis 1a and 1b proposed the effect of high consensus information on the level of perceived crisis responsibility and organizational reputation in the favorable reputation group. MANOVA analysis including the three conditions in this group (NHH, HHH, and LHH) indicated a significant effect of consensus information on crisis responsibility, \( F(2, 99) = 4.47, p = .01 \), Partial \( \eta^2 = .83 \), power = .76, but no significant effect of consensus information on organizational reputation was observed. The LSD post hoc analysis revealed that participants who were provided with high consensus information (HHH) perceived crisis responsibility to HP significantly less than those who were not given high consensus information did (NHH, \( p = .04 \)) and also significantly less than those who were given low consensus information did (LHH, \( p = .00 \)). However, because the manipulation check on consensus information did not yield a significant difference between the HHH condition and the NHH condition, Hypothesis 1a was only limitedly supported while Hypothesis 1b was not supported.

Hypothesis 2a and 2b proposed the effect of low consensus information on the level of perceived crisis responsibility and organizational reputation in the favorable reputation group. The MANOVA above found no significant difference between the LHH condition and the NHH condition in terms of either crisis responsibility score (\( p = 0.36 \)) or organizational reputation score (\( p = 0.37 \)), despite the fact that low consensus information did, to some degree, reduce the crisis responsibility score and
increase the organizational reputation score compared with the no consensus conditions in the same group. Thus, no support was found for Hypothesis 2a or 2b.

Similarly, Hypothesis 3a, 3b, 4a and 4b were aimed to predict the effect of consensus information on crisis responsibility and organizational reputation in the unfavorable group. MANOVA including the three conditions in this group (NLH, HLH, and LLH) was conducted to test the hypothetical effect of consensus information. Significant effects of consensus information were found both in the crisis responsibility scores, $F(2, 53) = 6.11, p = .00$, Partial $\eta^2 = .19$, power = .87, and in the organizational reputation scores, $F(2, 53) = 5.29, p = .01$, Partial $\eta^2 = .16$, power = .82. A further LSD post hoc analysis on the effect of consensus information on crisis responsibility found that participants in the low consensus condition (LLH) attributed significantly more crisis responsibility to HP than those in high consensus condition did (HLH, $p = .00$) and those in no consensus condition (NLH, $p = .01$) did. However, no such significant difference ($p = .78$) was found between the high consensus condition (HLH) and the no consensus condition (NLH) in this group. Since the manipulation check on the low consensus information was successful, an intensifying effect of low consensus information on crisis responsibility was confirmed. Hypothesis 4a was supported, but Hypothesis 3a was not supported.

The LSD post hoc analysis was also used to evaluate the effect of consensus information on organizational reputation in this group. Similarly, although no significant difference ($p = .72$) was found between the high consensus condition (HLH) and the no consensus condition (NLH), significant difference was observed in the low consensus condition (LLH) against the other two, as participants in the low consensus condition rated significantly lower on the organizational reputation score than participants in the other two conditions did ($p = .01$ in both cases). Hypothesis 4b was supported but Hypothesis 3b was not.

The results of the tests of hypothesis 1a to 4b are summarized in Table 6.
The last hypothesis attempted to determine whether the critical proposition in SCCT also remained valid in this study. Bivariate correlation analysis was performed to examine the proposed negative correlation between the crisis responsibility scores and the organizational reputation scores. It was found that there was a significant negative correlation ($p = .001$) between these two scores, despite a relatively weak one (Pearson $r = -.253$). Hypothesis 5 was confirmed.

### 5.4 Discussion

The purpose of this study was to examine the effect of consensus information on participants’ perceptions towards crisis responsibility and organizational reputation under the presence of crisis history in the favorable reputation group and in the unfavorable reputation group. The study hypothesized that both high consensus
information and low consensus information would have a significant effect on crisis responsibility and organizational reputation in both reputation groups. The results, however, indicated that significant effect of consensus information was observed only in some particular conditions but not in the others.

