TOWARDS UNDERSTANDING CONSUMER PROCESSING OF ONLINE NEGATIVE WORD-OF-MOUTH COMMUNICATION: THE ROLES OF OPINION CONSENSUS AND ORGANIZATIONAL RESPONSE STRATEGIES

A Dissertation in
Hotel, Restaurant and Institutional Management
by
Chung Hun Lee

© 2011 Chung Hun Lee

Submitted in Partial Fulfillment of the Requirements for the Degree of

Doctor of Philosophy

August 2011
The dissertation of Chung Hun Lee was reviewed and approved* by the following:

David A. Cranage  
Associate Professor of Hospitality Marketing  
Dissertation Advisor  
Chair of Committee

Anna S. Mattila  
Marriott Professor of Lodging Management  
Professor-In-Charge of Graduate Programs in Hotel, Restaurant and Institutional Management

Breffni M. Noone  
Assistant Professor of Hospitality Management

Deborah Kerstetter  
Professor of Recreation, Park and Tourism Management

*Signatures are on file in the Graduate School
ABSTRACT

The Internet has produced numerous online word of mouth communication channels where prospective consumers can readily acquire from other consumers a great deal of positive and negative reviews about a company and its services. These online articulations, due to their being widely and rapidly spread, are likely to have a significant effect on the potential consumer’s overall service evaluation, and therefore the company’s reputation and profit. Prior research suggests that this impact is greater when they are negative (vs. positive) word of mouth (NWOM) messages and when other consumers highly agree upon the NWOM communication. Although many organizations strive to handle NWOM online, limited research has attempted to understand the influence of NWOM on potential consumers’ buying behaviors and to suggest the appropriate organizational response strategy to NWOM communication. In an attempt to bridge this gap, this dissertation identified the roles of consensus on NWOM communication and organizational response to NWOM in affecting potential consumers’ evaluation process of a service organization – their attributional judgment and attitude formation.

First, impression formation theory, attribution theory, and information processing theory were reviewed and combined to propose a theoretical research framework. Second, the pilot and subsequent main studies were conducted to empirically test the proposed research model by employing an experimental design. The results showed that consensus on online NWOM communication plays a pivotal role in influencing the weights and attributions of NWOM that potential consumers bring to their evaluations about the target company. Additionally, this NWOM consensus effects are contingent on the organizational response strategies. Finally, theoretical and practical implications, limitations, and directions for future research were discussed.
TABLE OF CONTENTS

List of Figures ......................................................................................................................... vii
List of Tables ......................................................................................................................... viii
Acknowledgements ................................................................................................................ ix

Chapter 1. INTRODUCTION ........................................................................................................ 1
  Motivation for Research ......................................................................................................... 1
  Purpose of Research and Research Questions ......................................................................... 2

Chapter 2. REVIEW OF LITERATURE .......................................................................................... 6
  Electronic Word of Mouth (eWOM) Communication ............................................................. 6
  Implication of eWOM Characteristics for Online WOM Communication ........................... 9
  Impression Formation Theory ............................................................................................... 11
  Negativity Effect .................................................................................................................. 14
  Attributional Response to Negative Information ............................................................... 15
  Implication for Online WOM Communication ....................................................................... 17
  Information Processing in Attitude Formation and Change .................................................. 19
  Elaboration Likelihood Model .............................................................................................. 20
  Heuristic-Systematic Model of Persuasion ........................................................................... 21
  Information Processing Bias and Resistance to Attitude Change ......................................... 24
  Implication for Online NWOM Communication ..................................................................... 26
  Conceptual Research Framework ......................................................................................... 29
  Consensus of Online Consumer Reviews ............................................................................ 29
  Organizational Response to NWOM as a Moderator ............................................................ 31
    Apology ............................................................................................................................... 32
    Causal Explanations ........................................................................................................... 33
    The Combinations of Apology and Casual Explanations .................................................. 34

Chapter 3. METHOD .................................................................................................................... 42
  Study Design and Overview .................................................................................................. 42
  Pilot Study ............................................................................................................................. 42
    Study Overview .................................................................................................................. 42
    Subjects .............................................................................................................................. 43
Procedure ................................................................................................................... 44
Measures ..................................................................................................................... 44
Pilot Study Results .................................................................................................... 46
  Manipulation Check ............................................................................................... 46
  Review Quality ...................................................................................................... 47
Additional Analyses .................................................................................................. 47
  (1) Weight on NWOM ...................................................................................... 48
  (2) External Attribution ..................................................................................... 48
  (3) Attitude Change ........................................................................................... 49
  (4) Weight on NWOM as a Moderator ............................................................ 49
Summary of Pilot Study Results ................................................................................ 52
Participants and Procedures for Main Study ......................................................... 54
Stimulus Materials ..................................................................................................... 55
  General Restaurant Information ........................................................................ 55
  Consumer Reviews .............................................................................................. 55
  Organizational Response Strategies ................................................................... 56
Measures .................................................................................................................... 57
  Manipulated Independent Variables ................................................................. 57
    Review Consensus ........................................................................................... 57
    Organizational Response Type ....................................................................... 57
  Measured Mediating Variables .......................................................................... 58
    Weight on NWOM ............................................................................................ 58
    External Causal Attribution .............................................................................. 58
  Measured Dependent Variable ........................................................................... 59
    Attitude ............................................................................................................. 59
Preparation for Data Analysis .................................................................................. 60
Chapter 4. RESULTS .................................................................................................. 62
  Participants ............................................................................................................ 62
  Manipulation Checks ............................................................................................ 63
  Multivariate Results ............................................................................................... 64
  Weight on NWOM .................................................................................................. 65
External Attribution ................................................................. 67
Attitude Change ........................................................................... 69
Mediated Moderation Analysis ....................................................... 70

Chapter 5. DISCUSSION AND IMPLICATIONS ............................ 76
Discussion ......................................................................................... 76
Implications ....................................................................................... 80
Theoretical Implications ................................................................. 80
Practical Implications ....................................................................... 82

Chapter 6. LIMITATIONS AND FUTURE RESEARCH .................. 86

References ...................................................................................... 90

Appendices ....................................................................................... 110

Appendix A General Restaurant Information .................................... 110
Appendix B Low Consensus and Accommodative Response Condition ....... 111
Appendix C High Consensus and Defensive Response Condition ............... 113
Appendix D Survey Instrument .......................................................... 115

Appendix E Final Project Report ....................................................... 116
## LIST OF FIGURES

2.1 A Proposed Research Framework ............................................................... 41

3.1 A Three-way Interaction Plot in the High Review Consensus Condition .............. 51

4.1 Two-way Interaction Effect on Weight on WOM ............................................. 66

4.2 Two-way Interaction Effect on External Attribution ......................................... 68

4.3 Two-way Interaction Effect on Attitude Change .............................................. 70
LIST OF TABLES

3.1 Number of Valid Observations per Cell (n) for the Experimental Conditions .......... 44

3.2 Pilot Study Scale Items .................................................................................................. 46

3.3 Summary of GLM Results with Attitude Change as the Dependent Variable .......... 51

3.4 Main Study Scale Items ................................................................................................. 59

3.5 Univariate and Bivariate Statistics for the Study Variables ....................................... 61

4.1 Number of Valid Observations per Cell (n) for the Experimental Conditions .......... 63

4.2 Source Table for Analysis of Variance on Weight on NWOM Index ....................... 66

4.3 Source Table for Analysis of Variance on External Attribution Index ....................... 68

4.4 Source Table for Analysis of Variance on Attitude Change Index ............................ 70

4.5 Values of the Dummy Coded Variables ........................................................................ 71

4.6 Hierarchical Regression Models for Testing the Mediated Moderation Hypothesis 7 .................................................................................................................. 74

4.7 Hierarchical Regression Models for Testing the Mediated Moderation Hypothesis 8 .................................................................................................................. 75

5.1 Summary of the Response Strategy Effectiveness ....................................................... 83


ACKNOWLEDGEMENTS

This dissertation has benefited tremendously from the support of many individuals. I would like to start by expressing my sincere gratitude to my dissertation committee chair and advisor, Dr. David Cranage, for his advice, moral support, and opportunities he provided for last five years at Penn State. I was very fortunate to have him as my advisor, and he has led me to where I am today.

Special thanks go to my core committee members: Dr. Anna Mattila, Dr. Breffni Noone and Dr. Deborah Kerstetter. I truly appreciate their time, effort, and feedback that challenge me intellectually and help me take my thinking and ideas to the next level. Their contribution is more noteworthy because they went above and beyond during a time when I know their services were in high demand from others.

Last, but most importantly, I deeply thank my parents. I could not have overcome all the hurdles I have encountered throughout my graduate studies without their advice, enthusiasm, and love.
DEDICATION

To

my parents and my friends

for all of their love and support.
CHAPTER 1

INTRODUCTION

Motivation for Research

Word of mouth (hereafter, WOM) is an informal social networking-based and consumer-driven communication channel that exchanges consumption experience of goods and services (Griffin & Hauser, 1993; Liu, 2006; Luo, 2009). WOM communication is regarded as one of the most influential information sources (Bayus, 1985; Gelb & Johnson, 1995; Walker, 1995) that consumers utilize to diminish their uncertainty regarding service purchase decisions (Murray, 1991). General consensus has been reached among researchers and practitioners on the strong influence of WOM communications on customers’ quality judgments and purchase decisions of goods and services (Hennig-Thurau & Walsh, 2003). Herr, Kardes, and Kim (1991) contend that this influence appears to be more powerful particularly when WOM direction is negative than when it is positive. That is, consumers place more value on negative WOM (hereafter, NWOM) than positive WOM (hereafter, PWOM) in their evaluation processes for a target product, and this NWOM has a significant detrimental effect on a company’s image, reputation, and sales.

Never has this WOM effect been as powerful as it is today. The expansion of the Internet has allowed for the wide dissemination of virtual opinion platforms (e.g., personal blog, social networking website, and online review forum) as sources for electronic WOM (hereafter, eWOM) communication for consumers and for incremental diffusion of eWOM to a myriad of other consumers (Hennig-Thurau, Gwinner, Walsh, & Gremle, 2004). One negative consumer review can spread online in a second and drastically change the direction of a company. Similar to face-to-face WOM, eWOM is considered as a relatively more credible and influential source
of information than other marketer-created communications on the Web (Gruen, Osmonbekov, & Czaplowski, 2006). Accordingly, the negative eWOM may lead to less favorable product evaluation by potential consumers, and its impact can result in substantial losses in a company’s reputation, revenue, and market share.

Considering the growing volume of online NWOM opinions that potential consumers rely on for their purchase-decision, and the negative consequences it can bring to the company’s business, the company needs to be able to ascertain the consumers’ process of, and reaction to, online NWOM communication. Additionally, but more importantly, the company should pay heed to appropriately responding to NWOM online so as to preserve its reputation.

**Purpose of Research and Research Questions**

The purpose of this dissertation is to investigate the role of NWOM consensus and organizational response to NWOM in influencing consumers’ evaluation process of a service organization. To accomplish this objective is to bridge the following several research gaps that have not been adequately addressed in previous consumer research.

First, although prior research has emphasized the impact of negative information about a company and its offerings on consumers’ purchasing decisions and company sales (Chevalier & Mayzlin, 2006; Herr et al., 1991; Lacznak, DeCarlo, & Ramaswami, 2001), few researchers have attempted to identify the process by which consumers integrate negative information into their service evaluation. Literature in public relations and publicity has addressed this issue to some extent and found a “negativity effect” (e.g., Ahluwalia, Burnkrant, & Unnava, 2000; Fiske, 1980). That is, when given positive and negative information in evaluating a target, consumers place more weight on negative than positive information and exhibit greater attitude changes in a negative direction (Skowronski & Carlston, 1989). Herr et al. (1991) argue that this effect may
arise because consumers find the negative information more diagnostic, useful, and informative than the positive information for evaluating the quality of targets, and because the positive or less negative information is “commonly possessed by high-, average-, and low-quality products” (p. 457). Another reason for the negativity effect may be that publicity, as compared to any other market-driven communication, is recognized as a more credible and influential information source (Ahluwalia, 2000; Bond & Kirshenbaum, 1998). However, the question that needs to be addressed is whether the negativity effect found in negative publicity context can also be observed in a WOM communication context. Although some WOM researchers have found a stronger influence of NWOM on consumers’ brand evaluation (Ahluwalia, 2002; Mizersik, 1982; Wright, 1974) and on the purchase intentions of prospective consumers (Arndt, 1967; Charlett, Garland, & Marr, 1995; Herr et al., 1999; Park & Lee, 2009), they tested it under the condition where consumers were given solely either positive or negative WOM, but not the mixture of both. This dissertation will examine the negativity effect under the combination of positive and negative WOM by manipulating the proportion of NWOM.

Second, with the advent of information and communication technology, the Internet has created an online WOM platform where consumers share their evaluation of product/service with other unknown customers. Compared to the traditional face-to-face WOM communication, the online WOM platform has unique characteristics that may influence the way consumers process WOM and make purchase decisions (Lee, Park, & Han, 2008). For example, online consumer review forums enable consumers to view both positive and negative WOM simultaneously. In addition, given that online consumer reviews are written and accumulated in the collection, they are measurable. That is, consumers are easily able to count the number of positive and negative opinions and thus evaluate the quality of products/service in a numeric manner. These features of
online WOM have opened a new research venue: opinion consensus and conformity effect. This dissertation pursues this research area by examining the effect of NWOM consensus about a company’s service on consumers’ evaluation process in an online WOM communication environment.

Third, few researchers have been interested in how organizations should handle negative information. In the service failure and recovery literature, organizational responses to the negative situation (i.e., service failure and customer complaining) have gained a lot of attention as potential recovery strategies to soothe dissatisfied customers and prevent further negative consequences such as NWOM and switching behavior. However, there have been very limited works investigating how the organization’s response to NWOM influences potential customers’ evaluation and purchasing decision of its service. Identifying the influence of WOM on potential consumers’ attitude formation is important to service providers, since it helps to justify expenditure on complaint management, service recovery and customer retention as well as to prevent potential consumers from choosing another alternative. Thus, I aim to seek evidence of whether the organizational response to NWOM has a significant effect on the attitude formation of potential consumers. Especially, the question is whether responding to negative reviews online is more effective than taking no action. And if organizations choose to respond, what would be an appropriate and effective response?

In sum, the major foci of this dissertation are to investigate how consumers process online NWOM, and to examine how the company response to NWOM can alter the way consumers process NWOM for their evaluations about the company. This dissertation will specifically address the following research questions:
(1) Do potential consumers’ attitudes toward a company become negative as consensus of negative online reviews about the company increases?

(2) Does the company’s response to negative online review(s) affect the way the potential consumers process online NWOM communication in evaluating the company? If so, what would be an appropriate and effective response?

(3) Is the effect of consensus of negative online reviews on potential consumers’ processing of online NWOM communication contingent on how the company responds to NWOM?
CHAPTER 2

REVIEW OF LITERATURE

Electronic Word of Mouth (eWOM) Communication

Word of mouth (WOM) and its importance to consumers and marketers have been frequent research topics in marketing and consumer behavior research. In general, WOM, defined as “oral, person to person communication between a receiver and a communicator whom the receiver perceives as non-commercial regarding a brand, a product, or a service” (Arndt, 1967, p. 3), is perceived as a more vivid (Herr et al., 1991); credible (Liu, 2006; Smith & Vogt, 1995); and thereby persuasive (Sun, Youn, Wu, & Kuntaraporn, 2006; Villanueva, Yoo, & Hanssens, 2008) consumer-dominated marketing communication channel than other marketer-generated sources of information such as personal selling and advertising. As a result, WOM is regarded as an important factor in an individual consumer’s evaluation and subsequent purchasing decision (Katz & Lazarsfeld, 1955; Richins & Root-Shaffer, 1988); expectations (Zeithaml, Berry, & Parasuraman, 1993); post-purchase product perceptions (Bone, 1995) of the attitude object; as well as product sales (Chevalier & Mayzlin, 2006; Srinivasan, Anderson, & Ponnavolu, 2002).

Within the past few decades, the Internet and communication technology has rapidly evolved and has dramatically changed the format of WOM communication and its environment (Duan, Gu, & Whinston, 2008). Consumers in traditional WOM communication environments have verbal and face-to-face interpersonal conversation with others to express their opinions, complaints, and recommendations about services or service providers. These consumers now can share their attitudes and reactions toward services online, thereby engaging in online WOM or
electronic WOM (eWOM) – “any positive or negative statement made by potential, actual, or former customers about a product or company, which is made available to a multitude of people and institutions via the Internet” (Hening-Thurau et al., 2004, p. 39). Although eWOM effects on consumers may be similar to WOM effects (Gruen et al., 2006), eWOM communication is believed to have different power and characteristics (Dellarocas, 2003). First, the nature of participants between the two communication contexts is different. WOM communication is typically a dyadic or a small group two-way interpersonal dialog where a message sender and a receiver likely know one another (e.g., family members, friends, or colleagues). In contrast, eWOM communication is a many-to-many conversation in which a vast, geographically dispersed group of people participates anonymously. That is, the identities of message creators and readers are hardly approachable. This difference may affect diffuseness and persuasiveness of WOM information, which possibly pose challenges, especially for the online communication environment.

As far as dispersion of WOM, the transmission of traditional WOM and its influence are restricted to people in close proximity or a social group of the communicator, whilst eWOM is shared and available among unknown people all over the world due to geographical and temporal freedom rendered by the Internet. Accordingly, WOM information online is more voluminous in quantity and more spreadable compared to WOM information offline. Given that companies have minimal control over information flow and customer generated content (CGC) acts as an independent “salesperson” affecting decision-making (Chen & Xie, 2008), eWOM is really a double-edged sword: Widely-spread positive WOM (PWOM) contributes to consumers’ positive impression formation about a company, thereby the success of a business; negative WOM (NWOM) is devastating to the company’s brand image and reputation and alters consumers’
judgment on and purchasing decision of its offerings in negative direction (Haywood, 1989). NWOM is more powerful in its impact since consumers place more weight on NWOM than PWOM (Herr et al., 1991; Park & Lee, 2009). Hence, the company strives for its reputation management by encouraging consumers to spread PWOM and suppressing the diffusion of NWOM.

In relation to persuasiveness of WOM, the anonymity of eWOM makes it difficult for recipients to evaluate its persuasiveness or validity. Prior research on WOM communication suggests that the credibility of WOM message is determined by characteristics of the message sender such as source expertise (i.e., source credibility; see Birnbaum & Stegner, 1979) and social relationship between source and receivers (i.e., tie strength, see Money, Gilly, & Graham, 1998). Communicators engaging in interpersonal WOM communication are likely to have already formed a social bond and thus have sufficient cues to understand these characteristics between themselves. However, these cues are very limited or rarely available in online WOM communication environment. Thus, consumers form impressions of others “based solely on the linguistic content of written electronic messages” (Brown, Broderick, & Lee, 2007, p. 3), and the argumentation quality is considered as an influential factor of message persuasiveness (Petty & Cacioppo, 1984).