Specifically, the study found limited support for the hypothesis that high consensus information could significantly reduce the attributions of crisis responsibility among participants who had a favorable impression towards the organization even when the organization had a history of similar crises in the past (i.e. the HHH condition). Moreover, the results also confirmed the predicted effect that low consensus information could significantly intensify both crisis responsibility attributions and reputation threat among participants who had unfavorable impressions towards the organization when the organization had experience several similar crises in the past (i.e. the LLH condition). Other than the above two, no statistically significant evidence was found for the hypothetical effects of consensus information in the other conditions, although the effects yielded by consensus information in the other conditions did coincide with what has been proposed in the covariation-based approach, just in an insignificant way.

The result for the HHH condition was in accord with the predicted causal attribution of the HHH pattern in covariation principle. As shown in Table 3, empirical tests of the HHH pattern in social psychology have indicated that the HHH pattern would lead to a very strong causal attribution to the entity with which the person is interacting. In this experimental study, it seemed that when providing with the information that HP had generally performed well in its businesses (suggested by the favorable overall impressions), that HP had experienced several similar laptop battery problems, and that many other laptop makers had also got stuck in the annoy battery overheating issues, the participants in the HHH condition would possibly perceive that the battery accident could be resulted from some inherent factors in the entity of the batteries (e.g. defective products provided by certain common suppliers or immaturity of the battery technology) rather than something for which HP should take full responsibility. Consequently, a relatively low level of crisis responsibility was attributed to HP in this condition. Importantly, when compared with the results of earlier SCCT studies
(Coombs 2004; Coombs and Holladay 2006), it seems that the high consensus information does have a positive effect on crisis responsibility attributions. Such a positive effect could even counteract the negative effect imposed by the negative high consistency information (crisis history), as seen in the HHH condition. However, since the manipulation in this setting was not successful in the current study, the positive effect of high consensus information cannot be confirmed until more evident empirical support is found in the future studies.

In the meanwhile, crisis attribution in the LLH condition was also in conformity with what has been predicted in the LLH pattern in covariation principle. According to the empirical tests in covariation principle, the LLH pattern would yield a strong attribution to the focal person. The result in this study demonstrated that low consensus information could move the perceived crisis responsibility to a much higher level, and also significantly exacerbate the reputational threat from the crisis when the two intensifying factor documented in SCCT were simultaneously present. As expected, the worst condition to the focal organization HP was witnessed in this condition.

Furthermore, the study also demonstrated the effects of the three information dimensions as an integrated pattern. It is important to notice that significant effect of low consensus information was observed only in the LLH condition but not in the LHH condition, while the effect of high consensus information was statistically significant only in the HHH condition but not in the HLH condition. In other words, the effect of consensus information on causal inferences during crises became prominent only when some particular configurations of information dimensions were matched. This finding strongly indicated the interactive effect among the three information dimensions. The effect of one information dimension was somewhat interwoven with and dependent on the effect of the other information dimensions, and the three information dimensions came together as an integral information system to make a joined impact on crisis responsibility attributions as well as the level of reputational threat. When certain information pattern was matched, the integrated impact could be significant enough to alter the effect created by a single information dimension.
Finally, the study provided another empirical support for the core relationship between crisis reasonability and organizational reputation in the SCCT model. The result once again confirmed the proposition in earlier research that the reputational threat imposed by a crisis intensifies as the attributions of crisis responsibility to the focal organization increases (Coombs 2004; Lee 2005; Brown and White 2011).
Chapter 6 Conclusion

6.1 Discussion

As an evidence-based framework for understanding the relationships among crisis situation, crisis responsibility and reputational threat, SCCT utilizes Weiner’s (1992) concept of personal control and operationalizes two types of information out of Kelley’s (1967) three information dimensions of causal attribution to assess to what extend stakeholders attribute crisis responsibility to the focal organization in crisis situations. However, it is argued that the crisis responsibility assessment approach proposed in SCCT may suffer from two flaws. First, since crises are often complex and ever-evolving events, the way how media and stakeholders interpret a crisis dynamically changes as more information from multiple observations and sources continue to become available. Hence, it sometimes may be impractical to determine the level of the perceived crisis responsibility by simply assigning a certain crisis type from the SCCT’s crisis typology list to a crisis event, because the typology may not be able to cover all sorts of crises at different stages of development. Second, Kelley’s covariation principle is intended to identify the interactive effect of the three information dimensions as a pattern on making causal attributions for an event. The approach of crisis responsibility assessment in SCCT selectively operationalizes two of the three information dimensions in covariation principle and examine their effects as isolated dimensions rather than as integral patterns. This may be misleading because the effect of a single information dimension on shaping crisis attributions may be dependent on the effect of the others.

Schwarz (2008) suggests that a more consistent integration of the covariation-based causal attribution analysis into SCCT framework would avoid the potential problems above. Such an integration could greatly enrich our understanding of how stakeholders make crisis attributions during crises and improve the explanatory power of SCCT on crisis responsibility assessment.

In line with Schwarz’s (2008) suggestion, two studies were conducted in the present research to further examine the applicability of extending SCCT with a covariation-
based approach to crisis responsibility assessment. The first study investigated what kind of information stakeholders actually used to make crisis responsibility attributions in a real crisis event. A content analysis on related media reports and user comments found that stakeholders did refer to multiple observations and experiences based on their past dialogues with the focal organization HP and did use all the three information dimensions proposed in covariation principle, including consensus information in particular, to judge crisis responsibility in the crisis. The study also showed that the information dimensions used by stakeholders largely matched the strong ‘person’ attribution pattern proposed in covariation principle. The study offered empirical evidence to confirm the prerequisite assumptions for including covariation principle into the crisis responsibility assessment process in the crisis communication context.

Followed the content analysis, an experimental study was conducted to examine whether consensus information could make any extra impact on crisis responsibility attribution as well as on reputational threat besides the effect of prior reputation status (distinctiveness information) and a negative crisis history (high consistency information). The study found that participants in the HHH condition attributed significantly less crisis responsibility to the focal organization than participants in either LHH condition or NHH condition did, and that participants in the LLH condition attributed significantly more crisis responsibility to and rated significantly lower reputational score on the focal organization than participants in either HLH condition or NLH condition did. These findings suggested that when certain particular information patterns were matched, consensus information can significantly impact stakeholders’ crisis responsibility attributions and the perceived organizational reputation besides the effect of distinctiveness information and consistency information. These findings highlighted the conjoint effect of the three information dimensions as an integral information system. Moreover, they provided evidence to support the claim that partially operationalizing two information dimensions as isolated factors in SCCT can suffer from the bias of missing a whole picture of how causal information dimensions interact as a pattern.
As of now, both of the two research questions proposed in Section 3.2 that guide the whole research can be answered with “Yes” in some sense. In other words, at least for product crises in IT industry, it seems to be true that stakeholders do use an ANOVA-like way of causal attribution in general and take into account consensus information in particular when judging crisis responsibility, and that consensus information can make a significant influence on stakeholders’ perceptions of crisis responsibility alongside the effect of distinctiveness information and high consistency information, as long as the information dimensions could match certain suitable configurations.

With these regards, it can be concluded that Schwarz’s suggestion of extending SCCT with covariation principle is legal and plausible, as the research showed that a covariation-based model in crisis responsibility assessment not only can be legitimately applied to crisis communication context but also can contribute to a better understanding of crisis responsibility attributions. Nevertheless, far more empirical tests are needed to make this interesting integration theoretically meaningful and practically advisable.

6.2 Practical Implications

First, a covariation-based approach to crisis responsibility assessment can help organizations with crisis communication planning in the pre-crisis phase. Using the three information dimensions in covariation principle, crisis managers can establish useful categories for a better early-warning system in crisis management. For example, during their media monitoring exercise, crisis managers can identify information dimensions and patterns from stakeholders’ comments on the focal organization so as to have a clear idea on what kind of messages stakeholders would be likely to resort to and what attributions they are likely to make if a crisis in related aspects happens. For another example, crisis managers can use quick polls to periodically evaluate the general state of organizational reputation among different groups of stakeholders and among other comparable brands, and then draft crisis management plans that best deal with possible attributions in the corresponding categories.

Second, in the crisis response phase, given that the current research showed that consensus information was taken into account by stakeholders when judging crisis
situations and was able to make a difference on the level of perceived crisis responsibility in certain situations, crisis communication practitioners can better estimate the perceived crisis responsibility and respond to the crisis by taking into consideration consensus information along with the other evidence-proven aspects suggested in SCCT.