Another idiosyncratic feature of eWOM is its scalability (Dellarocas, 2003). That is, unlike traditional WOM communications that exchange spoken words, eWOM is published in a written format that is recordable and therefore measurable (Lee, Park, & Han, 2008). The online communication platform of eWOM allows for the presence of both positive and negative information from various sources at the same time, whereas traditional WOM is presumably a single piece of information that is either positive or negative in valence. Therefore, consumers
using eWOM communication channels (e.g., online product/service rating website, personal blog, discussion forum) can easily count and measure the quantity of positive and negative consumer reviews.

In sum, online WOM communication, as compared to the interpersonal format of WOM communication, offers unique features: broader scope of accessibility with faster transmission, wider range of content, anonymity of communicators, and measurability of WOM messages. These attributes contribute considerably to expanding the power of eWOM on consumer behavior and a company’s business bottom line.

**Implication of eWOM Characteristics for Online WOM Communication**

Characteristics of eWOM have offered unique avenues of research in online WOM communication. While the nature of anonymity of eWOM has reduced information recipients’ abilities to evaluate the message and source credibility, its measurability feature provides them with important cues regarding the message validity – the proportion of positive vs. negative online consumer reviews. This information can be considered as an indicator of opinion consensus among communicators on a target attitude object. The consensus in eWOM refers to the degree to which two or more individuals agree on a product or its performance (Doh & Hwang, 2009). High level of consensus suggests that all the online consumer reviews are in the same direction (i.e., positive or negative). According to attribution theory (Kelley, 1967), when one finds that others have the same perspective regarding the same entity, s/he is more likely confident that the perspective is true. Prior research in decision-making also suggests that a lack of others’ support for opinions will induce uncertainty for a consumer (Meyer, 1981), thereby resulting in rejection of the opinions (West & Broniarczyk, 1998). Consequently, it is likely that consensus information about a product on an Internet forum is more effective in its
persuasiveness and trustworthiness than non-consensus or conflicting information about the same product (Chiou & Cheng, 2003). However, opinion consensus effect is likely different according to the valence of eWOM message. Prior research has documented that when forming attitudes and overall evaluations toward a target, consumers give more weight to negative than positive information (Fiske, 1980; Skowronski & Carlston, 1989). Negative information is perceived as more diagnostic and useful than positive information, and thereby its impacts are more influential on consumers’ judgments and attitude formations about the target (Herr et al., 1991; Solomon, 1998). Hence, it is conceivable that opinion consensus effect is stronger for negative (i.e., more negative set of online consumer reviews) than positive eWOM information. I examine the relationship between the level of consensus in online consumer reviews and consumers’ perception of, and responses to, the reviews, at both eWOM directions (i.e., positive and negative).

Finally, the online NWOM effect on potential consumers’ evaluation about a company can be extremely detrimental because of eWOM’s accessibility. Accordingly, the company’s reaction to NWOM as part of reputation management may be required not only for soothing dissatisfied consumers (i.e., message senders), but also for preventing potential consumers (i.e., message readers) from switching to competitors. Although the literature in services marketing has documented that appropriate company responses to customer complaints (e.g., apology, explanation, and compensation) result in positive consequences such as increased perceptions of fairness, satisfaction, and repurchase intention of complainants (e.g., Mattila & Cranage, 2005; Maxham & Netemeyer, 2002; Smith, Bolton, & Wegner, 1999; Tax, Brown, & Chandrashekaran, 1998), scant attention has been devoted to the role of company responses to NWOM information in influencing potential consumers’ service quality evaluation and
purchasing decision-making processes. Prior WOM research points out the need for the company to adopt a defensive strategy to counter NWOM information (e.g., Arndt, 1967; Mahajan, Muller, & Kerin, 1984; Richens, 1983). Yet, with limited empirical evidence on such strategy’s effectiveness, research needs to address whether company response to NWOM information is necessary and, if so, which response strategy is appropriate to attenuate the negative impact that NWOM has on consumer behavior.

As a result, I proposed a conceptual research framework that illustrates the process by which consumers integrate a set of positive and negative eWOM information into service evaluations in relation to opinion consensus and the company responses to NWOM. To this end, I reviewed the literature regarding consumers’ perception of negative information based on both impression formation and information processing theories. First, impression formation theory was reviewed with regard to negativity effect and its association with attributional process. Then, information processing theory was discussed in relation to attitude formation and change.

**Impression Formation Theory**

Since the classic impression formation theories of Asch (1946) and Anderson (1965) that both conceived of the person’s perception process as the formation of an integrated impression derived from the stimulus information provided, the study of impression formation has focused on how people integrate multiple attribute information into an overall evaluation of others. In the standard impression formation paradigm, subjects are exposed to a set of trait adjectives with reference to a hypothetical stimulus person (for example, polite, lazy, and quarrelsome); they are subsequently expected to incorporate this separate trait information into an overall judgment of the stimulus person. Through a series of experiments on impression formation theory, social psychologists have generated extensive evidence regarding different modes of impression
formation (i.e., holistic vs. analytic process) and biases (i.e., negativity effects that are discussed later in this chapter) in this person perception process. Hence, the direction or the major goal of research investigating impression formation has become to find “a simple, parsimonious rule that adequately describes the relationship between the overall evaluation of a stimulus person and separate evaluations of his attributes”, and to understand the biases in impression formation (Kanouse & Hanson, 1972, p. 48).

The mathematical models of impression formation that have been extensively employed and tested are an “adding” model and an “equal-weight averaging” model propagated by Norman Anderson (1965). The adding model of impression formation delineates that “the individual, in effect, “adds up” the values of the separate traits possessed by a stimulus person and reaches something approximating the sum of these trait values in his or her overall evaluation” (Kanouse & Hanson, 1972, p. 48). For instance, if a person received a rating of -6 for “nice” and a rating of +8 for “industrious” on the scale continuum ranging from -10 (dislikable) to +10 (likable), then a person described as “nice” and “industrious” should receive a rating of +2. The equal-weight averaging model proposes, “the individual, again in effect, averages the separate trait values in making his overall evaluation” (Kanouse & Hanson, 1972, p. 48). For example, if a person received a rating of +8 for “nice” and a rating of +6 for “industrious” on the scale continuum ranging from -10 (dislikable) to +10 (likable), then a person described as “nice” and “industrious” should obtain a rating of 7 (examples adopted from Skowronski & Carlston, 1989).

However, this mathematical approach to impression formation has encountered systematic discrepancy between actual and predicted impressions, especially when the stimulus set contains negative information (Skowronski & Carlston, 1989). Kanouse and Hanson (1972) have suggested, “the empirical battles fought over this issue provide detailed evidence about the
differential impact of positive and negative traits on the overall evaluation of a stimulus person” (p. 48). That is, negative information receives greater weight than moderate and positive information in impression rating, which comes to be termed as a negativity bias.

One of Anderson’s (1965) earlier impression formation studies witnessed this relatively different power of negative and positive cues on impression formation of a person. He asked subjects to characterize a person by particular personality-trait adjectives on a scale of 0 to 6. Using these ratings, he generated lists of four kinds of adjectives: Highly positive (H), moderately positive (M+), moderately negative (M-), and highly negative (L). This categorization was chosen to have positive and negative adjectives to be equally deviated from the neutral point of the scale. Afterwards, combinations (sets of twos and fours) of these four scale ranges were generated. (e.g., HH, M+M+, M-M-M-, LLLL). Subjects were asked “to use 50 to rate a person they would neither like nor dislike, to use lower numbers for persons they would dislike, and to use higher numbers for persons they would like” (Anderson, 1965, p. 396). The findings showed that the mean ratings of the negative sets (i.e., LL, LLLL) were further from the neutral point than the mean ratings of the corresponding positive sets (i.e., HH, HHHH); these results imply that highly polarized negative adjectives “lower the overall evaluation more than would be predicted on the basis of either the adding or the averaging model”, and that negative personality traits thus seem more influential than equally polarized positive traits in affecting the overall evaluation (Kanouse & Hanson, 1972, p. 49).

Since Anderson’s (1965) experimental research, studies of impression formation have consistently found a similar “negativity effect” (see Birnbaum, 1972; Feldman, 1966; Rokeach, 1968 for the evidence of the greater impact of negative traits in impression formation of a stimulus person).
Negativity Effect

Negativity effect has become a well-recognized and prevalent psychological phenomenon in several different research areas. People pay more attention to, and place more weight on, negative than positive experiences, or other types of information, in the formation of judgments (Fiske, 1980; Skowronski & Carlston, 1989; Wright, 1974). While this effect has received substantial attention in person perception literature, it has also been examined in product evaluation and service performance evaluation contexts (e.g., Ahluwalia et al., 2000; Mattila, 2004, Mittal, Ross, & Baldasare, 1998). For example, Herr et al. (1991) found that negative word-of-mouth had a stronger impact than positive word-of-mouth. Several other researchers confirm this NWOM impact on consumers’ brand evaluations (Arndt, 1967; Mizerski, 1982; Richins, 1983) and on the purchase intentions of potential consumers (Brown & Reingen, 1987; Weinberger, Allen, & Dillon, 1981). Park and Lee (2009) recently found that subjects considered negative eWOM (vs. positive eWOM) in the form of online product reviews more influential and credible in their purchase decision. Rozin and Royzman (2001) suggest that a possible reason for the negativity effect stems from prospect theory, which indicates that losses generally loom larger than gains (e.g., Kahneman & Tversky, 1979; Tversky & Kahneman, 1991). Another reason for the negativity effect, which has been well accepted in persuasion and consumer research, is that negative information is considered more diagnostic or informative in consumer purchase decisions and, thus, obtain greater weight than positive information due to its usefulness in categorizing the products into evaluative categories such as high-, average-, and low-quality products (Herr et al., 1991; Liu, Wang, & Wu, 2010; Skowronski & Carlston, 1989).
**Attributional Response to Negative Information**

At the stage in which people bring incoming stimulus information or messages (whether it is negative or positive) to the evaluative judgment on a target object, they as message recipients need to interpret the message not only for deciding whether to accept it, but also more importantly for understanding its dispositions. Attribution theory is concerned with how people interpret and ascribe causality to particular events and how this associates with their thinking and behavior (Weiner, 1974).

In interpersonal communication (i.e., WOM communication), where messages are sent and received, attribution theory can be of help “in understanding a receiver’s interpretation of a sender’s motives for communicating such information” (Heider, 1958; Hilton, 1995, as cited in Laczniak et al., 2001, p. 58). According to Kelley (1972), people strive to understand why others behave the way they do (e.g., why does an individual generate negative information about a product?) and to make the causal inferences about their behavior (what causes a communicator to generate negative information?): Stimulus (i.e., a product in this case), person (i.e., communicator in this case), circumstances, or a combination of three (Laczniak et al., 2001). Heider (1958) made a simple categorization of causal attribution - internal attribution and external attribution. Internal attribution refers to assigning causality to something about the person like character, personality, motives, dispositions, belief and so on. In contrast, external attribution represents assigning causality to something about the situation or event outside a person’s control like other people, various environmental stimuli, social pressure, coercion, and so on. Kelley’s (1967) ANOVA model in persuasion suggests that people’s estimation of this causation locus (i.e., internal vs. external) is based on three dimensions: source consistency, distinctiveness, and consensus. First, *consistency* (information) relates to whether a
communicator responds to a particular attitude object in a similar or different way over time and situations. For example, assume that, in a negative WOM communication context, consumer A shares a negative comment with consumer B about a hotel. If consumer A shares the same comment with consumer C (or/and consumer D), then the negative comment about the hotel can be considered high consistency (the alternative is low consistency). In relation to attributions, high consistency leads people to attribute the negative comment to external attributions (i.e., the hotel), whereas low consistency leads to internal attributions (i.e., consumer A). Second, distinctiveness (information) deals with whether a communicator holds a certain attitude only towards a particular target or towards other similar targets as well. Now, using the same example above, assume that consumer A made a negative comment about hotel B. Distinctiveness level will be low if consumer A made the same negative comment about other hotels, and will be high if consumer A made positive comments about other hotels. High distinctiveness leads people to ascribe the negative comment to external attributions (i.e., hotel B), whilst low distinctiveness brings about internal attributions (i.e., consumer A). Finally, consensus (information) pertains to the degree to which other communicators react the same way toward the same attitude object as another communicator does. Again, drawing on the same example, consensus level is likely high (low) when other consumers are likely to agree (disagree) with the negative comment about a hotel by consumer A. High consensus induces people to generate external attributions (i.e., the hotel), while low consensus leads to internal attributions (i.e., consumer A). Combining these three information dimensions together generates eight different configurations (i.e., 2x2x2 ANOVA model). Scholars in attribution theory have suggested that recipients of information configured as being high consistency, high distinctiveness, and high consensus would perceive the information as more logical and persuasive, thereby making external attributions. However,
when provided with a high consistency, low distinctiveness, and low consensus combination, they would perceive the information as less logical and altruistic, directing it to the communicator (i.e., message sender) (see Kelley 1967, 1972; Lacziak et al., 2001 for more details about other configurations and their associations with attributions).

**Implication for Online WOM Communication**

One of the most important contributions by Kelley’s ANOVA model may be providing a cue, in relation to information content configuration, about whether the communicator’s position is caused by the “entity” (i.e., the attitude object) or some other factors (i.e., mainly the communicator as a source) (Ziegler, Diehl, Zigon, & Fett, 2004). This perspective of attribution should be, and may be, well applied to the WOM communication environment where potential consumers are presented with other consumers’ reviews and make an effort to assess whether the reviews provide an accurate representation. That is, consumers need to scrutinize, although not all the time, “negative” reviews (i.e., NWOM) to generate attributions that explain why other consumers communicated the NWOM (DeCarlo, Lacziak, Motley, & Ramaswami, 2007), attribution process that either discounts or enhances the quality of reviews in terms of its credibility and persuasiveness. Given that a recipient’s initial conception about a communicator determines subsequent message processing (i.e., attribution) and evaluations (Hilton, 1995; Schlosser, 2005), examining the aforementioned 3 dimensions of the NWOM communicator will help to understand how potential consumers integrate NWOM into their evaluations of a particular product/service. According to Decarlo, Lacziak, Motley, and Ramaswami (2007), “in a NWOM communication context, consensus refers to the degree to which others are likely to agree with the negative views of the communicator; distinctiveness is the extent to which the communicator associates the negative information with a particular entity, but not other entities;
and consistency is the degree to which the communicator has stable negative views of the entity across time and situations” (p. 44).

Traditional face-to-face WOM communication occurs within a social relationship characterized according to “tie strength” (Money et al., 1998), which includes closeness, intimacy, support, and association (Frenzen & Davis, 1990). Hence, it is likely in this interpersonal relationship that information receivers know, to some extent, the characteristics of the information sender, especially consistency, distinctiveness, and consensus. However, the online NWOM communication environment, where the source of information is usually unknown or anonymous, limits cues of individual communicator’ identity and background (Brown, Broderick, & Lee, 2007). One time or anonymous consumer NWOM information makes it difficult to uncover the pattern of consistency and distinctiveness of a communicator, but not consensus since the level of opinion agreement can be grasped by countable and recordable features of eWOM. Although some research in WOM communication has examined the effect of opinion consensus (e.g., DeCarlo et al., 2007; Laczniak et al., 2001; West & Broniarczyk, 1998), very few studies with a theoretical underpinning have been conducted on the role of consensus as a construct in an online WOM communication context (except Lee et al., 2008; Lee & Song, 2010). Accordingly, this dissertation focuses on the role of consensus in influencing potential consumers’ processing of online NWOM.

Moreover, previous research in the service encounter literature has attempted to identify the role of causal explanation for a service failure in mitigating the negative effects of a service failure and influencing the attributional processes of consumers (e.g., Bitner, 1990; Folkes, 1984; Mattila & Patterson, 2004). The results of these studies, although some of which were conducted
in a cross-cultural context, suggest that providing external\(^1\) explanation (vs. internal explanation or no explanation) for a service failure leads consumers to attribute less control to the service firm, thereby diminishing the blame attributed to the firm and its employees. In attempting to understand how the service organization reduces the negative effect of online NWOM on potential consumers’ purchasing decisions, we need to test whether the effect of causal explanation on attributional process would hold when applied to a NWOM communication context (i.e., how the service organization’s response to NWOM affects potential consumers’ attributional processes of NWOM). Therefore, by incorporating attribution theory and service recovery literature, this dissertation attempts to identify the effect of organizational reactions to NWOM as response strategies on consumers’ attributional process.

**Information Processing in Attitude Formation and Change**

According to Bettman, Capon, and Lutz (1975), the effectiveness of persuasive communication is determined by “the effects a message has on an individual’s beliefs about aspects of the communication object, and the effects on the relative strength of the evaluation of each aspect” (p. 267). In other words, persuasive information that an individual processes possibly shapes his/her attitude toward the target object and its strength. The importance of information processing has brought about a proliferation of theories about persuasion in particular and of social judgment more generally.

Dual mode processing models of attitude change (Chaiken, 1980; Petty & Cacioppo, 1986) are well recognized and explain “the processes underlying changes in judgments of objects,

---

\(^{1}\) In service failure context, “external” explanation refers to blaming something or someone other than the service provider; “internal” explanation represents implicating the service provider in a service failure. In contrast, in the NWOM communication context, “external” attribution is the service provider, the subject to NWOM; “internal” attribution is the generator of NWOM.
the variables that induce these processes, and the strength of the judgments resulting from these processes” (Petty & Wegner, 1999, p. 42). The theories illustrate that a persuasive message like WOM is processed through two different routes: a systematic or central processing route and a peripheral or heuristic processing route (Sherman, 1987). With systematic or central processing, the message recipients generate cognitive responses by way of careful, critical, and reasoned consideration of the central content of new information. In contrast, heuristic processing entails the cognitive responses using simple cues (e.g., message length or communicator characteristics) or heuristic rules in the persuasion context such as people agree with those they like (Wood et al., 1995). Having instigated either heuristic or systematic processing, the recipients have presumably formed or changed their attitudes toward the target object. In the following section, I reviewed the dual mode processing models of persuasion and its association with attitude change in brief.

**Elaboration Likelihood Model**

The Elaboration Likelihood Model (ELM) (Petty & Cacioppo, 1981) is a theory that was developed exclusively with regard to persuasion and explains the effects of various message-relevant variables (e.g., message, source, recipient, and contextual factors) on attitude change toward various objects, issues, and people (Petty & Wegener, 1999). The central tenet of this theory is that people presumably involve one of two relatively distinct routes to persuasion (i.e., central vs. peripheral) according to their motivation and ability to process issue-relevant information, and that their motivation and ability determine the likelihood of elaboration of message arguments and hence the processes of attitude change (Wood, 2000).

Critical to this model is the degree of message elaboration and argumentation on the “elaboration continuum,” of which the central route and peripheral route respectively anchor the
endpoints (Petty, Wegener, & Fabrigar, 1997). The central route involves extensive cognitive information processing activity whereby message recipients are highly motivated and able to uncover the central merits/drawbacks of a person, issue, or a position (i.e., how good or bad the object really is) and scrutinize all available object-relevant information (Petty & Brifior, 2002). Hence, the extensive articulation and evaluation of object-relevant information lead people to reach to a “reasoned” attitude (though not necessarily rational or accurate) through the central route to judgment (Petty & Wegener, 1999).

In contrast to the central route to persuasion, the ELM holds that people, especially when less motivated or unable to process the issue relevant information (i.e., low elaboration likelihood), involve reduced information scrutiny and less extensive evaluation of the information (e.g., examining less information than when elaboration is high or examining the same information less carefully), and thereby their attitude formation or change can take place by peripheral route to persuasion - “a number of less resource-demanding processes” (Olson & Zanna, 1993; Petty, Wheeler, & Tormala, 2003, p. 359). The peripheral route enables message recipients to accept or reject a persuasive message relying on various heuristic cues, simple decision rules, and other environmental characteristics of the message (e.g., source credibility, expertise, consensus information, and number or length of arguments) (Petty, Haugetvedt, & Smith, 1995).

**Heuristic-Systematic Model of Persuasion**

In a similar vein, Chaiken (1980) introduced another dual mode processing model of persuasion – the Heuristic-Systematic Model (HSM) - that examines information processing as an antecedent to attitude change and formation. This model was proposed as an alternative to the ELM to “apply to validity-seeking persuasion settings in which people’s primary motivational
concern is to attain accurate attitudes that square with relevant facts” (Eagly & Chaiken, 1993, p. 326). The HSM is closely allied with the ELM in a sense that two information processing mechanisms (i.e., systematic/heuristic processing) are available and are differentiated by the amount of mental effort people exert to process persuasive information. However, this model, unlike the ELM that posits two mutually exclusive routes to persuasion (Chaiken, 1987), hypothesizes that individuals will engage in one or both of these information processing strategies for the sake of evaluating the information validity and arriving at an attitude judgment (Trumbo, 2002).

According to Chaiken (1980), systematic processing arises from individuals’ motivation and capacity to make an attitude judgment by analytic and comprehensive examination of issue relevant information and incorporation of the information with their previously held knowledge. People using this processing mode are likely to exert considerable effort in “a scrutiny of arguments, maintaining higher standards for the quality of information used in decision making” (Trumbo, 1999, p. 392).

On the other hand, heuristic processing refers to a “limited information processing that requires less cognitive effort and fewer cognitive resources” (Eagly & Chaiken, 1993, p. 327). In accord with other theoretical perspectives such as “cognitive miser,” a perspective of information processing in social psychology, this processing mode entails the use of simple decision rules or heuristics in judging the validity of persuasive messages without fully comprehending the persuasive message content or argumentation (e.g., “arguments based on expert opinions are valid,” “length implies strength,” “more arguments are better arguments,” “consensus opinions can be trusted”) (Chaiken, 1987). Yet, “the heuristic mode is constrained by social-cognitive principles of knowledge activation and use” (Chen & Chiken, 1999, p. 74). That is, to use these
rules to arrive at their evaluations of message validity and subsequent agreement with the messages, people must have learned and stored the heuristic in memory (i.e., availability), have activated or retrieved it from memory (i.e., accessibility), and finally it must be applicable (i.e., applicability) to the judgment at hand (Chaiken, Liberman, & Eagly, 1989).

The primary determinants of processing strategies for attitude change include motivation, information sufficiency, and self-efficacy. According to the HSM, people are motivated to gain sufficient judgmental confidence in holding accurate attitudes and beliefs (i.e., accuracy motivation). This motivation is positively associated with systematic processing since substantial effort in processing and evaluating information increases confidence in judgment (Wood, 2000), and the extensive cognitive processing (vs. relying on simple schema) is a more reliable method of assessing message validity (Eagly & Chaiken, 1984). Information sufficiency (similar to sufficiency principle in Chen & Chaiken, 1999) as one of motivational determinants represents “the degree of confidence a person aspires to attain in a given judgment setting” (Eagly & Chaiken, 1993, p. 330, as cited in Trumbo, 2002). The sufficiency principal predicates that people aim to hit “a balance between minimizing cognitive effort on the one hand and satisfying their current motivational concerns on the other (Chen & Chaiken, 1999, p. 74), and that they are likely to engage only in whatever amount of deliberation is necessary (and possible) to reach sufficient judgmental confidence (Olson & Zanna, 1993). Hence, the degree to which people exert cognitive effort is determined by the gap between their actual judgmental confidence and desired confidence. Thus, systematic processing will occur when heuristic processing fails to generate a clear-cut assessment of message validity (Chaiken & Stangor, 1987). This makes sense given that HSM views systematic and heuristic processing as parallel modes of information processing. Self-efficacy refers to the individual’s perceived ability to acquire
information and evaluate the validity of information for judgmental tasks. People with low self-efficacy are more likely to use heuristic processing than systematic processing since it impairs cognitive capacity to process systematically, thereby relying on simplifying choice heuristics in judging message validity (Trumbo, 1999).

**Information Processing Bias and Resistance to Attitude Change**

While motivational and ability factors determine whether message recipients use a central route/systematic or peripheral route/heuristic processing, these factors also directly influence whether they perform objective or biased message processing (Petty, Priester, & Wegener, 1994). Chaiken *et al.* (1989) proposed an expanded HSM to account for objective vs. biased information processing, which takes into consideration motives other than accuracy: defense and impression motives (Petty *et al.*, 1997).

Defense motivation is self-serving bias in processing and refers to the aspiration to preserve attitudes and beliefs that are consistent with preexisting self-definitional attitudes and beliefs such as one’s values (e.g., equality); social identities (e.g., profession); and personal attributes (e.g., intelligence) (Chaiken, Giner-Sorolla, & Chen, 1996). Defense motivation leads to validating preferred attitudinal positions and disapproving nonpreferred attitudinal positions. The HSM speculates that high defense-motivated message recipients with sufficient cognitive capacity are likely to engage in systematic processing, especially when given incongruent information with their existing attitudes and beliefs, but they will do so in a biased way (Dillard & Pfau, 2002). That is, while attitude-congruent information will be judged favorably, information that strikes the previously held attitudes and beliefs will be scrutinized and be disconfirmed. The ELM also supports this biased information processing. According to Petty and Cacioppo (1979), attitude formed in this process is not necessarily rational because personal
relevance, especially combined with an individual’s prior attitude and knowledge about the attitude object, is likely to bias elaborative cognitive processing. That is, when the issue is personally involving, people are motivated to selectively process and support the information that strengthens their own positions and to counter-argue and elicit unfavorable thoughts about the information of the contrary positions, resulting in resistance to attitude change (Chen, Reardon, Rea, & Moore, 1992; Pfau, 1997).

The HSM, on the other hand, also predicts that defense-motivated message receivers undertake heuristic but biased information processing. This is likely especially when heuristics available in a judgmental setting are congenial to the recipients’ existing attitudes and beliefs. For example, Giner-Sorolla and Chaiken (1997) conducted a study to examine how consensus heuristic-cue information in the form of poll results has an impact on the judgment of people with or without a vested interest in the persuasion issue. When the poll results supported the participants’ positions on the issue, they validated the reliability of the result more and criticized it less.

Therefore, it is conceivable that people holding high defense motivation show a strong tendency to resist their attitude change by greatly scrutinizing counter-attitudinal information to derogate its validity, heuristic processing of the pro-attitudinal information, or both (i.e., parallel modes of information processing in the HSM).

Another type of motivation that the HSM encompasses with regard to biased processing of information is impression motivation. Impression motivation refers to the “desire to determine attitudes that will satisfy current social goals” (Chen, Shechter, & Chaiken, 1996, p. 263). Regardless of systematic or heuristic processing, impression motivated information processing focuses on the interpersonal consequences of expressing a particular judgment in the persuasion
context (Chaiken et al., 1996). That is, people are likely to process a persuasive message and exhibit their judgments on its validity in a way that is approved or accepted in their social groups.

As with accuracy and defense motivation, impression motivation may induce heuristic processing, systematic processing, or both, which is (are) determined by cognitive factors (e.g., one’s current cognitive capacity); situational factors (e.g., the availability of judgmental-relevant heuristic cues); and motivational factors (e.g., the importance of judgmental task) (Chaiken et al., 1996; Chen & Chaiken, 1999). For example, in interpersonal communication settings, the availability of others’ opinions has an impact on the likelihood of elaborative processing of the opinion issue. When others’ opinions are known, people rely on the heuristic “go along to get along” and express opinions that mirror the other person’s viewpoint (i.e., heuristic processing that is biased toward achieving their social goals). However, when the audience position is unknown, they (although possibly using a heuristic like “moderate opinions minimize disagreements”) are more likely to engage in more elaborative and systematic information processing in a relatively objective manner (Cialdini, Levy, Herman, & Evenbeck, 1973; Tetlock, 1985). Hence, people holding high impression motivations are likely to generate their opinions under the conditions of social approval, thereby making it difficult to change their attitudes (opinions) in response to persuasive messages.

**Implication for Online NWOM Communication**

Studies in consumer information search and processing theories have well documented that consumers are likely to seek other’s opinions (i.e., WOM) to reduce their cognitive effort or uncertainty with regard to purchasing decisions (Bettman, 1979; Dowling & Staelin, 1994; Rosen & Olshavsky, 1987). The opinions of other consumers are critical for experiential goods in guiding potential consumers’ product evaluation (West & Broniarczyk, 1998).
In general, consumers become attached to various brands and feel tied to the brands, which leads to attitude formation (Ahluwalia et al., 2000). Scholars studying social influence and persuasion suggest that when exposed to the persuasive message like WOM, individuals engage in different message processes that vary according to their initial attitudes and initial relevant beliefs about a target object (Sherman, 1987) and attitude strength (Ahluwalia, 2000; Eagly & Chaiken, 1995). That is, people are keen to selectively seek out the information that is consistent with prior attitudes and to avoid counter-attitudinal information (Crosby & Taylor, 1983; Festinger, 1957; Sweeney & Gruber, 1984). In addition, people with strong attitudes are likely to resist counter-attitudinal information (e.g., Chaiken et al., 1989, Kiesler, 1971), whereas weak attitude counterparts engage in more objective processing of both attitude-consistent and inconsistent information (see the aforementioned discussion about defensive motivation and biased processing; theory of motivated reasoning, Kunda, 1990). In sum, evaluative processes of new information consist of “affirming, favorable reactions as well as negating, unfavorable reactions” (Wood et al., 1995, p. 297), and they are determined by the individual’s original attitude and beliefs about the target object prior to the information.

Drawing upon this attitude-information processing relationship, it is conceivable that consumers process negative and positive WOM information differently according to the degree to which they have favorable associations with, and commitments to, the target brand. Consumers with strong commitment to a particular brand hold high defense motivation and position involvement in processing WOM information (Chaiken et al., 1996), and therefore they

---

2 Motivated reasoning theory suggests that two major sets of goals dictate the individual’s information processing and judgment formation: an accuracy conclusion vs. a desired conclusion. When accuracy motivated, people (with weak attitude in this case) perform unbiased judgment and information process such that they scrutinize and diagnose all the information received. In contrast, when motivated to form or defend particular desired position (i.e., attitude in this case), individuals undertake defensive or biased information processing in the direction of their preferred conclusion (Eagly & Chaiken, 1993).
are likely to support and selectively perceive attitude consistent PWOM and to discount and resist attitude inconsistent NWOM (e.g., Ahluwalia, 2002). Hence, they are expected to pay greater attention to, and elaborate more on, PWOM than NWOM, which results in greater attitude resistance and thus less attitude change. In contrast, consumers with weak or no commitment to the brand may have high accuracy motivation and thus scrutinize and process both PWOM and NWOM in detail to find merits of the argumentations.

Furthermore, it should be noted that the quantity and quality of online WOM messages might significantly influence consumer information processing (Park, Lee, & Han, 2007). Whether consumers undertake information processing through central routes (also systematic information processing) or through peripheral routes (heuristic information processing) is contingent upon the degree of their motivation and involvement. In the WOM communication environment, the level of involvement is likely to be influenced by the valence of and the level of agreement of the consumer reviews – consensus (Kelley, 1973). The level of consensus represents the level of agreement or disagreement about the recommendation of a target object among consumers. When there is high consensus on the consumer reviews on a service in either negative or positive direction, *ceteris paribus*, consumers may use the consensus information as a heuristic cue to process the reviews in service quality judgment (i.e., heuristic information processing). That is, these consumers are less motivated to perform extensive message processing, rather more motivated to use peripheral cues to judge whether they accept or reject the service. In contrast, when there is equal number of WOM in both negative and positive direction, *ceteris paribus*, consumers may feel ambiguous in their judgment. In this circumstance, consumers are more likely to have accuracy motivation and therefore use highly elaborative and systematic information processing.
Conceptual Research Framework

On the basis of the theories reviewed, I propose a conceptual research framework that illustrates how potential consumers incorporate negative and positive online WOM into their evaluations of a particular service company. The proposed framework provides integrative views of how two factors come into play to influence the negativity effect of online NWOM on consumers’ attributional processes and attitude formation/change processes: (1) the levels of online NWOM opinion consensus and (2) the types of company responses to online NWOM. In the following section, I put forth the research hypotheses regarding consumer processing of both negative and positive online WOM by integrating impression formation theory, attribution theory, and information processing theory.

Consensus of Online Consumer Reviews

The availability and measurability of multiple consumer reviews to potential consumers are introduced as some of the unique features of eWOM communication in the aforementioned discussion. That is, online consumer reviews involve positive or negative statements about the product and are visible to consumers accessible to the online agora. While consumers seek out others’ opinions online to form their evaluation of a particular service performance, they perhaps experience two different situations: (1) all or most online consumer reviewers agree on the service evaluation – albeit favorably or unfavorably and/or (2) both favorable and unfavorable evaluations are in conflict between the reviewers. In the WOM communication context, the degree to which others concur on the review of a communicator is referred to as consensus and is determined by the proportion of negative to positive consumer reviews, or vise versa. West and Broniarczyk (1998) suggest that opinion consensus transforms the processes in which consumers combine separate pieces of information into an overall product evaluation, particularly attitude
change (Lee et al., 2008) and attribution process (DeCarlo et al., 2007; Lacznia et al., 2002).

With regard to attitude change, as suggested in the earlier review of impression formation theory, consumers perceive negative information as more diagnostic than positive information and, thereby weight negative information more than positive information in forming an overall attitude towards and evaluation of a target (Fiske, 1980; Herr et al., 1991; Skowronski & Carlston, 1987). Due to this negativity effect, consumers are expected to exhibit greater amount of attitude change with negative as compared to positive information (Ahluwalia et al., 2000). However, consumer attitude change may be influenced by the referents’ opinion consensus information (e.g., Lee et al., 2008). Research in decision-making suggests that a lack of consensus in opinions can generate uncertainty or perceived risk for consumers (Ellsberg, 1961; Hogarth, 1989). This perceived uncertainty might lead consumers to discount or ignore the value of conflicting information (Meyer, 1981; West & Broniarczyk, 1998), and might also motivate them to engage in extensive elaboration and scrutiny of the dissent information for evaluating its validity (Petty & Cacioppo, 1981). In contrast, a high level of opinion agreement provides individual consumers with heuristic decision cues (i.e., consensus opinion) (Chaiken, 1987) and with greater confidence that the information is believable and acceptable (Chiou & Cheng, 2003), even if it is not true (Deutsch & Gerard, 1955). Therefore, it is likely that consumers perceive negative consumer reviews to be more (less) reliable, credible, and trustworthy when given more (less) supportive viewpoints of the reviews from different reviewers. In addition, consumers presumably exhibit a greater amount of attitude change in accordance with negative consumer reviews when the level of agreement on the reviews is high than when the level is low.

**H1**: Potential consumers will place *more* weight on a NWOM message in formation of their overall attitudes toward a target company when there is *higher* agreement on NWOM than when there is lower agreement on NWOM.
**H2**: Potential consumers will exhibit a *greater* amount of attitude change in a negative direction in response to NWOM when there is *higher* agreement on NWOM than when there is lower agreement on NWOM.

Moreover, as discussed in the review of attribution theory (Kelley, 1967), opinion consensus information can be a critical factor that affects consumers’ attributional process of negative consumer reviews as to a company and its performance. NWOM information with which a majority of others concur may induce the impression that the problem being discussed is true. It may also lead the recipients of NWOM to attribute the cause of the problem to the company, rather than to the communicators (i.e., the reviewers). In contrast, if the problem in NWOM is addressed by only a few communicators and is counterargued by the majority of people, the recipients (i.e., the readers) are more likely to attribute the negative evaluations to the communicators or circumstances beyond the control of the company (Laczniak *et al.*, 2002). Hence, it is conceivable that as the proportion of negative consumer reviews increases, potential consumers will be prone to ascribe the problem to the bad performance of the company, rather than the external factors outside the company’s control. Therefore, I propose the following hypothesis:

**H3**: Potential consumers will be *less* likely to attribute the causes of NWOM to external or unforeseen factors (i.e., other than a target company) when there is *higher* agreement on NWOM than when there is lower agreement on NWOM.

**Organizational Response to NWOM as a Moderator**

The most important objective and implication of this dissertation is to explore the role of organizational responses to NWOM in consumers’ processing of NWOM communication and their evaluations of a company. In the service encounter literature, organizational responses to
the negative situation (i.e., service failure and customer complaining) have gained a lot of attention as potential recovery strategies to soothe dissatisfied customers and prevent further negative consequences such as NWOM and switching behavior (Smith et al., 1999). However, despite the potency of NWOM in the consumer market, there has been limited research investigating how companies should handle and respond to NWOM. The influence of WOM is important to marketers’ decisions on customer service, especially in regard to justifying the expenditures associated with complaint handling, customer retention, and service recovery as well as preventing potential customers from choosing another alternative. Thus, I aim to seek evidence of whether the organizational response to NWOM has a significant effect on the attitude and probability of purchase of potential consumers. Specifically, the question is whether responding to a negative online review is more effective than not responding to it. And, if organizations choose to respond online to negative reviews, what would be an appropriate and effective response?

**Apology.** Apologies have been considered as the basic but the most essential response component that organizations can use for handling a negative incident such as service failure and customer complaint (Mattila & Cranage, 2005; Smith et al., 1999). Apologies are defined as “confessions of responsibility for negative events which include some expression of remorse” (Tedeschi & Norman, 1985, p. 299). Organizations use apologies to manage or reclaim a favorable impression and to ameliorate the severity of a problem (Conlon & Murray, 1996). Prior research has documented that an apology due to its nature is effective in reestablishing trust. For example, Bottom, Gibson, Daniels, and Murnighan (2002) and others (e.g., Lewicki & Bunker, 1996; Ohbuchi, Kameda, & Agarie, 1989) suggest that broken trust as a result of an unfavorable event may be successfully restored if mistrusted parties identify and admit responsibility/guilt for
the trust-destroying occurrence. Moreover, Kim, Ferrin, Cooper, and Dirks (2004) argue that the expression of regret indicates the intention to avoid reoccurrence of the problem in the future, thereby reducing perceivers’ concerns about continued vulnerability and increasing trust. From an attribution theory perspective, apologies are considered as internal, rather than external, attributions or accounts, which suggests that the problem was caused under the control of the company (Kim, Dirks, Cooper, & Ferrin, 2006; Sigal, Hsu, Foodim & Betman, 1988). Some researchers have documented that organizations acknowledging the culpability of the problem are perceived more favorably by external audiences than organizations defending themselves and denying responsibility (Elsbach, 1994). Likewise, an apology as an organizational response to a negative event is expected to be received more favorably than no apology or denial (Conlon & Murray, 1996).