At the initial stage where no prominent crisis frame emerges, crisis managers can, based on covariation principle, use the available options to produce information cues that could form desired information patterns that will lead to more positive attributions to the organization’s own advantages. As the crisis evolves, high consensus information could be offered to indicate that the crisis is due to some common difficulties in the industry and other similar organizations also do not have a perfect solution on this matter. Although the present research indicated that high consensus information did not necessarily be able to make a significant positive influence in every situation, there was at least no evidence showing that high consensus information could have a negative impact.

If an unfavorable attribution to the organization is inevitably emerged, crisis managers could still use the covariation-based approach to evaluate crisis responsibility level and then employ the crisis response strategies suggested by SCCT in a better informed way.

Third, it was shown in Study 1 that messages in one information dimension could be transformed to another information dimension in the future. A good example was that HP had taken battery recalls several times in the past. Normally this information would be treated as negative crisis history (high consistency). However, if those past crises were managed in a satisfactory way, stakeholders could consider the negative crisis history as a positive crisis response record (high distinctiveness). This again underscores the importance of crisis management, as crisis managers can make use of this possibility to change the negative impact of crisis history to a more positive one, especially in the long run.
As with any study, the methods used in the present research imposes limitations on the generalizability of the results. For the content analysis of the HP crisis case in Study 1, the study is subject to subjectivity errors in interpreting the raw materials, although efforts were made to increase objectivity and reliability of the coding procedure. Moreover, the study only descriptively documented what kind of information stakeholders actually used to attribute crisis responsibility in one particular crisis case. Such an inherently inductive attempt, like any other case study in crisis communication research, was in lack of the validity for drawing meaningful inference to other crisis situations. Stakeholders in other crises may make judgment on crisis responsibility based on completely different information cues and use completely different way than the proposed ANOVA-like approach.

For the experimental method used in Study 2, although the crisis stories used in the stimuli sounded real and plausible, respondents were not the actual stakeholders in those crisis situations and they experienced the “crisis event” in quite a virtual way. Only a small set of information cues were selected and exercised to the respondents with purposeful manipulation, while at the same time, the respondents arrived at their judgments based on very limited information in greatly oversimplified way. Moreover, cautions should be observed in generalizing the effect of consensus information and covariation-based information patterns in practical usage, because of the sample range and the non-probability sampling methods used in data collection. Finally, since the experiment was designed and exercised in Chinese, there would be some subtle discrepancies in the statement items and measure scales from the previous SCCT studies due to the wordings in the two different languages. Furthermore, the context of Chinese culture may also have an impact on the results the experiment yielded, as the cultural influence on crisis interpretation has been documented in many extant crisis communication studies (Lee 2005, Huang 2006). Therefore, more evidence from other demographic contexts is needed for more robust tests on the effectiveness of the covariation-based approach in crisis communication.
6.4 Future Research

As an initial effort to apply a covariation-based approach to SCCT, the present research yielded some inspiring findings but left more questions unanswered. Future research on crisis communication from the attribution-related perspective can improve the understanding of how stakeholders perceive the crisis situations at least from the following areas:

Firstly, further elaborate the effect of different covariation-based information patterns. The present research observed some evident effects of the information dimensions in the LLH condition and the HHH condition, but the evidence for the effect in the other conditions remained unsupportive. Future studies may focus on how different information dimensions can make an impact on stakeholders’ interpretation of crisis responsibility when other information patterns are matched, which information dimension is the most used dimension and which information dimension plays the most important role in shaping the overall effect.

Secondly, connect the findings in crisis responsibility assessment with the appropriate crisis response strategies. SCCT posits that the level of crisis responsibility is a key indicator for selecting the appropriate crisis response strategy, as the smaller the gap between the level of stakeholders’ perceived crisis responsibility and the level of the organization’s willingness to accept crisis responsibility, the better the chance that the loss of organizational reputation was minimized (Coombs 2009). Therefore, if information patterns have been identified to be able to alter the level of perceived crisis responsibility to the focal organization, then the question as to which crisis response strategy can best addresses the changed level of crisis responsibility has to be answered to provide useful reference in practice.

Finally, pursue an even broader integration of attribution theories into crisis communication. Attribution studies in social psychology have provided many fruitful theoretical frameworks for understanding and interpreting how people make judgment regarding the causes of events. In additional to Weiner’s achievement motivation model in SCCT and Kelley’s covariation principle used in this research, many other rules and models of attribution also have great potential in explaining stakeholders’
attributions of crisis responsibility in the field of crisis communication. Indeed, some studies have already demonstrated the effect of other attribution models such as discounting principle (Dean 2004) and counterfactual thinking (Coombs and Holladay 2010) in the context of crisis communication and public relations. Crisis communication research in general and SCCT in particular can be substantially enriched if future studies provide a more comprehensive understanding of stakeholders’ attributions of crisis responsibility.
References


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## Appendix A: Summary of Information Cues identified in the Content Analysis in Chapter 4

<table>
<thead>
<tr>
<th>Entity</th>
<th>Information</th>
<th>Product (Laptop)</th>
<th>Customer Services</th>
<th>Response towards the Crisis</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Product Information Cues</td>
<td>N_{rpt}</td>
<td>N_{cmt}</td>
<td>STOT</td>
<td>Information Cues</td>
</tr>
<tr>
<td>Consensus Information</td>
<td>less problems in other brands</td>
<td>5</td>
<td>1*</td>
<td>12</td>
<td>21</td>
</tr>
<tr>
<td></td>
<td>better design in other brands</td>
<td>2</td>
<td>1</td>
<td>12</td>
<td>21</td>
</tr>
<tr>
<td>Distinctiveness</td>
<td>problems in different component parts</td>
<td>5</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Information</td>
<td>problems in many models</td>
<td>14</td>
<td>2</td>
<td>27</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>problems in other electronic products</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>bad Customer Services as well</td>
<td>0</td>
<td>2</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Consistency Information</td>
<td>problems stable to many individuals</td>
<td>13</td>
<td>4</td>
<td>16</td>
<td>43</td>
</tr>
<tr>
<td></td>
<td>problems stable over time</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>1</td>
</tr>
<tr>
<td>Others</td>
<td>Industrial Problem</td>
<td>0</td>
<td>3</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Policy violates required standard</td>
<td>6</td>
<td>0</td>
<td>6</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Unethical behaviors</td>
<td></td>
<td></td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>62</td>
<td>32</td>
<td>94</td>
<td></td>
</tr>
</tbody>
</table>

**Note:**
1. N_{rpt} = Number of media reports; N_{cmt} = Number of user comments; STOT = Subtotal.
2. Cells that occupy two rows indicate the number of messages that mentioned both of the information cues. The first example is labeled with * in the table.
Appendix B: The Questionnaire Used for the Experimental Study in Chapter 5

Page 1

Welcome

Thanks for taking your time to participate in this survey! The survey is aimed to investigate how customers perceive organizational image and responsibility after organizational crises. The survey consists of a short piece of news story and 16 multiple-choice questions, and will roughly take 10 - 15 minute to complete.

In order to make this investigation meaningful and valid, you are kindly requested to read the news story carefully and then answer the questions truthfully based on your real perception and judgment.

The information you provided in this survey will remain confidential and anonymous, and will only be used for academic purposes.

Thanks again for your support.

-----------------------------------------------------

On a scale of 1-7, what is your overall impression of Hewlett-Packard Company (HP)?

1, Very positive 5, A little negative
2, Positive 6, Negative
3, A little positive 7, Very negative
4, Neutral / I do not know very much about HP
Please read the following news story carefully, and then answer the questions based on your real perception.

1 - News story for the HHH condition

(International news) - James Brinkman, an IT engineer in Dresden, Germany, has reported a dangerous laptop fire he had recently. James and his friends were just about to leave for dinner, while a blast of crackling suddenly gave them a start. Light smoke and sparkles came out from a corner of his music-playing Hewlett-Packard laptop on the desk. The flame died down soon after it spread to the desk. Fortunately, there was no substantial loss except some minor damage to the office stationery next to the laptop. James reported the accident to HP customer service, before two HP staffs came later to take away the burned laptop for further investigation.