**Causal Explanations.** Offering explanations in response to a negative incident is recognized as another effective organizational response strategy and impression management tool in reducing the negative consequences across various disciplines including management, services marketing, organizational behavior, and consumer behavior (e.g, Bies, 1987; Bies & Shapiro, 1987; Greenberg, 1990; Mattila, 2006; Scott & Lyman, 1968). A causal explanation (also called social or causal account) is defined as “explanations for a person’s responsibility for his or her actions” (Bies & Shapiro, 1987, p. 201). Provided consumers have a tendency to seek out underlying causes for events observed (Kelley & Michela, 1980), the causal explanation helps individuals reveal “the reasons for, or the cause of, some event that is not immediately obvious or entirely known” (Shaw, Wild, & Colquitt, 2003, p. 445). Prior research categorizes the causal explanations into internal and external explanations (e.g., Bitner, 1990, Kim et al., 2006), which are likely to determine the degree of blame associated with a negative outcome (Fincham, 1982).
Internal explanations, similar to apologies, are accepting full responsibility for the problem or poor performance, whereas external explanations place the blame on some other culprit, thereby extenuating accountability. Accordingly, external explanation is more likely than internal explanation or no explanation to lead consumers to believe the firm had less control over the negative event (Bitner, 1990; Folkes, 1984). In addition, as suggested by the discounting principle (Kelley, 1973), people, when judging the cause of the problem between situational and dispositional factors, tend to deduct “the effect of the situation and attribute what remains to the individual” (Kim et al., 2006, p. 52). This phenomenon may become more salient as the influence of situational factors becomes stronger (McClure, 1998). Hence, external explanation, when perceived as an adequate and plausible alternative explanation, will likely discount an apparent initial causal inference (i.e., internal attribution) (Dean, 2004).

The Combinations of Apology and Causal Explanations. Kim et al. (2006) raise the question of whether mitigating the blame for the problem can be done in other manners that are different from providing either an apology or an external explanation. They attempt to combine an apology with either internal explanation or external explanation by focusing on how to convey apologies, particularly “whether the apology should assume more or less responsibility” for the negative event, rather than whether to provide an apology (p. 52). An apology with an internal explanation can be understood as a response to lessen the perceived negativity of problems rather than to lessen or negate one’s perceived linkage to the problems. In contrast, an apology with an external explanation is a response intended for going beyond minimization of the perceived negativity of events and shifting the causal attribution for negative events away from oneself. Thus, apologies with both internal and external explanations as compared to no action, are more effective in repairing trust and alleviating the severity or negativity of an unfavorable incident.
(e.g., service failure, poor performance), yet the latter further comes to play a role in deflecting the blame away from internal attribution (i.e., a service organization).

Despite this prevailing discussion about the benefits of practicing apologies, internal and external explanation, and their combinations in response to a negative event, some research suggests that apologies and causal explanations may lead to negative reactions. That is, the nature of an apology (i.e., acknowledgment of guilt/responsibility) can fail to reduce the negative outcomes of an accusation (Schlenker, 1980) and can generate trust damage by confirming that the mistrusted party was to blame, which outweighs its benefits (i.e., achieve redemption) (Kim et al., 2006). Causal explanations, particularly external explanations rather than an apology with internal explanations, may also bring about backfire effects such as making a problem more serious and creating a more unfavorable impression, when perceivers think of the explanations as excuse-making that intentionally avoid or mitigate the organization’s accountability (Mattila, 2006; Tax et al., 1998). Then, the critical inquiry that needs to be examined is not so much whether causal explanations can be effective for the negative event as when they can be beneficial or detrimental.

Drawing upon my hypothesis development regarding opinion consensus on NWOM, I assume that the effectiveness of causal explanations in influencing consumers’ processing of NWOM about an object (i.e., service) may depend on the consensus of negative online reviews among multiple eWOM messages. I previously hypothesized that consumers give more weighting to NWOM messages and exhibit greater attitude change when exposed to the more negative sets (i.e., high consensus) than when exposed to the less negative sets (i.e., low consensus) of multiple eWOM messages due to the negativity effect (Fiske, 1980; Skowronski & Carlston, 1987). More (fewer) NWOM messages may lead consumers to attribute the negativity
to stable (unstable) and permanent (temporary) causes, and thus signal the information that the same outcome will more (less) likely recur in the future (Weiner, 1986; Smith & Bolton, 1998). Hence, in a situation where fewer NWOM messages are available, the organizations offering both an apology with an internal and an external causal explanation (vs. no response) induce consumers to place more weight on positive competence information (i.e., PWOM) and intended redemption than negative competence information (i.e., NWOM) and information about guilt, thus more effectively reducing the negative reactions and subsequent conflict (Baron, 1988; Bies, Shapiro, & Cummings, 1988). As a result, it is conceivable that both an apology with an internal and external causal explanation has a greater impact than no response on lessening consumers’ weighting on NWOM in formation of overall evaluations and their attitude change, especially when fewer negative reviews exist (i.e., low consensus of NWOM). Moreover, given that apologies with information concerning both internal and external causality (i.e., internal and external explanations) alter perceptions of the causes behind the service problem to external, unintentional causes largely outside of the organization’s control (Baron, 1990; Bies et al., 1988; Weiner, Amirkhan, Folkes, & Verett, 1987), these organizational responses (vs. no response) are more likely to lead consumers to generate external attributions than internal attributions (i.e., the organization).

However, in a situation where more NWOM messages are available (i.e., high consensus of NWOM), the patterns for the effects of organizational responses may be different. The more negative sets of NWOM messages signal the higher chance that a negative incident (i.e., service failure) has originated from internal factors (e.g., a service organization) and will occur again in the future (Laczniak et al., 2001; Smith & Bolton, 1998), thereby leading consumers to weight NWOM more in their evaluation formations. In these circumstances, when apology with an
internal explanation is given, consumers’ focuses are less likely on admission of guilt but more likely on intention to correct the problem in future. Hence, an apology’s negative impact of accepting responsibility on consumers’ processing of NWOM should be less influential than its positive impact of declaring intent to prevent further failures that cue positive competence of the organization in the future (Kim et al., 2006). In contrast, external explanations that deflect the blame away from the accused party will “limit perceived guilt, but also limit signals of intended redemption because this response indicates that there will be no effort to change one’s behavior” (Kim et al., 2004, p. 107). Because the organization is likely the cause of the problem in consumers’ mind, a causal account that avoids responsibility for and shows no intent to rectify the recognized problem will be perceived by consumers to be unreliable and insincere, thereby discounting its effect of shifting problem attributions to external factors or out of the control of the organization. Therefore, an apology with an external explanation in response to NWOM may intensify the negativity effect of NWOM in consumers’ evaluation and attitude formations relative to an apology and even no response. Accordingly, the following hypotheses are developed:

**H4a:** In the condition of lower agreement on NWOM, an apology with both internal (i.e., accommodative response) and external (i.e., defensive response) explanation will be more effective than no response in reducing potential consumers’ weighting on NWOM in the formation of overall attitudes towards a target company.

**H4b:** In the condition of higher agreement on NWOM, an apology with external explanation (i.e., defensive response) will be less effective than an apology with internal explanation (i.e., accommodative response) and even no response in reducing consumers’ weighting on NWOM in the formation of overall attitudes towards a target company.
**H5a:** In the condition of *lower* agreement on NWOM, potential consumers’ attitude changes in a negative direction will be *less* likely when given an apology with both internal (i.e., accommodative response) and external (i.e., defensive response) explanation than when given no response.

**H5b:** In the condition of *higher* agreement on NWOM, attitude changes will be *greater* when given an apology with external explanation (i.e., defensive response) than an apology with internal explanation (i.e., accommodative response) or even no response.

**H6a:** In the condition of *lower* agreement on NWOM, an apology with both internal (i.e., accommodative response) and external (i.e., defensive response) explanation will be *more* likely than no response to lead consumers to attribute the causes of NWOM to external or unforeseen factors (i.e., external attribution).

**H6b:** In the condition of *higher* agreement on NWOM, an apology with external (i.e., defensive response) explanation will be *less* likely than an apology with internal (i.e., accommodative response) explanation or no response to lead consumers to generate external attributions.

From the information processing perspective (ELM, Petty & Cacioppo, 1986), attitude change will follow after consumers process the messages through either a central or peripheral route to judge the primary merits of the attitude object (i.e., to evaluate how good it truly is) and subsequently find them persuasive, accurate, and informative enough to change their initial cognitive structures (Petty & Wegener, 1999). Given that negative (vs. positive) information is perceived as more diagnostic and useful, (Herr *et al.*, 1991, Skowronki & Calston, 1987), consumers give great weight to negative information in forming their attitudes towards a target (Fiske, 1980; Klein, 1996), which in turn leads to attitude change in a negative direction (Ahluwalia *et al.*, 2000). Ahluwalia (1996) supports this idea by suggesting that the degree of attitude change of a message recipient depends on the amount/magnitude of weight given to the
negative information. Hence, as the proportion of NWOM messages increases (i.e., high consensus of NWOM), consumers are likely to place more weight on negative than positive WOM in their evaluative judgments, thereby exhibiting more attitude change toward a target (i.e., focal service/service provider) in a negative direction. Additionally, based on the review of literature on organizational response type (particularly regarding the development of hypotheses 4 and 5), it can be assumed that NWOM consensus and types of company response jointly influence potential consumers’ weighting on NWOM, which in turn determines their attitude changes toward the company (i.e., NWOM Consensus × Company Response Type → Weighting on NWOM → Attitude Change). Thus, I put forth the following mediated moderation hypothesis:

H7: The moderating effect of the company response to NWOM on the relationship between NWOM consensus and attitude changes toward the target company is mediated by weighting on NWOM.

Consumer attributions about NWOM messages are likely to influence the extent to which they change their attitudes in a negative direction. Prior research has suggested that consumer attributions pertaining to products/services have effects on consumer evaluations regarding brand, sale, and store (e.g., DeCarlo et al., 2007; Laczniak et al., 2001; Lichtenstein & Bearden, 1986). For example, Burton, Lichtenstein, Biswas, and Fraccastoro (1994) found that when consumers generated product attribution as to price reduction of a product in an advertisement (e.g., poor quality, unknown brands, or antiquated technology), their attitudinal sale evaluations and shopping intentions became unfavorable. However, the evaluations became positive when consumers made merchant-related attributions about price discounting (e.g., meeting or beating competitors’ prices). Laczniak et al. (2001) also found that when receivers attributed NWOM toward the brand (and not the communicator), their brand evaluations decreased. In contrast,
when making a communicator (i.e., a message sender) attribution about NWOM, receivers’ evaluations did not diminish. DeCarlo et al. (2007) also confirmed these findings and suggested that the internal (i.e., store) attributions made about NWOM about a particular store will lead to negative store evaluations, whereas external (i.e., communicator) attributions will generate positive evaluations. Moreover, causal attributions are observed to mediate the NWOM – brand (or store) evaluations: consumers generate causal attributions about NWOM messages, which in turn are used to make subsequent brand (or store) evaluations³ (DeCarlo et al., 2007; Laczniak et al., 2001). Based on the review of literature on the NWOM consensus and organizational response type with respect to attribution theory (particularly regarding the development of hypotheses 3 and 6), it can be assumed that NWOM consensus and types of company response jointly influence potential consumers’ perceived external attribution on NWOM, which in turn determines their attitude changes toward the company (i.e., NWOM Consensus × Company Response Type → External Attribution on NWOM → Attitude Change). I therefore put forth the following hypothesis:

H₈: The moderating effect of company response to NWOM on the relationship between NWOM consensus and attitude changes toward the target company is mediated by external causal attribution on NWOM.

³ Attitude toward the brand or store were measured for consumer evaluations in both studies.
Please see Figure 2.1. for the research framework of consumer processing of NWOM communication.

**Figure 2.1. A Proposed Research Framework**
CHAPTER 3

METHOD

This chapter presents the methodology and data analysis used in this study in the following order: (1) Study design and overview, (2) Pilot Study, (3) Participants and procedures for Main Study (4) Stimulus materials, (5) Measures, and (6) Preparation for data analysis.

Study Design and Overview

To test the proposed hypotheses, the study employed a 2 (NWOM consensus: high and low) x 3 (Organizational response type: no response, accommodative response, and defensive response) between-subjects factorial experimental design where participants were randomly assigned to one of six experimental conditions. A self-administered survey questionnaire that consisted of two parts was used to collect the main study data from each participant. The first part consisted of experimental stimuli and measurement items using 7-point semantic differential scales for attitude measures (i.e., good/bad, like/dislike, favorable/unfavorable, positive/negative) as well as 7-point Likert type scales for other measures that were anchored by “strongly disagree” to “strongly agree”. The second part of the questionnaire solicited information about demographics and several behavioral aspects of the eWOM experience.

Pilot Study

Study Overview

The primary purpose of the pilot study was to obtain unbiased stimulus materials based on real-life examples and to test their effectiveness in manipulating experimental treatment conditions using a restaurant review Web site as a study context. Specifically, I aimed to
establish the best sets of positive, negative, and neutral consumer reviews, with which participants would clearly identify high and low levels of NWOM opinion consensus without any difference in their perceptions regarding review quality. I also checked whether participants were able to differentiate between the two types of response to negative consumer review(s).

The pilot study additionally aimed to test and validate protocols, data collection instruments, and logistic feasibility of the procedures that would be used in the main study. To that end, it employed a 2 (NWOM consensus: high/low) x 3 (Organizational response type: no/accommodative/defensive response) between-subjects factorial experiment where participants were randomly assigned one of the six conditions, and their processing of consumer reviews and, if any, a response message was observed by measures of their attitudes, external causal attributions, and weightings of the negative review in making a purchase-decision.

**Subjects**

A total of 650 faculty and staff from a large, public, northeastern university, were randomly selected and invited to participate in this study. They were mailed a randomly-assigned paper- and-pencil questionnaire and asked to participate voluntarily. A total of 73 individuals (11%) returned the questionnaire. It should be noted that the participants in this pilot test were excluded from the sample frame for the main study.

The respondents had an average age of 44 (range 23 to 65), and 66% were female (n=48). The subjects indicated that, in general, they read about five consumer reviews ($M = 5.69$) and moderately rely on the reviews ($M = 4.82$; 1 = *not at all*, 7 = *very much*) before making a purchase-decision. Additionally, 63% of the subjects (n=45) indicated that they have never lodged a complaint online. Table 3.1. reports the number of valid observations per cell for the six experimental treatment conditions.
Table 3.1. Number of Valid Observations per Cell (n) for the Experimental Conditions

<table>
<thead>
<tr>
<th>Response Type</th>
<th>Consensus Level</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Low</td>
<td>High</td>
</tr>
<tr>
<td>No Response</td>
<td>14</td>
<td>17</td>
</tr>
<tr>
<td>Accommodative Response</td>
<td>10</td>
<td>9</td>
</tr>
<tr>
<td>Defensive Response</td>
<td>16</td>
<td>7</td>
</tr>
<tr>
<td>Total</td>
<td>40</td>
<td>33</td>
</tr>
</tbody>
</table>

Procedure

Subjects were sent a survey kit consisting of a cover letter, an informed consent form, and the questionnaire. The cover letter described the study and indicated that their task was to evaluate an imaginary restaurant before and after reading the consumer reviews. Then, if they agreed to participate in the study, they were asked to read through general information about the restaurant. Thereafter, their initial attitudes toward this restaurant were measured. After the first attitude measure, individuals were introduced to a set of consumer reviews about a restaurant. Subsequent to reading the consumer reviews, the subjects completed the questionnaire that included manipulations of consensus and response type, participants’ post-attitude, weighting of a negative consumer review, attribution, and argument quality.

Measures

Although the pilot study questionnaire contained all the measures used in the main study, it also included additional measurement items that were eventually filtered out in the main study as a result of expert reviews, respondent comments, as well as an item reliability analysis. Identical scales were used for both the pilot and main studies except with the organizational response type measure (detail description about all the measures is available in measurement section for main study later on). That is, in the pilot study, the organizational response type
measure consists of five items: for the first item that asks the presence of a restaurant’s response to the negative consumer review, dichotomous scales (yes/no) were used; for the other four items that address the response type, respondents were allowed to choose multiple responses, if appropriate. However, in a main study, the later four response type measurement items were measured using seven point Likert scale anchored with “strongly disagree” and “strongly agree”.

In addition, the review quality measures were added to the instruments to allow for an objective analysis of the study stimulus (i.e., restaurant reviews). Previous research indicates that the quality of an argument can have a significant effect on persuasion and thus attitude change (Petty & Cacioppo, 1984; Petty, Cacioppo, & Schumann, 1983). Lee et al. (2008) discussed the effect of argument quality in relation to online consumer reviews such that purchase decisions of potential consumers are influenced according to whether the reviews are understandable, relevant, and believable recommendations with sufficient reasons. To purify the compounding effect of review quality from the effect for review consensus, review quality was measured using a four item, seven point bipolar scale (Lee et al., 2008). The items were summed to create an overall review quality index. Scale items and their reliabilities are exhibited in Table 3.2.
Table 3.2. Pilot Study Scale Items (Cronbach’s α; 7-Point Scale)

<table>
<thead>
<tr>
<th>Attitude (α = .94 for pre-attitude; α = .97 for post-attitude):</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bad/Good</td>
</tr>
<tr>
<td>Unfavorable/Favorable</td>
</tr>
<tr>
<td>Undesirable/Desirable</td>
</tr>
<tr>
<td>Dislike/Like</td>
</tr>
<tr>
<td>Negative Impression/Positive Impression</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Weighting (α = .86; 1 = Strongly Disagree, 7 = Strongly Agree):</th>
</tr>
</thead>
<tbody>
<tr>
<td>I will refer to this complaint message in a purchase decision.</td>
</tr>
<tr>
<td>Overall, I think this complaint message is credible.</td>
</tr>
<tr>
<td>Overall, I think this complaint message is important.</td>
</tr>
<tr>
<td>This complaint message will crucially affect my purchase decision.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>External Attribution (α = .68; 1 = Strongly Disagree, 7 = Strongly Agree):</th>
</tr>
</thead>
<tbody>
<tr>
<td>The unpleasant events were due to factors outside the restaurant’s control.</td>
</tr>
<tr>
<td>I get the impression that unforeseen factors influenced the restaurant’s performance.</td>
</tr>
<tr>
<td>The unpleasant events were due to bad luck.</td>
</tr>
<tr>
<td>The restaurant was responsible for the problem.</td>
</tr>
<tr>
<td>The complainer was responsible for the problem.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Review Quality (α = .88):</th>
</tr>
</thead>
<tbody>
<tr>
<td>Irrelevant/Relevant</td>
</tr>
<tr>
<td>Not Understandable/Understandable</td>
</tr>
<tr>
<td>Unreliable/Reliable</td>
</tr>
<tr>
<td>Insufficient Reasoning/Sufficient Reasoning</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Review Consensus (α = .90; 1 = Strongly Disagree, 7 = Strongly Agree):</th>
</tr>
</thead>
<tbody>
<tr>
<td>A majority of the comments supported the original complaint about the restaurant.</td>
</tr>
<tr>
<td>A majority of the comments differed from the original complaint about the restaurant.</td>
</tr>
<tr>
<td>Overall, consumer reviews indicate a negative impression of the restaurant.</td>
</tr>
<tr>
<td>There is a great deal of agreement among all the consumer reviews, providing a bad impression of the restaurant.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Response Type (Yes/No):</th>
</tr>
</thead>
<tbody>
<tr>
<td>Was there a restaurant’s response to the negative consumer review?</td>
</tr>
<tr>
<td>The restaurant apologized for the problem.</td>
</tr>
<tr>
<td>The restaurant admitted responsibility for the problem.</td>
</tr>
<tr>
<td>The restaurant shifted the blame to others.</td>
</tr>
<tr>
<td>The restaurant disagreed and argued with the complaining customer(s).</td>
</tr>
</tbody>
</table>

*Reverse coded

Pilot Study Results

Manipulation Check. To test the efficacy of the two levels of consensus manipulation, an Independent Samples t-test was performed with the consensus index as a test variable. The results revealed a significant main effect of consensus on consensus index, \( t(71) = -6.56, p < \)
Respondents in the high consensus conditions ($M = 5.22, SD = 1.21$) gave higher scores on consensus among consumer reviews than their counterparts ($M = 3.40, SD = 1.15$).

For the response type manipulation check, all respondents correctly described the response (i.e., no response, accommodative response, or defensive response) that they were given. Specially, those in accommodative response conditions identified that the restaurant provided an apology and admitted the responsibility for the problem; those in defensive response conditions reported that the restaurant apologized for the problem, but attempted to shift the blame to others and to persuade the complaining customer(s) to understand and accept the situation. Taken together, these results indicated that experimental manipulations for consensus and response type were effective.

**Review Quality.** To ensure that the quality of consumer reviews was not significantly different between high and low consensus conditions, a two-way ANOVA was run with consensus and response type as independent variables and review quality index as a dependent variable. The results indicated no significant difference in review quality across the two consensus conditions ($F = .91, p = .34$). In contrast, the main effect for the response type was significant $F(67, 2) = 3.22, p < .05$; Tukey HDS post hoc analyses revealed that the defensive response conditions ($M = 4.44$) yielded a significantly lower review quality ratings than no response conditions ($M = 5.06$) at the .05 significance level. Overall, the results demonstrated that review quality does not come into play in examining the effect for review consensus. Additionally, there is evidence that response type as one of the study variables is likely to produce persuasion effects, and ultimately attitude changes.

**Additional Analyses.** Although the purpose of this pilot test was not to test study hypotheses in advance, because of the success in manipulating experimental treatment conditions and
creating unbiased stimuli, I further tested whether the pilot study data gave an indication that the research questions and study hypotheses were reasonable to pursue.

(1) Weight on NWOM

First, I examined how review consensus and type of company response to a consumer’s negative review influenced the extent to which potential consumers weight the negative review in their purchase-decision. A two-way ANOVA was conducted, and the results showed that the main effect for response type was significant, $F(67, 2) = 3.82, p < .05$; neither the main effect for consensus ($p = .18$) nor the interaction effect ($p = .78$) were significant. Planned contrasts indicated that the mean for no response ($M = 4.56$) was not significantly different from the mean for accommodative response ($M = 4.13$), but was different from the mean for defensive response ($M = 3.78; p < .05$). This finding illustrated the necessity not only for responding to the negative consumer review but also for effectively responding so as to attenuate the weight potential consumers place on the negative review: respondents gave lower weight on the negative review in the presence of either type of response than in the absence of it. This pattern was even prominent especially when the response contained an apology with a partial responsibility for the negative event but deflects the rest of responsibility from the restaurant (i.e., defensive response).

(2) External Attribution

The effects of review consensus and response type were also examined on the degree to which potential consumers attribute the cause of the negative event to some external (situational) factor beyond the control of the company. A two-way ANOVA was run, and the results suggested that the main effect for review consensus was significant, $F(67, 1) = 4.90, p < .05$: respondents in the high consensus conditions ($M = 2.30$) gave slightly lower ratings on external attribution than their counterparts ($M = 2.75$). This result indicates that the more the negative
consumer reviews were, the less the potential consumers were aware of the situational constraints for the negative event, thus perceiving the higher level of internal, dispositional attributions.

(3) Attitude Change

Finally, I investigated the impacts of review consensus and response type on potential consumers’ attitude changes towards the restaurant. A two-way ANOVA was performed, and the results showed a review consensus main effect only, \( F(60, 1) = 27.56, p < .001 \). Respondents in the conditions of high review consensus (\( M = -1.65 \)) changed their attitudes towards the restaurant in a more negative direction than their counterparts (\( M = -0.06 \)). This finding suggests that the more negative the consumer reviews were, the more the potential consumers were likely to change their attitudes towards the restaurant in a negative direction.

Additionally, I ran two separate simple regressions to see how weight on NWOM and external attribution are respectively linked with attitude change. The results showed that weight on NWOM (\( \beta = -0.30, p < .10 \)) has a marginally significant negative relationship with attitude change, whereas attribution (\( \beta = .73, p < .001 \)) has a significant positive association with attitude change. Thus, as consumers place more weight on the negative consumer review and make less external attributions, their attitudes become more negative.

(4) Weight on NWOM as a Moderator

Weight on NWOM was considered as a mediating variable in the proposed research framework. Despite its significant relationship with attitude change, it has no association with review consensus, thus prohibiting a mediation test. However, since it has relationships with response type and attitude change, I further examined whether it possibly plays a moderating role in the relationship between review consensus, response type, and attitude change.
A general linear model (GLM) that fully crossed the two manipulated factors of review consensus and response types – that is, 2 (high/low review consensus) x 3 (no response, accommodative response, and defensive response), respectively – along with the measured variable of weight on NWOM (as a continuous independent variable) was performed on the dependent variable of change in attitude towards the restaurant before and after the exposure of consumer reviews. Since weight was used as one of the interaction terms, I centered it by subtracting the mean from each of its elements (Aiken & West, 1991). Given that the external attribution is considered influential in the model overall, it was entered in the analysis as a covariate. See Table 3.3. for the results of the GLM analysis.

The GLM analysis yielded a significant covariate effect, $F(53,1) = 5.47, p < .05$, and a significant two-way interaction between review consensus and weight on NWOM, $F(53,1) = 4.64, p < .05$, which is eventually qualified by a significant three-way interaction, $F(53,2) = 2.43, p < .10$. As depicted in Figure 3.1, for respondents in the high review consensus conditions, those who placed weight on the negative consumer review in their purchase-decisions showed a higher attitude change in a negative direction when given a defensive response than when given either no response or an accommodative response. However, those who gave less weight to NWOM in their purchase decision showed higher attitude change in a negative direction when given either no response or an accommodative response than when given a defensive response.
Table 3.3. Summary of GLM Results with Attitude Change as the Dependent Variable

<table>
<thead>
<tr>
<th>Source of Variation</th>
<th>Df</th>
<th>Sum of Squares</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>External Attribution</td>
<td>1</td>
<td>7.43</td>
<td>7.43</td>
<td>5.47</td>
<td>$p &lt; .05$</td>
</tr>
<tr>
<td>Consensus</td>
<td>1</td>
<td>30.38</td>
<td>30.38</td>
<td>22.38</td>
<td>$p &lt; .001$</td>
</tr>
<tr>
<td>Response Type$^a$</td>
<td>2</td>
<td>1.58</td>
<td>0.76</td>
<td>0.58</td>
<td>ns</td>
</tr>
<tr>
<td>Weight</td>
<td>1</td>
<td>1.12</td>
<td>1.12</td>
<td>0.82</td>
<td>ns</td>
</tr>
<tr>
<td>Consensus x Response Type</td>
<td>2</td>
<td>1.01</td>
<td>0.50</td>
<td>0.37</td>
<td>ns</td>
</tr>
<tr>
<td>Consensus x Weight</td>
<td>1</td>
<td>6.30</td>
<td>6.30</td>
<td>4.64</td>
<td>$p &lt; .05$</td>
</tr>
<tr>
<td>Response Type x Weight</td>
<td>2</td>
<td>0.67</td>
<td>0.33</td>
<td>0.25</td>
<td>ns</td>
</tr>
<tr>
<td>Consensus x Response Type x Weight</td>
<td>2</td>
<td>6.59</td>
<td>3.29</td>
<td>2.43</td>
<td>$p &lt; .10$</td>
</tr>
<tr>
<td>Error</td>
<td>53</td>
<td>71.95</td>
<td>1.36</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>65</td>
<td>142.89</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

$^a$Three types: no response, accommodative response, and defensive response.

Figure 3.1 A Three-way Interaction Plot in the High Review Consensus Condition
**Summary of Pilot Study Results**

The results of this pilot study revealed that the developed stimulus materials worked as designed. They were effective in manipulating the experimental treatment conditions and in generating reasonable variations in the weight respondents place on NWOM, as well as their attribution processes and attitude changes. In addition, the measurement items for each variable had high internal consistency.

Regarding consumer reviews and response types, the review quality was not significantly different between high and low review consensus conditions, but differed across the response types. This result shows that any effects for review consensus do not result from the review quality; thus it can be concluded that there are no compounding effects. The response types are potentially effective in persuading respondents and in influencing the way they process the consumer reviews, and thus attitude changes.

As far as a preliminary test of the proposed research model, the findings showed a pattern similar to the proposed hypothesis as to the effects of review consensus and response types on attitude change. It was proposed that review consensus and response types interact to affect consumer attitude change: attitude change in a negative direction will be greater when a defensive response is offered rather than an accommodative response or even no response in the conditions of high review consensus on a negative consumer review. The results from this pilot test do not confirm exactly the same outcome. However, this prediction appeared to be true when taking weight on NWOM into consideration. That is, a defensive response to the high consensus NWOM turned out to be the worst response strategy in preventing negative evaluation, especially when potential consumers placed more weight on the negative consumer review in their purchase decisions. In contrast, a defensive response to the highly agreed negative
consumer review appeared to be a better response strategy, particularly when less weight was given to the negative consumer review.

In summary, this pilot test set out to acquire objective stimulus materials and to check their efficacy in manipulating experimental treatment conditions. Further, it aimed to evaluate the adequacy of research instruments and the feasibility of a full study. The results provided strong evidence that the experiment and data collection instruments employed in this pilot study were appropriately formulated, and its procedures were justifiable.

Nevertheless, respondents’ feedback and expert reviews suggested areas for improvement of the stimuli and survey instrument. First, while a majority of respondents indicated their initial attitudes towards a restaurant as neutral, some expressed more negative attitudes due to the menu items displayed in the restaurant’s general information. Thus, the information regarding the menu items was removed from the general information. Second, several respondents reported that they were confused with how an original complaint, a comment, and a consumer review differed from one another and what each indicated, resulting in their having difficulty answering the questions regarding consensus manipulations and weight on NWOM. To reduce respondent error that might result from this confusion, I provided a graphical chart portraying the layout of WOM communication dialog comprising an original complaint and the four following comments with or without a restaurant’s response. Additionally, I added the word bubble next to each component of the dialog to refer to what it represents. My hope was that modification would help individuals to understand how each component is ordered and what each indicates, thereby eliminating misinterpretation.

With regard to the measurement items, quite a few respondents suggested that undesirable/desirable was not an appropriate scale to measure attitude towards a restaurant.
Three scholars with expertise on the constructs and methodological issues regarding this research reviewed the items to judge their appropriateness for measuring the intended constructs. I removed this scale from the attitude measure. Further, the experts were concerned about the low internal consistency among the external attribution items (Cronbach’s $\alpha = .68$). Two items – “The restaurant was responsible for the problem” and “the complainer was responsible for the problem” - were considered problematic and potentially decreasing face validity. I eliminated each item prior to the main study.

**Participants and Procedures for Main Study**

A total of 2,000 faculty and staff members from a large, public, northeastern university, were randomly selected and invited to participate in this study. Each participant received a randomized survey kit that included a cover letter describing the purpose of study and procedures to complete it, an implied informed consent form, and a paper-and-pencil questionnaire.

The survey kit was delivered to each participant via campus mail. All participants were exposed to one of the six versions of a consumer WOM communication dialog following general information about a restaurant, each with an identical number of restaurant reviews furnished with or without a restaurant’s response but differing in the number of negative and positive reviews as well as in the type of the restaurant’s response. Participants were asked to imagine that they are viewing a restaurant review Web site to find some good restaurants to dine in. Thereafter, they were instructed to read the restaurant’s general information and immediately indicate their initial attitude towards the restaurant. The participants were then exposed to the consumer WOM communication dialog about the restaurant, and asked to respond to the manipulations (NWOM consensus and organizational response), mediating variables (perception of attribution for the negative reviews and weightings on the negative reviews in evaluation of
the restaurant), as well as the dependent variable (subsequent attitudes towards the restaurant). Finally, individuals were requested to provide information regarding their demographic, characteristics and their eWOM experience, and to return the complete survey via campus mail. It should be noted that to capture participants’ attitude change towards the restaurant, their attitudes were measured twice using a pre-attitude measure between the general restaurant information and the restaurant reviews and a post-attitude measure after the restaurant reviews.

**Stimulus Materials**

Since this study focuses on potential consumers’ attitude change towards a restaurant before and after reading consumer reviews, I developed a stimulus to shape their pre-attitudes along with consumer reviews for forming their post-attitudes, both of which allow for identifying attitude change.

**General Restaurant Information**

General restaurant information serves to induce participants’ initial attitudes towards a restaurant. A picture of a restaurant’s exterior along with a description portraying restaurant attributes (service, location, etc.) in both narrative and list format are components of the general restaurant information content. Appendix A includes the general restaurant information.

**Consumer Reviews**

Consumer reviews serve to manipulate levels of high and low NWOM opinion consensus. The reviews were created based on real-life examples from an online restaurant review Web site (i.e., Yelp.com). A total of three negative, three positive, and one neutral consumer reviews were adapted and modified to generate two sets of five consumer reviews for review consensus manipulation. For the high NWOM review consensus conditions, the review
set consisted of three negative, one positive, and one neutral consumer reviews. For the low NWOM review consensus conditions, the review set was composed of three positive, one negative, and one neutral consumer reviews. The length of each consumer review was set to be equal since it potentially affects review quality perception (Lee et al., 2008).

Regarding configuration of the consumer reviews, one negative consumer review was used as an original complaint message about the restaurant. This complaint message was placed before four consumer reviews that either agree or disagree with it. To control for position effects, a positive consumer review that completely disagrees with the original complaint was always in second place; the neutral consumer review that neither fully agrees nor disagrees with it in third place. In the high level of consensus conditions, the sequence of the consumer reviews was (Negative original complaint, Positive, Neutral, Negative, Negative). In the low level of consensus conditions, the sequence of consumer reviews was (Negative original complaint, Positive, Neutral, Positive, Positive).

An overall review rating score and a review rating distribution chart served as another stimuli to manipulate the level of review consensus. In both high and low consensus conditions, the overall review rating score was set to be equal (three out of five stars). However, the review rating distribution charts were different: the rating distribution in the high consensus condition largely concentrated at two and three stars whereas in the low consensus condition it primarily clustered on three and four stars.

**Organizational Response Strategies**

Three organizational response strategies to negative consumer review(s) were employed in this study, including taking no action, an accommodative response and a defensive response. The accommodative response included an apology and an acceptance of responsibility for the
negative event described in negative consumer review(s). The defensive response contained an apology, but provided an explanation for shifting the blame away from the restaurant itself along with only partial responsibility for the negative event. The length of the defensive response message was by nature slightly longer than that of the accommodative response message. Appendix B and C show the two examples of the experimental conditions: (1) low consensus and accommodative response condition and (2) high consensus and defensive response condition.

**Measures**

**Manipulated Independent Variables**

**Review Consensus.** Review consensus on NWOM was operationalized as the degree to which others agree on a consumer’s negative online review (i.e., an original complaint) and is manipulated by the proportion of negative online consumer reviews that support the original complaint. The efficacy of manipulation for review consensus was assessed using a four item, seven-point Likert scale that was anchored with *strongly disagree* and *strongly agree*. Two items, “A majority of the comments supported the original complaint about the restaurant” and “A majority of the comments differed from the original complaint about the restaurant” (adapted from Lee & Song, 2010) were reverse coded. All four items were summed to create a review consensus index. A higher rating on this index represented a higher level of NWOM consensus.

**Organizational Response Type.** A number of manipulation checks were used to ensure that respondents interpreted the response type conditions as intended. Only those who were assigned to either accommodative or defensive response conditions were given the manipulation check questions. First, participants were asked to indicate if the restaurant offered a response to the negative consumer review(s). Then, they were asked to indicate their level of agreement or
disagreement (1 = strongly disagree, 7 = strongly agree) with the statements - “the restaurant apologized for the problem,” “the restaurant admitted responsibility for the problem,” “the restaurant shifted the blame to others,” and “the restaurant disagreed and argued with complaining customer(s)” (items adapted from Kim et al., 2006; Lee & Song, 2010). The first two items represent the accommodative response measure (Pearson’s $r = .68$), while the latter two items are the defensive response measure (Pearson’s $r = .56$). Participants in the accommodative (vs. defensive) response conditions were expected to give higher (lower) ratings on the first two items but lower (higher) ratings on the latter two items than participants in the defensive (vs. accommodative) response conditions. Finally, the first two items were reverse coded and summed with the other two to create an organizational response index. The higher (lower) score on this index indicates the more defensive (accommodative) response.

**Measured Mediating Variables**

**Weight on NWOM.** Weight given to negative online reviews in a restaurant’s evaluation was operationalized as the degree of importance consumers place on an original complaint message when making a purchase-decision. It was assessed via a four item, seven-point Likert scale anchored with strongly disagree and strongly agree (items adapted from Park & Lee, 2009).