HP's preliminary inspection suggested that the explosion was very likely caused by battery overheating, as a photo provided by HP clearly showed that the battery part of the laptop had been severely burned out. However, it was said that why the battery suddenly caught fire was still await for closer examination, because laptop batteries were now normally outsourced to specialized battery cell producers, and HP, like many other PC makers, purchased the finished battery packs from its cooperative battery partners.

Actually, quite a few battery overheating and explosion accidents have been reported in recent years. Laptop batteries have even been termed "time bombs" in some news comments. The causes of battery overheating vary from case to case. Poor internal structure, long time battery charging, defects of component parts and adverse work environment may all lead to battery faults and even hazardous accidents.

It is reported that many top laptop brands have been caught in battery quality issues such as battery explosions and mass product recalls over recent years. Apple, Lenovo, Dell, Asus, Toshiba and Acer together have recalled a total of three million laptop batteries in the past five years. Hewlett-Packard, as one of the top IT companies on
Fortune 500, has outstanding performance across a wide range of product lines such as personal computers, printers, storage devices and enterprise software. HP, nevertheless, made a global recall of 162,000 laptop batteries that could potentially bring safety trouble this May. This actually has been the third global recall of HP laptop battery since 2009 with the earlier two calling back 54,000 and 70,000 batteries respectively.

2 - News story for the LHH condition

(International news) - James Brinkman, an IT engineer in Dresden, Germany, has reported a dangerous laptop fire he had recently. James and his friends were just about to leave for dinner, while a blast of crackling suddenly gave them a start. Light smoke and sparkles came out from a corner of his music-playing Hewlett-Packard laptop on the desk. The flame died down soon after it spread to the desk. Fortunately, there was no substantial loss except some minor damage to the office stationery next to the laptop. James reported the accident to HP customer service, before two HP staffs came later to take away the burned laptop for further investigation.

HP's preliminary inspection suggested that the explosion was very likely caused by battery overheating, as a photo provided by HP clearly showed that the battery part of the laptop had been severely burned out. However, it was said that why the battery suddenly caught fire was still await for closer examination, because laptop batteries were now normally outsourced to specialized battery cell producers, and HP, like many other PC makers, purchased the finished battery packs from its cooperative battery partners.

Actually, quite a few battery overheating and explosion accidents have been reported in recent years. Laptop batteries have even been termed "time bombs" in some news comments. The causes of battery overheating vary from case to case. Poor internal structure, long time battery charging, defects of component parts and adverse work environment may all lead to battery faults and even hazardous accidents.

It is reported that after the mass Sony battery recall in 2006, other brands across the industry have had much fewer battery overheating or explosion accidents. Although
as one of the top IT companies on Fortune 500, Hewlett-Packard has outstanding performance across a wide range of product lines such as personal computers, printers, storage devices and enterprise software, it nevertheless made a global recall of 162,000 laptop batteries that could potentially bring safety trouble this May. This actually has been the third global recall of HP laptop battery since 2009 with the earlier two calling back 54,000 and 70,000 batteries respectively.

3 - News story for the NHH condition

(International news) - James Brinkman, an IT engineer in Dresden, Germany, has reported a dangerous laptop fire he had recently. James and his friends were just about to leave for dinner, while a blast of crackling suddenly gave them a start. Light smoke and sparkles came out from a corner of his music-playing Hewlett-Packard laptop on the desk. The flame died down soon after it spread to the desk. Fortunately, there was no substantial loss except some minor damage to the office stationery next to the laptop. James reported the accident to HP customer service, before two HP staffs came later to take away the burned laptop for further investigation.

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Safety issues of laptop battery have raised increasing attention worldwide, as the unexpected danger of battery overheating may potentially cause tremendous loss and
damage. Hewlett-Packard, as one of the top IT companies on Fortune 500, has outstanding performance across a wide range of product lines such as personal computers, printers, storage devices and enterprise software. HP, nevertheless, made a global recall of 162,000 laptop batteries that could potentially bring safety trouble this May. This actually has been the third global recall of HP laptop battery since 2009 with the earlier two calling back 54,000 and 70,000 batteries respectively.