**External Causal Attribution.** External attribution was operationalized as the degree to which the negative event was caused by external factors that were outside the purview of the restaurant. It was measured according to a three item, seven-point Likert scale anchored with very unlikely and very likely (items adapted from Griffin et al., 1992; Jones et al., 1971; Mattila & Patterson, 2004).
Measured Dependent Variable

**Attitude.** Attitude toward the restaurant was measured twice via a four-item, seven-point semantic differential scale (items adapted from Ahluwalia *et al.*, 2000, MacKenzie & Lutz, 1989). A mean attitude score was computed using these measures (Ajzen & Fishbein, 1980). Mean attitude change was computed as the difference between the pre- and the post-stimuli mean attitude for each subject. A higher negative number indicates a greater degree of attitude change in the negative direction. Table 3.5. displays all the measures used in this study. Please see Appendix D for the entire survey instrument.

### Table 3.4: Main Study Scale Items (Cronbach’s α; 7-Point Scale)

<table>
<thead>
<tr>
<th>Scale Items</th>
<th>Cronbach’s α</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attitude (α = .95 for pre-attitude; α = .98 for post-attitude):</td>
<td></td>
</tr>
<tr>
<td>Bad/Good</td>
<td></td>
</tr>
<tr>
<td>Unfavorable/Favorable</td>
<td></td>
</tr>
<tr>
<td>Dislike/Like</td>
<td></td>
</tr>
<tr>
<td>Negative Impression/Positive Impression</td>
<td></td>
</tr>
<tr>
<td>Weighting (α = .89; 1 = Strongly Disagree, 7 = Strongly Agree):</td>
<td></td>
</tr>
<tr>
<td>I will refer to this complaint message in a purchase decision.</td>
<td></td>
</tr>
<tr>
<td>Overall, I think this complaint message is credible.</td>
<td></td>
</tr>
<tr>
<td>Overall, I think this complaint message is important.</td>
<td></td>
</tr>
<tr>
<td>This complaint message will crucially affect my purchase decision.</td>
<td></td>
</tr>
<tr>
<td>External Attribution (α = .87; 1 = Strongly Disagree, 7 = Strongly Agree):</td>
<td></td>
</tr>
<tr>
<td>The unpleasant events were due to factors outside the restaurant’s control.</td>
<td></td>
</tr>
<tr>
<td>I get the impression that unforeseen factors influenced the restaurant’s performance.</td>
<td></td>
</tr>
<tr>
<td>The unpleasant events were due to bad luck.</td>
<td></td>
</tr>
<tr>
<td>Review Consensus (α = .94; 1 = Strongly Disagree, 7 = Strongly Agree):</td>
<td></td>
</tr>
<tr>
<td>A majority of the comments supported the original complaint about the restaurant.</td>
<td></td>
</tr>
<tr>
<td>A majority of the comments differed from the original complaint about the restaurant.</td>
<td></td>
</tr>
<tr>
<td>Overall, consumer reviews indicate a negative impression of the restaurant.</td>
<td></td>
</tr>
<tr>
<td>There is a great deal of agreement among all the consumer reviews, providing a bad impression of the restaurant.</td>
<td></td>
</tr>
<tr>
<td>Response Type (α = .83; 1 = Strongly Disagree, 7 = Strongly Agree):</td>
<td></td>
</tr>
<tr>
<td>Was there a restaurant’s response to the negative consumer review? (Yes/No)</td>
<td></td>
</tr>
<tr>
<td>The restaurant apologized for the problem.</td>
<td></td>
</tr>
<tr>
<td>The restaurant admitted responsibility for the problem.</td>
<td></td>
</tr>
<tr>
<td>The restaurant shifted the blame to others.</td>
<td></td>
</tr>
<tr>
<td>The restaurant disagreed and argued with the complaining customer(s).</td>
<td></td>
</tr>
</tbody>
</table>

*a Reverse coded*
**Preparation for Data Analysis**

Prior to data analysis in the main study, I checked for accuracy of data entry, multivariate outliers, and the normality and linearity of the observed variables. Exploratory analysis was performed to identify outliers in the variables. Histograms and summary descriptive statistics from the Descriptives option in SPSS were used to evaluate normality of the observed variables. Additionally, examination of skewness and kurtosis revealed that all the variables were within the acceptable ranges (an acceptable skewness range of no greater than +/- 1.0; an acceptable kurtosis range of no greater than +/- 3.0; Neter et al., 1996), indicating that the variable distributions were essentially normal. Because it was not practical to examine all pairwise scatterplots, randomly selected pairs of scatterplots were examined to assess linearity of the observed variables. A total of 241 useable responses remained for the final data analyses after excluding 24 multivariate outliers along with other types of unusable data.

In addition, because this study heavily relied on self-report measures, it was subject to common method variance bias. I performed Harman’s single factor test (1967) to assess the presence of the potential common method variance bias using an approach suggested by prior literature (Mattila & Enz, 2002; Podsakoff et al., 2003). All the variables used in the main study, including consensus and response type manipulations, weight on NWOM, external attribution, and attitude, were entered into a principal components factor analysis with varimax rotation. This test assumes that if a single factor accounting for the majority of the covariance in the variables (more than 50%) is observed in a factor analysis, then common method variance is present. The results of the factor analysis yielded five principal components as planned with eigenvalues greater than one, together accounting for 76.18% of the variance (each factor accounting for less than 50% of the covariation). After rotation, all the measures were clearly differentiated, with
their primary loading exceeding 0.6 and all other loadings below 0.4. This finding offers
evidence that the findings from the main study are not likely influenced by such bias.

Item reliability using the five-factor structure was examined before performing the data
analysis for the main study. As displayed in Table 3.2, the items measuring each variable are
internally consistent (Cronbach’s α > .70). Table 3.6 contains the univariate statistics and
bivariate correlations for all five variables.

Table 3.5. Univariate and Bivariate Statistics for the Study Variables

<table>
<thead>
<tr>
<th>Variable</th>
<th>Consensus</th>
<th>Response Type</th>
<th>Weight</th>
<th>External Attribution</th>
<th>Attitude Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>M</td>
<td>.48</td>
<td>.93</td>
<td>4.35</td>
<td>2.59</td>
<td>-1.01</td>
</tr>
<tr>
<td>SD</td>
<td>.50</td>
<td>.80</td>
<td>1.15</td>
<td>1.04</td>
<td>1.52</td>
</tr>
<tr>
<td>Correlations</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Consensus</td>
<td>-</td>
<td>-.019</td>
<td>.417**</td>
<td>-.395**</td>
<td>-.727**</td>
</tr>
<tr>
<td>Response Type</td>
<td></td>
<td>-</td>
<td>-.057</td>
<td>.087</td>
<td>.062</td>
</tr>
<tr>
<td>Weight</td>
<td></td>
<td>-</td>
<td>-.445**</td>
<td>-.368**</td>
<td></td>
</tr>
<tr>
<td>External Attribution</td>
<td></td>
<td>-</td>
<td></td>
<td>.347**</td>
<td></td>
</tr>
<tr>
<td>Attitude Change</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- ** denotes significance at the 0.01 level.
CHAPTER 4

RESULTS

In this section, I will begin by describing the overall response rate and respondent characteristics. Then, I will present the results of hypotheses testing. A series of independent t-tests were performed first to identify the effectiveness of manipulations. Analysis of variance (ANOVA) and regression analysis were employed to test proposed hypotheses. When a significant interaction effect was observed, planned contrasts with mostly one-tail tests were performed to confirm a priori hypotheses at the $\alpha = .05$ level. Finally, to conduct a mediated moderation tests I adapted the hierarchical regression procedure proposed by Muller, Judd, and Yzerbyt (2005), which is widely accepted as the standard method for analyzing mediated moderation models.

Participants

A total of 290 questionnaires were returned (a response rate of 14.5%). After excluding unusable 49 (11 insincere responses, 14 missing pre-attitude measures, 24 multivariate outliers), a total of 241 useable responses remained for the final data analyses. The demographics of the sample indicate that 66.4 percent of the respondents ($n=160$) were female and 33.6 percent of them ($n=81$) were male. The average age of participants was 46, with the age range between 22 and 73. A majority of respondents never lodged any complaint online (68.3 %; $n=164$). The respondents reported that they, on average, read about 5 ($M = 5.91$) reviews, and moderately rely on the reviews ($M =5.10$; 1 = not at all, 7 = very much) before making a purchase-decision. Table 4.1. exhibits the number of valid observations per cell for the six experimental conditions.
Table 4.1. Number of Valid Observations per Cell (n) for the Experimental Conditions

<table>
<thead>
<tr>
<th>Response Type</th>
<th>Consensus Level</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Low</td>
<td>High</td>
</tr>
<tr>
<td>No Response</td>
<td>42</td>
<td>44</td>
</tr>
<tr>
<td>Accommodative Response</td>
<td>48</td>
<td>38</td>
</tr>
<tr>
<td>Defensive Response</td>
<td>35</td>
<td>34</td>
</tr>
<tr>
<td>Total</td>
<td>125</td>
<td>116</td>
</tr>
</tbody>
</table>

Manipulation Checks

Participants perceived the experimental treatment conditions reflecting different NWOM consensus levels and response types as intended. The independent sample t-test showed a significant effect for NWOM consensus (two-tailed $t(239) = -31.61, p < .001$), with participants in the high NWOM consensus conditions ($M = 5.63$) rating higher on the consumer review consensus measure than participants in the low NWOM consensus conditions ($M = 2.49$).

Another two independent sample t-tests were performed to assess the efficacy of response type manipulation. The results exhibited that participants in accommodative response conditions rated higher on the accommodative response measure (i.e., (1) the restaurant apologized for the problem; (2) the restaurant admitted responsibility for the problem) than participants in defensive response conditions ($M = 5.98$ versus $M = 4.32$; two-tailed $t(153) = 7.44, p < .05$). In contrast, participants in defensive response conditions gave higher ratings on the defensive response measure (i.e., (1) the restaurant shifted the blame to others; (2) the restaurant disagreed and argued with the complaining customers) than participants in accommodative response conditions ($M = 3.28$ versus $M = 1.49$; two-tailed $t(153) = -11.26, p < .001$). Additionally, I reverse coded the accommodative response measures and summed them with the defensive response measures.
to form a defensive response index. A one-way ANOVA test with response type as an independent variable and a defensive response index as a dependent variable revealed a significant main effect of response type: participants in the defensive response condition gave higher ratings on the defensive response index than their counterparts in the accommodative response ($M = 3.48$ versus $M = 1.76$; $F(1, 154) = 110.21, p < .001$).

In sum, both NWOM consensus and response type manipulations were successful.

**Multivariate Results**

To test for omnibus effects of NWOM consensus and organizational response strategy on NWOM communication processing variables as a check against alpha inflation from multiple univariate tests (see Leary & Altmaier, 1980), a two-way multivariate analysis of variance (MANOVA) was run with NWOM consensus and organizational response type as independent variables. Dependent variables were weight on NWOM, external attribution, and attitude change. The omnibus MANOVA results indicated significant main effects of NWOM consensus (Wilks’ $\Lambda = .41, F(3,233)=110.79, p < .001$, multivariate $\eta^2_p = .59$), organizational response type (Wilks’ $\Lambda = .91, F(6,466) = 3.93, p < .001$, multivariate $\eta^2_p = .05$), and their significant interaction effect (Wilks’ $\Lambda = .90, F(6,466) = 4.05, p < .001$, multivariate $\eta^2_p = .05$). These MANOVA results informed subsequent univariate analyses by suggesting that significant univariate effects of NWOM consensus and organizational response type factor and significant interaction effect were not likely artifacts of alpha inflation. Subsequently, univariate analysis of variance (ANOVA) tests on each dependent variable were conducted as follow.
**Weight on NWOM**

I hypothesized that potential consumers would place more weight on a NWOM message (i.e., an original complaint) in their overall attitude formation when there is high (versus low) agreement on that message among the following consumer reviews (i.e., replies to the complaint) (H1). Additionally, when there is low agreement on the NWOM message, I expected both an accommodative and a defensive response to be more effective than no response in reducing weights the consumers give to the NWOM message (H4a). In contrast, when there is high agreement on the NWOM message, both no response and an accommodative response were expected to be more helpful than a defensive response to discount the consumers’ weightings on the NWOM message (H4b). These predictions indicate a significant NWOM consensus main effect and a significant interaction between NWOM consensus and response type.

A two (NWOM consensus) by three (organizational response type) ANOVA was conducted to test the hypotheses. The results in Table 4.2 show a significant NWOM consensus by response type interaction effect ($F(2,235) = 3.35, p < .05$) that qualified a significant main effect of NWOM consensus on weight on NWOM ($F(1,235) = 55.60, p < .001$). Participants in high NWOM consensus conditions placed more weight on a NWOM message in forming their attitudes than participants in low NWOM consensus conditions ($M = 3.89$ versus $M = 4.84$). This finding indicates strong support for H1. Despite a significant NWOM consensus by response type interaction effect, planned contrasts partially supported H4a but disconfirmed H4b such that in the low NWOM consensus conditions a defensive response ($M = 3.45$) was more effective than no response ($M = 3.97; t(122) = 2.10, p < .05$) and an accommodative response ($M = 4.13; t(122) = 2.82, p < .01$) respectively in minimizing consumers’ weightings on the NWOM message. In the high NWOM consensus conditions an accommodative response and no response
did not differ from a defensive response in terms of their impacts on weight on NWOM (two-tailed $t(113) = 0.83, p = .41$). Figure 4.1 describes a NWOM consensus by response type interaction effect for weight on NWOM.

**Table 4.2 Source Table for Analysis of Variance on Weight on NWOM Index**

<table>
<thead>
<tr>
<th>Effect</th>
<th>F</th>
<th>Degree of Freedom</th>
<th>$p$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Consensus</td>
<td>55.60</td>
<td>1, 235</td>
<td>.000</td>
</tr>
<tr>
<td>Response</td>
<td>1.27</td>
<td>2, 235</td>
<td>.283</td>
</tr>
<tr>
<td>Consensus $\times$ Response</td>
<td>3.35</td>
<td>2, 235</td>
<td>.037</td>
</tr>
</tbody>
</table>

**Figure 4.1 Two-way Interaction Effect on Weight on WOM**
External Attribution

I hypothesized that potential consumers in the low NWOM consensus conditions would be more likely to attribute the cause of NWOM message to external or unforeseen factors, thus making more external attribution than their counterparts in the high NWOM consensus conditions (H3). Moreover, in the low NWOM consensus conditions both an accommodative and a defensive response were expected to lead to more external attribution than no response (H6a). However, in the high NWOM consensus conditions I expected both an accommodative response and no response to induce more external attribution than a defensive response (H6b). Overall, I expected a significant NWOM consensus main effect and a significant interaction between NWOM consensus and response type.

To test the hypotheses, the external attribution index was subjected to a two-way ANOVA. The two by three ANOVA in Table 4.3 revealed a significant NWOM consensus by response type interaction effect ($F(2,235) = 3.10, p < .05$) that qualified a NWOM consensus main effect ($F(1,235) = 51.70, p < .001$) and a response type main effect ($F(2,235) = 6.02, p < .01$). Participants made more external attribution in the low NWOM consensus conditions than the high NWOM consensus conditions ($M = 2.99$ versus $M = 2.16$). This finding indicates strong support for H3. Although the interaction between NWOM consensus and response type was significant, planned contrasts did not confirm both H6a and H6b. That is, in the low NWOM consensus conditions, a defensive response ($M = 3.49$) induced higher ratings on external attribution than no response ($M = 3.02; t(122) = -2.24, p < .05$) and an accommodative response ($M = 2.59; t(122) = -4.46, p < .001$) individually. In the high NWOM consensus conditions an accommodative response and no response did not differ from a defensive response with reference to their impacts on external attribution perception (two-tailed $t(113) = 0.40, p = .69$).
Figure 4.2 highlights a NWOM consensus by response type interaction effect for external attribution.

**Table 4.3. Source Table for Analysis of Variance on External Attribution Index**

<table>
<thead>
<tr>
<th>Effect</th>
<th>F</th>
<th>Degree of Freedom</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Consensus</td>
<td>44.88</td>
<td>1, 235</td>
<td>.000</td>
</tr>
<tr>
<td>Response</td>
<td>5.23</td>
<td>2, 235</td>
<td>.003</td>
</tr>
<tr>
<td>Consensus × Response</td>
<td>2.69</td>
<td>2, 235</td>
<td>.047</td>
</tr>
</tbody>
</table>

**Figure 4.2 Two-way Interaction Effect on External Attribution**
**Attitude Change**

Finally, a two by three ANOVA was used to assess the joint effects of consensus and response type on attitude change. Consistent with H2, H5a and H5b, the results in Table 4.4 illustrate a significant interaction effect between NWOM consensus and response type for attitude change \((F(2, 235) = 7.58, p < .01)\) that qualified the main effects of consensus \((F(1, 235) = 290.20, p < .001)\) and response type \((F(2, 235) = 4.62, p < .05)\). In support of H2, the results indicated that potential consumers in a high NWOM consensus condition \((M = -2.18)\) exhibited greater attitude changes in a negative direction than their counterparts in a low NWOM consensus condition \((M = 0.04)\), confirming that negativity effects exist. Additionally, planned contrasts supported *a priori* hypotheses - H5a and H5b. That is, in the low NWOM consensus conditions both accommodative \((M = 0.42)\) and defensive responses \((M = 0.22)\) were more effective than no response \((M = -0.51)\) in preventing consumers’ attitude change in a negative direction \((t(122) = -2.83, p < .01)\). However, in high NWOM consensus conditions both accommodative \((M = -2.05)\) and no response \((M = -2.03)\) were more effective than a defensive response \((M = -2.46)\) in minimizing consumers’ attitude change in a negative direction \((t(113) = 2.24, p < .05)\). Figure 4.3 is showcased a NWOM consensus by response type interaction effect for attitude change.

In addition, a regression analysis was performed to test whether weighting on NWOM and external attribution individually were significant predictors of attitude change. Consistent with the directional relationships implied in H7 and H8, consumers’ attitude change in a negative direction had a significant negative relationship with their weightings on NWOM \(\beta = -.34, p < .001\), but a significant positive relationship with their external attribution perceptions \(\beta = .35, p < .01\) \(- F(2,238) = 25.64, p < .001; R^2 = .18, \text{adjusted } R^2 = .17.\)
Table 4.4. Source Table for Analysis of Variance on Attitude Change Index

<table>
<thead>
<tr>
<th>Effect</th>
<th>F</th>
<th>Degree of Freedom</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Consensus</td>
<td>290.20</td>
<td>1, 235</td>
<td>.000</td>
</tr>
<tr>
<td>Response</td>
<td>4.62</td>
<td>2, 235</td>
<td>.011</td>
</tr>
<tr>
<td>Consensus × Response</td>
<td>7.58</td>
<td>2, 235</td>
<td>.001</td>
</tr>
</tbody>
</table>

**Figure 4.3 Two-way Interaction Effect on Attitude Change**

**Mediated Moderation Analysis**

Because my interpretive focus is on the interaction effects between NWOM consensus and organizational response type on a weight on NWOM (H7) and an external attribution (H8) which, in turn, affect attitude change (Morgan-Lopez & MacKinnon, 2006), a mediated
moderation analysis is more appropriate than a moderated mediation analysis that focuses on the estimates of the conditional indirect effect of NWOM consensus on attitude change via two mediators with certain types of organizational response (Hayes, 2009). Muller et al. (2005) describe the occurrence of mediated moderation such that the overall moderation of a treatment effect is reduced once the mediating process is controlled (p. 862).

Following Muller et al. (2005), I conducted mediated moderation analyses using hierarchical regression procedures to test H7 and H8 respectively. Organizational response as a moderating variable was dummy coded with no response used as the baseline reference condition. Since organizational response has three treatment levels (i.e., 1 = accommodative response, 2 = defensive response, and 3 = no response), I converted it to two dichotomous variables, one called AccomRes and one called DefensRes. Specifically, if organizational response = 1, then AccomRes was coded with a 1 and DefensRes with a 0. If organizational response = 2, then AccomRes was coded with a 0 and DefensRes was coded with a 1. These two dummy variables were the predictors in the regression model. Each dummy coded variable was compared to the reference level (i.e., no response), which was coded as 0 for both dummy variables. Table 4.5 presents the values of the dummy coded variables.

**Table 4.5. Values of the Dummy Coded Variables**

<table>
<thead>
<tr>
<th>Organizational Response</th>
<th>AccomRes</th>
<th>DefensRes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accommodative Response</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Defensive Response</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>No Response</td>
<td>3</td>
<td>0</td>
</tr>
</tbody>
</table>
Afterward, I built and estimated three different hierarchical linear regression models for H7 (Baron & Kenny, 1986; Muller et al., 2005):

1. \( AC = \beta_{10} + \beta_{11}CS + \beta_{12}AR + \beta_{13}DR + \beta_{14}CSxAR + \beta_{15}CSxDR + \varepsilon_1 \)
2. \( WT = \beta_{20} + \beta_{21}CS + \beta_{22}AR + \beta_{23}DR + \beta_{24}CSxAR + \beta_{25}CSxDR + \varepsilon_2 \)
3. \( AC = \beta_{30} + \beta_{31}CS + \beta_{32}AR + \beta_{33}DR + \beta_{34}CSxAR + \beta_{35}CSxDR + \beta_{36}WT + \beta_{37}WTxAR + \beta_{38}WTxDR + \varepsilon_3 \)

where \( AC = \text{attitude change}, \ AR = \text{accommodative response}, \ DR = \text{defensive response}, \ WT = \text{weight on NWOM}, \ CS = \text{NWOM consensus}, \) and \( \varepsilon = \text{error term}. \)

Model (1) describes the overall effects of independent variable (i.e., CS) and moderating variables (i.e., AR and DR) on dependent variable (i.e., AC) without the mediator (WT), and Model (2) shows the effects of CS and both AR, and DR, on the mediator WT. Finally, Model (3) illustrates the effects of CS and both AR, and DR, on AC with WT, WT x AR, and WT x DR held constant. If full mediated moderation is present then interaction of both CS x AR, and CS x DR, should significantly predict AC in Model 1, but not in Model 3. That is, AR and DR should significantly moderate the effect of CS on dependent variable, AC (i.e., \( \beta_{14} \neq 0 \) and \( \beta_{15} \neq 0 \)).

Then, it should be confirmed that the effect of CS on mediator WT depends on both AR and DR (i.e., \( \beta_{24} \neq 0 \) and \( \beta_{25} \neq 0 \)); WT has a significant main effect on dependent variable AC (i.e., \( \beta_{36} \neq 0 \)); the effect of CS on AC is mediated by WT, and the influence of WT on AC is moderated by AR and/or DR (i.e., \( \beta_{21} \neq 0, \beta_{37} \neq 0, \) and \( \beta_{38} \neq 0 \)).

To confirm that first, I centered all the continuous predictor variables (Aiken & West, 1991). Then, attitude change and weight on NWOM were separately regressed on NWOM consensus as well as each of the organizational response dummy variables at Step 1 of a hierarchical regression equation and then on interactions between NWOM consensus and each of the organizational response dummies at Step 2 along with constituent first-order effects. Overall,
the higher-order interaction terms accounted for a significant increase in $R^2$ for attitude change, $\Delta F (2, 235) = 7.58, \Delta R^2 = .02, p < .001$, and for a significant increase in $R^2$ for weighting on NWOM, $\Delta F (2, 235) = 3.35, \Delta R^2 = .02, p < .05$, indicating that NWOM consensus and company response type interaction explained a significant amount of the variation in consumer attitude change and weighting on NWOM beyond that explained by the individual variable.

In detail, results indicated significant effects of NWOM consensus and both accommodative and defensive responses on attitude change, demonstrating more negative attitude change as a result of high NWOM consensus ($\beta_{11} = -.50, p < .001$) and more positive attitude change as a result of an accommodative response ($\beta_{12} = .29, p < .001$) and a defensive response ($\beta_{13} = .22, p < .01$). In addition, there were significant interaction effects between NWOM consensus and both dummy variables (accommodative response $= \beta_{14} = -.23, p < .01$ and a defensive response $= \beta_{15} = -.26, p < .001$), indicating a more negative attitude change for those who were given either an accommodative response (vs. no response) or a defensive responses (vs. no response) in high NWOM consensus situations. Results for the same model with weight on NWOM indicated a significant NWOM consensus effect ($\beta_{21} = .35, p < .001$), a defensive response effect ($\beta_{23} = -.20, p < .05$), and an interactive effect between NWOM consensus and a defensive response ($\beta_{25} = .22, p < .05$). Overall, there was greater weight on NWOM that results from high NWOM consensus and a defensive response in high NWOM consensus situations, but less weight on NWOM as a result of a defensive response (vs. no response). Finally, attitude change was regressed on weight on NWOM, NWOM consensus, dummy variables for organizational response type, and the dummy variables x NWOM consensus interaction terms, and the dummy variables x weight on NWOM interaction terms. In this analysis, NWOM consensus ($\beta_{31} = -.49, p < .001$) and weight on NWOM ($\beta_{36} = -.13, p < .05$)
were significant predictors of attitude change. The interactive effects between NWOM consensus and the two dummy variables for response type (i.e., $\beta_{34}$ and $\beta_{35}$) respectively remained significant with the same magnitude as that in the Model 1 (please see the Table 4.6 for the regression weight per each variable).

**Table 4.6. Hierarchical Regression Models for Testing the Mediated Moderation Hypothesis**

<table>
<thead>
<tr>
<th>Predictor variables</th>
<th>Dependent Variables</th>
<th>(Model 1)</th>
<th>$\Delta R^2$</th>
<th>(Model 2)</th>
<th>$\Delta R^2$</th>
<th>(Model 3)</th>
<th>$\Delta R^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Step 1</strong></td>
<td>CS</td>
<td>-.72***</td>
<td>.54***</td>
<td>.42***</td>
<td>.18***</td>
<td>-.72***</td>
<td>.54***</td>
</tr>
<tr>
<td></td>
<td>AR</td>
<td>.15**</td>
<td>.05</td>
<td>.05</td>
<td>.15**</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>DR</td>
<td>.05</td>
<td>-.06</td>
<td>.05</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Step 2</strong></td>
<td>CS</td>
<td>-.50***</td>
<td>.02***</td>
<td>.35***</td>
<td>.02*</td>
<td>-.45***</td>
<td>.03**</td>
</tr>
<tr>
<td></td>
<td>AR</td>
<td>.29***</td>
<td>.07</td>
<td>.07</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>DR</td>
<td>.22**</td>
<td>-.20*</td>
<td>.09</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>CS x AR</td>
<td>-.23**</td>
<td>-.03</td>
<td>-.26***</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>CS x DR</td>
<td>-.26***</td>
<td>.22*</td>
<td>-.27**</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>WT</td>
<td>-</td>
<td>-</td>
<td>-.08*</td>
<td>.26</td>
<td></td>
<td>.13</td>
</tr>
<tr>
<td></td>
<td>WT x AR</td>
<td>-</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>WT x DR</td>
<td>-</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Note.* Values are standardized beta coefficients; $\Delta R^2 =$ Change in Adjusted $R^2$  
*** = $p < .001$; ** = $p < .01$; * = $p < .05$.

Additionally, none of the moderator x mediator interaction terms (i.e., $\beta_{37}$ and $\beta_{38}$) were significant. Thus, the mediated moderation hypothesis regarding weight on NWOM (H7) was not supported. The same procedures were conducted to test another mediated moderation hypothesis with respect to external attribution (H8):

(1) $AC = \beta_{10} + \beta_{11}CS + \beta_{12}AR + \beta_{13}DR + \beta_{14}CSxAR + \beta_{15}CSxDR + \epsilon_1$

(2) $EA = \beta_{20} + \beta_{21}CS + \beta_{22}AR + \beta_{23}DR + \beta_{24}CSxAR + \beta_{25}CSxDR + \epsilon_2$

(3) $AC = \beta_{30} + \beta_{31}CS + \beta_{32}AR + \beta_{33}DR + \beta_{34}CSxAR + \beta_{35}CSxDR + \beta_{36}EA + \beta_{37}EAxAR + \beta_{38}EAxDR + \epsilon_3$
where AC = attitude change, AR = accommodative response, DR = defensive response, EA = external attribution, CS = NWOM consensus, and \( \varepsilon \) = error term.

The results in Table 4.7 show that it also was not supported by the study data.

**Table 4.7. Hierarchical Regression Models for Testing the Mediated Moderation Hypothesis 8**

<table>
<thead>
<tr>
<th>Predictor variables</th>
<th>AC (Model 1)</th>
<th>( \Delta R^2 )</th>
<th>EA (Model 2)</th>
<th>( \Delta R^2 )</th>
<th>AC (Model 3)</th>
<th>( \Delta R^2 )</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Step 1</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CS</td>
<td>-.72***</td>
<td>.54***</td>
<td>-.42***</td>
<td>.20***</td>
<td>-.72***</td>
<td>.55***</td>
</tr>
<tr>
<td>AR</td>
<td>.15**</td>
<td>-.14*</td>
<td>.15**</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DR</td>
<td>.05</td>
<td>.10</td>
<td>.05</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Step 2</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CS</td>
<td>-.50***</td>
<td>.02***</td>
<td>-.39***</td>
<td>.02*</td>
<td>-.49***</td>
<td>.03***</td>
</tr>
<tr>
<td>AR</td>
<td>.29***</td>
<td>-.20*</td>
<td>.14</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DR</td>
<td>.22**</td>
<td>.20*</td>
<td>.02</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CS x AR</td>
<td>-.23**</td>
<td>.11</td>
<td>-.21**</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CS x DR</td>
<td>-.26***</td>
<td>-.15</td>
<td>-.21*</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EA</td>
<td>-</td>
<td>-</td>
<td>.02</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EA x AR</td>
<td>-</td>
<td>-</td>
<td>.16</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EA x DR</td>
<td>-</td>
<td>-</td>
<td>.18</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Note. Values are standardized beta coefficients; \( \Delta R^2 \) = Change in Adjusted R²
*** = \( p < .001 \); ** = \( p < .01 \); * = \( p < .05 \).
CHAPTER 5

DISCUSSION AND IMPLICATIONS

Discussion

I set out to examine how the consensus between an online complaint and consumer reviews as a form of online NWOM communication influences potential consumers’ processing of NWOM communication and their subsequent attitude change in an online restaurant review forum. At the same time, I explored the appropriate organizational response strategies to the complaint in an effort to minimize negative consequences such as a bad impression about the company inflicted by online NWOM communication.

The findings from this experiment suggest that consensus on online NWOM communication plays a pivotal role in affecting the weights and attributions of a complaint that potential consumers bring to their evaluations about the target company. When potential consumers find a complaint about the company to be agreed (vs. disagreed) upon by subsequent consumer reviews, they tend to place more weight on the complaint and attribute the cause of the complaint to the company more, consequently showing more attitude change toward the company in a negative direction. More importantly, when accounting for number of reviews, the results show that consumers exhibit more attitude change when they experience negative rather than positive reviews following the complaint, reinforcing the negativity effect in the context of WOM communication. Consistent with previous research (Herr et al., 1999; Laczniak et al., 2001; Lee & Song, 2010; Park & Lee, 2009), these findings confirm that NWOM (vs. PWOM) is perceived to be more diagnostic, useful, and persuasive, thus having stronger power to influence observers’ evaluation about the targeted company. Therefore, the online NWOM communication
consensus significantly determines the potential consumers’ processing of, and reaction to, the online complaint. This finding gives a good justification that the company should take actions to handle NWOM communication online, and it simultaneously generates additional inquiry of how to handle it.

Correspondingly, the results further indicate that the effects of NWOM communication consensus on outcome variables (e.g., weight on NWOM, external attribution, and attitude change) are contingent on the company’s response strategies (i.e., no response, an accommodative response, and a defensive response). A defensive response turns out to be a more effective strategy than an accommodative response or no response in terms of reducing the weights potential consumers place on the complaint and shifting its blame away from the company when the complaint is not quite supported by consumer reviews (i.e., low NWOM communication consensus conditions). This finding parallels findings presented by Conlon and Murray (1996) and Coombs (2000), which demonstrate that the defensive response can be an effective strategy to lessen the company’s blame when the responsibility for the predicament seems weak. In terms of the finding that an accommodative response is not as effective as a defensive response, it may be because it reflects an apology. Corrective actions may give an impression to the audience that the company accepts full responsibility for the problem and thus should be blamed (Lee & Song, 2010).

It is interesting that none of the response strategies had any significant influence on potential consumers’ weighting and attribution process about the online complaint when the complaint was highly agreed upon by the following reviews. Possible explanations for these findings may include the following: the agreed upon online complaint carries a considerable heuristic decision-relevant informational cue that (1) provides potential consumers with a great
deal of confidence that the complaint is believable and credible (Chaiken, 1987; Chiou & Cheng, 2003) and (2) signals that the complaint arises due to problems within the company rather than outside the company’s control (DeCarlo et al., 2007; Laczniak et al., 2001). Hence, an accommodative response, a defensive response, and no response, as persuasive messages might not help to discount potential consumers’ weights on the complaint and alter their attribution process, and consequently might be rejected by the consumers.

Conflict over complaints results in a feeling of uncertainty and leads potential consumers to discount the validity of the complaint (Hogarth, 1989; Meyer, 1981; West & Broniarczyk, 1998). In response, consumers undertake extensive message elaboration to scrutinize the validity of the complaint (Motivated Reasoning Theory: Kunda, 1990; Elaboration Likelihood Model: Petty & Cacioppo, 1981) and seek to process additional information such as the company’s responses to alleviate the psychological discomfort that results from the conflict (cognitive dissonance theory: Festinger, 1957). Building off of these theoretical frameworks and the results of this study, a defensive response that consists of an apology and an external explanation in this study might garner more attention from external audiences like potential consumers towards the explanation part than to the apology part. That is, potential consumers may be motivated to seek more detail and are more interested in the external explanation, than an apology, in the defensive response (Conlon & Murray, 1996). This argument is plausible given the complaint rather than all the consumer reviews is what the consumers mainly focus on and examine for their weighting and attribution process. Thus, a defensive response in this case is probably perceived as more persuasive than an accommodative response carrying only an apology as well as no response to alter the consumer’s processing of the complaint.
Giving no response to the complaint appears to be the least effective strategy to preventing the consumer’s negative attitude toward the company in the situation where there is low consensus between the complaint and the reviews. In contrast, a defensive or an accommodative response is the most effective strategy leading to even more positive consumer attitude toward the company despite no significant difference in their impact. This finding is consistent with previous investigations of consumer reactions to organizational explanations which suggest responses that take responsibility for predicaments and/or carry an external explanation are superior to messages that do not in terms of undermining negative consequences (Baron, 1988; Bies et al., 1988; Dean 2004). The company with an avoid-the-issue response is perceived unfavorably and receives a negative impression that it is irresponsible and disregards consumers’ concerns (Conlon & Murray, 1996). Moreover, unlike weighing and the attribution process, consumers attend not only to the complaint, but also to the following consumer reviews as a whole NWOM communication to form their overall evaluation about the company. In situations where reviews do not fully back up the prior complaint message, the consumer’s interest is possibly directed to processing the information regarding the positive competence of the company, intended redemption from the predicaments, or amelioration rather than its poor performance. Thus, it is not surprising that no response results in the lowest evaluation rating on the company than either a defensive or an accommodative response.

However, a defensive response is shown to be the least effective strategy to warding off consumers’ negative evaluation about the company in situations where there is high consensus between the complaint and the additional consumer reviews. An accommodative response or no response is a better strategy than a defensive response to attenuate a negative impression about the company that results from NWOM communication. This finding corresponds to previous
research emphasizing a possibility that an external causal explanation can be recognized as “excuse-making” generating an unfavorable impression about the company (Mattila, 2006; Tax et al., 1998). The results reveal that this phenomenon prevails when a high level of consensus on NWOM communication exists. High consensus transmits a signal that the company is responsible for the problem. With this belief, both the complainer and audiences are likely to expect the problem to be in the company’s control and to look for the corrective action or a sincere apology from the company. Hence, an accommodative response, despite its minimal impact on consumers’ evaluation of the company, is valued (Coombs, 1998, Lee & Song, 2010). The defensive response that attempts to minimize the blame is poorly received (Conlon & Murray, 1996; Sutton & Callahan, 1987) and may provoke consumers’ resentment and disappointment about the company; thus, its effect is less than even no response.

**Implications**

**Theoretical Implications**

The findings of this study have significant theoretical implications. First, the current research contributes to a growing body of literature regarding eWOM communication by introducing the following points. This study is distinct from prior research mainly paying attention to consumer motivations for online opinion seeking or giving (e.g., Goldsmith & Horowitz, 2006; Hennig-Thurau et al., 2004) and eWOM effects on sales or revenues (e.g., Chevalier & Mayzlin, 2006; Liu, 2006; Zhu & Zhang, 2010) in that it focused on consumers’ processing of eWOM communication rather than its proximate antecedents or outcomes. Additionally, this study utilizes the complaint handling literature dealing with offline settings (e.g., Conlon & Murray, 1996; Kim et al., 2004; 2006) for testing the appropriateness and effectiveness of suggested response strategies in an eWOM communication context, thus
bridging the literature on consumer complaint management and on WOM communication. It is also important to note that this study uniquely focuses its lens on the reactions of potential consumers as observers rather than those of the complainers to the company’s response. Hence, this study corresponds to a call for research to understand the power of eWOM in virtual communities from observer-oriented perspective and how the company responds to it (Lee & Song, 2010; Park & Lee, 2009; Zhang, Craciun, & Shin, 2010).

Second, the findings of this study suggest a new research venue for online WOM communication. The unique feature of eWOM communication such as measurability allows consumers to numerically calculate not only the overall rating of the targeted company, but also the number of negative and positive reviews. This offers important information – review consensus – that can be used in evaluation of a company. This study utilizes the concept “consensus” between a complainer and subsequent repliers and found that it has significant impact on observers’ processing of eWOM communication. Hence, it provides insights to support review consensus as a new boundary condition variable in eWOM communication research particularly when investigating the behavior of eWOM users.