4 - News story for the HLH condition

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It is reported that many top laptop brands have been caught in battery quality issues such as battery explosions and mass product recalls over recent years. Apple, Lenovo,
Dell, Asus, Toshiba and Acer together have recalled a total of three million laptop batteries in the past five years. Particularly, PC giant Hewlett-Packard seemed to get in endless trouble during these years. The large defective video card crisis in Chinese market last year has just faded away. HP, nevertheless, made a global recall of 162,000 laptop batteries that could potentially bring safety trouble this May. This actually has been the third global recall of HP laptop battery since 2009 with the earlier two calling back 54,000 and 70,000 batteries respectively.

5 - News story for the LLH condition

(International news) - James Brinkman, an IT engineer in Dresden, Germany, has reported a dangerous laptop fire he had recently. James and his friends were just about to leave for dinner, while a blast of crackling suddenly gave them a start. Light smoke and sparkles came out from a corner of his music-playing Hewlett-Packard laptop on the desk. The flame died down soon after it spread to the desk. Fortunately, there was no substantial loss except some minor damage to the office stationery next to the laptop. James reported the accident to HP customer service, before two HP staffs came later to take away the burned laptop for further investigation.

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6 - News story for the NLH condition

(International news) - James Brinkman, an IT engineer in Dresden, Germany, has reported a dangerous laptop fire he had recently. James and his friends were just about to leave for dinner, while a blast of crackling suddenly gave them a start. Light smoke and sparkles came out from a corner of his music-playing Hewlett-Packard laptop on the desk. The flame died down soon after it spread to the desk. Fortunately, there was no substantial loss except some minor damage to the office stationery next to the laptop. James reported the accident to HP customer service, before two HP staffs came later to take away the burned laptop for further investigation.

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Safety issues of laptop battery have raised increasing attention worldwide, as the unexpected danger of battery overheating may potentially cause tremendous loss and damage. Particularly, PC giant Hewlett-Packard seemed to get in endless trouble during these years. The large defective video card crisis in Chinese market last year has just faded away. HP, nevertheless, made a global recall of 162,000 laptop batteries that could potentially bring safety trouble this May. This actually has been the third global recall of HP laptop battery since 2009 with the earlier two calling back 54,000 and 70,000 batteries respectively.

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*Based on the information above (presume you just read this report in your daily news browsing), how would you look at this incident and HP company?*

*On a scale of 1-7, to what extend do you agree or disagree with the following statements? To the best of your ability, please circle the answer that most accurately indicates your levels of agreement on statement 1-12.*

1, Strongly agree 5, A little disagree
2, Agree 6, Disagree
3, A little agree 7, Strongly disagree
4, Undecided / neither agree nor disagree

S1. The battery explosion accident was very much likely caused by some uncertain factors in the user’s house at that time; it did not have much to do with HP.

S2. HP should take major responsibility for this accident.

S3. The accident was caused by factors that HP could have controlled better.

S4. The causes of the issue were something over which HP did not have power.
S5. The issue was due to something that was not manageable by HP.

S6. Under most circumstances, I would like to believe HP is concerned with the well-being of its customers.

S7. I do not believe HP will disclose the truth about the causes of this issue.

S8. Generally speaking, I believe HP is a responsible organization towards the public.

S9. Basically, I consider HP a dishonest organization.

S10. Under most circumstances, I would like to believe what HP says about its products in the future.

S11. Compared with HP, other laptop makers rarely had battery problems.

S12. HP had stuck into laptop battery issues for several times in the past.

Demographics

13. Gender:

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<th>Male</th>
<th>Female</th>
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14. Age

<table>
<thead>
<tr>
<th></th>
<th>Under 18</th>
<th>18-24</th>
<th>25-34</th>
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<tr>
<td></td>
<td>35-44</td>
<td>45-54</td>
<td>Above 54</td>
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15. Have you ever heard of any other laptop battery explosion accident before?

- No, not too much
- Sometimes, but normally I’m not interested in these reports
- Yes, that is something I care about
- Of course, I’m quite attentive to these reports and would like to follow reports later on.