Finally, this study attempts to provide a theory-driven research framework of consumer processing of eWOM communication by incorporating impression formation theory, attribution theory, and information processing theory. The present study proposed and found the negativity effect in the context of eWOM communication, supporting the impression formation theory that negative information gains more attention and weight than positive information in the formation of judgments (Fiske, 1980; Skowronsiki & Carlston, 1989). In addition, this study applies Kelly’s (1972) Covariation Model of Attribution to the context of eWOM communication and looks to the “consensus” concept as one of three main dimensions of information from which to make a
causal attribution decision about a complaint. The findings suggest that this attribution theory is applicable to the contemporary WOM communication research, thus opening a new avenue for attribution research in the WOM communication domain. With regard to information processing theory (Chaiken, 1980), this study indicates that review consensus serves as a peripheral or heuristic cue in attitude formation and change; consumers in high and low review consensus conditions process the company’s response as a subsequent message differently in terms of their elaboration of, and focus within, the message, thus changing or resisting to change their initial attitudes about the company. In sum, this study establishes a comprehensive model where three theories are well mixed to explain the potential consumers’ processing of eWOM communication and provides evidence of their usefulness for applications in the context of online WOM referrals.

**Practical Implications**

The findings of this study have significant managerial implications for public relations (PR) professionals responsible for managing the company reputation online. The proliferation of the Internet has allowed for easy access to and dissemination of the consumer review about the company and its offerings (Zhang *et al.*, 2010). Since this widely dispersed information can significantly influence numerous consumers to evaluate the company before purchase, to tolerate the accumulation of negative words without an appropriate intervention may possibly harm the company’s reputation. Many companies are perhaps uncertain of necessity to monitor and handle the negative consumer reviews while seeking justification for expending their resources to do it. The present data can be of help to answer clearly to the questions of (1) whether the company needs to respond to any complaint online, and, if so, (2) how to respond to it.
By showing the effectiveness of the company response strategies conditional to the level of review consensus, this study suggests that no universal response strategy works best in any case. PR practitioners should be first aware that the presence and absence of review consensus might draw different attentions from potential consumers to the company response.

**Table 5.1 Summary of the Response Strategy Effectiveness**

<table>
<thead>
<tr>
<th>Conditions</th>
<th>Weight on NWOM</th>
<th>External Attribution</th>
<th>Attitude Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>High NWOM Consensus</td>
<td>Defensive Response</td>
<td>Defensive Response</td>
<td>No Response</td>
</tr>
<tr>
<td></td>
<td>Accommodative Response</td>
<td>No Response</td>
<td>Defensive Response</td>
</tr>
<tr>
<td>Low NWOM Consensus</td>
<td>No Response</td>
<td>No Response</td>
<td>Accommodative Response</td>
</tr>
<tr>
<td></td>
<td>Accommodative Response</td>
<td>Accommodative Response</td>
<td>No Response</td>
</tr>
</tbody>
</table>

Data from the current study propound appropriate response strategies in high vs. low NWOM consensus situations. Table 5.1 illustrated a summary table that prioritizes the response strategies according to their effectiveness.

In a case where the negative impression is already dominant, PR managers should grasp that their company is at fault for the problem described in the complaint. As a result, either an accommodative response or no response is advisable as equally effective to impede potential consumers’ negative attitude change toward the company. Although none of the response strategies have significant effects on prospective consumers’ weight on NWOM and their external attribution judgment, PR managers should not select a defensive response. As discussed,
the consumers encountering high (vs. low) review consensus may be more attended to the company’s acceptance of responsibility and corrective actions (vs. more detail to judge the validity of the complaint). In this regard, PR managers should understand the backfire effect of a defensive response strategy as found in this study and carefully implement it according to the situation. Although a defensive response contains an apology for predicaments, consumers may disparage its sincerity and accelerate drastically negative attitude change towards the company under dominant disposition of negative consumer reviews. While the company’s explanations in a defensive response are intended to invalidate a complaint, rebutting a highly agreed complaint can be viewed by observers as blame shifting and, thus perceived as an inappropriate and/or inadequate response. Hence, the consumers may experience a double deviation situation where potential consumers doubly face with unfavorable impression from negative articulations and the failed response from the company, producing even greater negative attitude change.

In contrast, when a complaint does not gain supports from its replies, the PR managers should consider the defensive response strategy foremost. Nature of the defensive response represented in this study includes (1) an apology and (2) an external account validating what are overstated and misled in the complaint. A complaint less agreed or already disagreed by the following replies inherently carries a message that it is not convincing and needs to be validated. Hence, the company’s explanation that appropriately clarifies the issues in the complaint can be perceived as persuasive to the potential consumers; the company’s apology paired with the explanation can signal professionally expressing concern for its consumers rather than accepting the full blame for the problem. Accordingly, this defensive response can be effective in discounting the validity of the complaint, reducing a consumer’s perceived blame, and thus defending its reputation. However, the defensive response should not be interchangeable with a
denial. Put differently, neither do I recommend that companies fully dissociate from a problem, nor do I advise them to blame the complainer when they are responsible for a problem. Instead, the company should share the responsibility, if any, and offer a plausible external explanation that reframes negative events into a more positive light by reducing the severity of a predicament.

An accommodative response is also suggested as effective as a defensive response in hindering negative impression and leading toward a positive evaluation (attitude change in positive direction) of the company in a low consensus situation. Assuming full responsibility by communicating hope for a better future can convey to potential consumers a message that the company seriously cares about consumers and will address the problem. However, the company should also be cautious when using this strategy. As indicated in the findings, taking full blame for the problem confirms that the company is undoubtedly responsible for the problem in the eye of the consumers. Thus, it neither helps to reduce the weight the consumers place on the complaint about the company nor does it enhance their external attribution judgment. Additionally, accepting blame for the problem publicly can bring about a bandwagon effect that facilitates any type of complaint on the Internet and thus results in meaningless consumption of time and costs for both the consumers and the company.
CHAPTER 6

LIMITATIONS AND FUTURE RESEARCH

There are, of course, limits to the present research that should be addressed by future research. First, the current approach to operationalizing the concept “consensus” limits the scope of this research. The structure of online WOM communication consists of a complaint, subsequent replies, and a company’s response, if any. While the majority of consumer review Web sites allow for this type of communication, transmission of independent messages with no reply is still the most common type of communication format. Therefore, it might be suitable to apply the present research model to interactive communication channels such as a discussion forum or social networking media where interdependent message exchange frequently occurs; the findings of this study and their implications should be understood carefully by appropriate audiences. Future research should strive for testing this operationalization of consensus to different media channels so as to identify the channel effect on consumer processing of eWOM communication.

Second, this study employs the concept of consensus only among three dimensions of Kelly’s cube model of causal inferences (the other two dimensions are distinctiveness and consistency). Although the results show that consensus influences the attribution process and attitude change, identifying three important information dimensions simultaneously may help to explain the entire consumer attribution process. To this end, future research should diversify the NWOM communication dialogue by configuring the three dimensions of attribution information in high and low level. This is possible and realistic research in that current consumer review Web sites keep track of all the reviews made by one user. Additionally, locus of control (especially
external locus of control) was the only interest of this study. Given that the subjects of this study are potential consumers who are concerned about the quality of service in their future visits, their perceptions of whether the problem is un/stable and un/controllable by the company may also determine their evaluations about the company. Thus, future research should also examine the other two causal dimensions – stability and controllability so as to provide comprehensive attribution information to predict consumer attitude towards the company.

Third, this study is limited by the study sample as well as its single study context, both of which limit the conclusions drawn from it. Faculty and staff members as a homogeneous sample do not represent population of this online WOM communication study. The proportion of young professionals and students in the study sample is relatively low. As technology savvy consumers, their involvement and mechanism of processing WOM communication with the company response may be different, although no specific data support it thus far. Thus, future research should add them to study sample and identify whether the findings hold true. Previous research suggests that the eWOM effects are different contingent on search vs. experiential goods (Park & Lee, 2009). Although I purposefully chose the restaurant context to represent a hospitality service with which consumers frequently share their experiences and words, the results may not be generalizable to other contexts, especially non-hospitality product domains.

Forth, I created a Web site as an experimental stimulus, and it was designed to look similar to an existing restaurant review Web site. However, an online survey method was not attempted, for the identification of the email addresses of the sampling frame was not permitted. Consequently, the Web site was depicted in a printed survey. Although the interests of this study are not the impact of consumer-Web site interaction, respondents may have found the negative communication dialogue artificial.
Fifth, the current study mainly considered and focused on the measurability as one of many eWOM characteristics (i.e., positive and negative reviews countable). It presented an overall review rating mean score and a histogram of star ratings as qualitative comments, which accompany the information in the form of a consensus of consumer reviews. Future research should reflect other eWOM characteristics such that consumer reviews can be archived and represented as a time series. It can introduce a review trend chart that displays sequence of the company’s performance and reputation and examine how this information interacts with consensus information to affect consumers’ attitude formations and changes (see Benedictus & Andrews, 2006). Hence, future research should test the proposed research model according to whether reviews follow a declining trend over time, reviews follow a rising trend over time, or reviews exhibit no time trend. Having mentioned potential influence of reputation sequences, theoretical underpinnings should base on the recency effect (Anderson, 1981): consumers are more attended to the most recent shifts in company performance and reputation, and they place more weight on the information in recent period.

Finally, I excluded brand commitment from the proposed model due to the exploratory nature of this study and with hope that this study benefits non-brand local companies. However, brand commitment has been recognized as an influential factor in consumer processing of negative information and subsequent attitude change. Previous research suggests that an individual with a strong attitude toward a target resists attitude change in response to counter-attitudinal information (e.g., Eagly & Chaiken, 1995, Petty & Cacioppo, 1986). Ahulawalia et al. (2000) and Ahulawalia (2002) examined the moderating role of brand commitment in influencing customer response to negative information about a brand. They found that consumers who are committed to a brand counterargue the negative information about the brand, whereas
low-commitment consumers exhibit a greater amount of attitude change in response to negative as compared with positive information (i.e., more prevalent negativity effect). Therefore, future research should examine how potential consumers with different levels of brand commitment process NWOM communication and the company responses in their evaluation of the target brand.
References


APPENDIX A: General Restaurant Information

Consumers often seek other consumers’ opinions on products, services, or companies before they make a purchase decision. This behavior becomes pertinent in the online environment where other consumers’ assessment or experiences of products and services are easily and rapidly distributed to a huge volume of potential consumers. This study is interested in identifying how potential consumers process interpersonal online communication regarding services.

Imagine yourself in the following scenario.

You and your friends are planning a trip to Inner Harbor, MD. You want to find some good seafood restaurants to dine in. So you are now accessing a restaurant review Web site where general restaurant information and consumer reviews are available. The following is the general restaurant information that first appears on the screen when you search by cuisine and location.

Jay’s Seafood Restaurant

(410) 837-8600 | Menu
219 S President St, Baltimore, MD 21202 Get directions
Cross Streets: Near the intersection of S President St and Stiles St
Neighborhoods: Inner Harbor Baltimore, MD, Southeast Baltimore, Baltimore, MD

About: Experience the rich and varied tastes of seafood at Jay’s. Step into this classy eatery that has made a name for itself, and find out what the fuss is all about. Slurp up tasty oysters or Clams on the Half Shell, that are the precursor of things to come. Giant crab cakes made from fresh Maryland blue crabs greet never-ending crowds that flock Jay’s Seafood. What sets the restaurant apart is that the food is straight-forward, without fancy names or add-ons. Other favorites include succulent clams, oysters, shrimps and decadent fish dishes. The fare can seem pricey for first-timers but regulars don't seem to mind. We also offer office deliveries, catering and ship the blameworthy desirous cakes across the U.S. states.

Hours: Monday through Sunday 11:00am - 1:00am
Cuisine: Fish & Seafood, Seafood
APPENDIX B: Low Consensus and Accommodative Response Condition

Review Summary:

<p>|</p>
<table>
<thead>
<tr>
<th>Jay’s Seafood Restaurant</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall Review Rating</td>
</tr>
<tr>
<td>5 Stars</td>
</tr>
<tr>
<td>4 Stars</td>
</tr>
<tr>
<td>3 Stars</td>
</tr>
<tr>
<td>2 Stars</td>
</tr>
<tr>
<td>1 Stars</td>
</tr>
<tr>
<td>(3.0 / 5.0)</td>
</tr>
</tbody>
</table>

Recent Reviews

Alexis – Pittsburgh, PA

The crabs we ordered weren't bad, seasoned nicely. But they were mostly filler (less crab meat) and quite pricey compared to other places in Baltimore that have crabs just as good. I ordered a pasta dish with crabmeat in it. Seafood linguine in a basic tomato sauce. Well, it seemed extremely bland, bad sauce, and undercooked pasta. The service was friendly, but nowhere to be found when we needed her. We had to get another server to help find our waitress. The food came out really slow! I waited nearly 25 minutes longer than everyone else after they got their food, which already took awhile to begin with. I guess she forgot, or else I don't get why else it would take so long. I probably wouldn't come back and try somewhere else my next visit there.

Taylor – Arlington, VA

I must disagree with Alexis’s review. My experience with Jay’s was just great. My favorite dinner is crab cakes – so good and so large. They give so much I always have to take a doggie bag home. I have not gotten anything in there that could be described as terrible! We have waited in line a few times just to get in. But, it won’t matter if you make a reservation. I will always visit this wonderful restaurant every chance I get! I definitely give these place 5 stars. I didn't find the prices outrageous at all. With the amount of food given I think their prices were very reasonable. The service was excellent and prompt, and the waiter was right on point at all times. Their other main dishes also seem pretty good too, though I have not personally tried them.

Jaden – Ellicott City, MD

I have mixed experience. I've been coming to Jay’s for years. While not every experience was great, its overall quality is okay. Their service is usually prompt and friendly, but sometimes less attentive when crowded. So, I give them 3 stars. The amount of food for the $ was excellent. Unfortunately, the last few times I've been, I had to send something back to the kitchen. It was corrected and I'm not sure whether the problem was the wait staff or the kitchen. Nonetheless it was taken care of and the remainder of my dining experience was fine. In my recent visit, their crab cakes tasted good. But I noticed there seem to be more filler than usual. Maybe since they renovated, they have cut the quality of their food. Just was a little disappointed this time but will give them another try in my next visit to Baltimore.
Cameron – Washington, DC

I disagree with Alexis’s review to some extent. In my experience, they do not have filler – only enough to hold the large pieces of crab together. And it’s a good amount of crabmeat, so I never thought the price was either expensive or a rip-off. I give these restaurant 3 to 3.5 stars since the food I got was good, but definitely did not blow me away good (I believe I could’ve gotten the same quality food and service at a nearby restaurant for about the same price). Finally, I cannot comment on Alexis’s complaint about the service or the wait staff since we visited there on a weekday (not very crowded), and were seated immediately in a booth, and received proper service (our server seemed busy but was also very attentive). But, I think that anywhere you go would be a substantial wait on a nice day, and some delayed services could be expected and understandable.

Avery – New York, NY

This place is exactly what I want restaurant service to be like: efficient, friendly without being overbearing, knowledgeable about drinks and menu items, and unobtrusive, but always available. In our recent visit, I had an even better experience than the first time. I got the crab cakes, which were all crabmeat and OMG GOOD. We got a free side of mashed potatoes and free desserts for everyone at our table; the waiter said he didn't want my husband to eat his dessert alone. This was a nice touch, and though yes, the three of us paid full price for our meal and my husband got the RW menu, none of us expected anything extra. The fact that they did that unprompted really surprised and pleased me. This is the type of a restaurant I wish we had more of: excellent service, consistently good food, and a great atmosphere.

Owner’s Comment

Dear Customers:

Thank you for taking the time to write a review about Jay’s Seafood Restaurant. We do appreciate hearing from our customers, as their comments are vital for us to continue improving our service.

The problems that you mentioned have been brought to the attention of our management. We apologize for your unpleasant experience. We sincerely accept responsibility for the problems and promise better service and quality food next time.

Thank you again for your comments. We hope you give us another chance to serve you, if you happen to visit our restaurant in the future.

Best wishes,

Jill Zeffers, Manager
jill@mofwi.com
Jay’s Seafood Restaurant
APPENDIX C: High Consensus and Defensive Response Condition

Review Summary:

<table>
<thead>
<tr>
<th>Jay’s Seafood Restaurant</th>
<th>Overall Review Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>★★★★☆ (3.0 / 5.0)</td>
</tr>
</tbody>
</table>

Recent Reviews

Alexis – Pittsburgh, PA ★★★★★

The crabs we ordered weren't bad, seasoned nicely. But they were mostly filler (less crab meat) and quite pricey compared to other places in Baltimore that have crabs just as good. I ordered a pasta dish with crabmeat in it. Seafood linguine in a basic tomato sauce. Well, it seemed extremely bland, bad sauce, and undercooked pasta. The service was friendly, but nowhere to be found when we needed her. We had to get another server to help find our waitress. The food came out really slow! I waited nearly 25 minutes longer than everyone else after they got their food, which already took awhile to begin with. I guess she forgot, or else I don't get why else it would take so long. I probably wouldn't come back and try somewhere else my next visit there.

Taylor – Arlington, VA ★★★★★

I must disagree with Alexis’s review. My experience with Jay’s was just great. My favorite dinner is crab cakes – so good and so large. They give so much I always have to take a doggie bag home. I have not gotten anything in there that could be described as terrible! We have waited in line a few times just to get in. But, it won’t matter if you make a reservation. I will always visit this wonderful restaurant every chance I get! I definitely give these place 5 stars. I didn't find the prices outrageous at all. With the amount of food given I think their prices were very reasonable. The service was excellent and prompt, and the waiter was right on point at all times. Their other main dishes also seem pretty good too, though I have not personally tried them.

Jaden – Ellicott City, MD ★★★★★

I have mixed experience. I've been coming to Jay’s for years. While not every experience was great, its overall quality is okay. Their service is usually prompt and friendly, but sometimes less attentive when crowded. So, I give them 3 stars. The amount of food for the $ was excellent. Unfortunately, the last few times I've been, I had to send something back to the kitchen. It was corrected and I'm not sure whether the problem was the wait staff or the kitchen. Nonetheless it was taken care of and the remainder of my dining experience was fine. In my recent visit, their crab cakes tasted good. But I noticed there seem to be more filler than usual. Maybe since they renovated, they have cut the quality of their food. Just was a little disappointed this time but will give them another try in my next visit to Baltimore.
Cameron – Washington, DC ★★★★★

I agree with Alexis’s review. If this place is known for its crab cakes, there must be some mistake. Huge lumps of bread pudding. Absolutely tasteless. The crab to filler ratio is poor. So, I feel their crab cakes are quite expensive. My last visit there felt more like McDonalds people were in and out so fast, especially after having to wait 30 minutes for a table. Don't tell customers it’s a 25-minute wait when you know it’s an hour or more. No place to wait - that's okay, but why wait in the cold or rain to get bad service and food. Some people still believe food is worth the wait. But, I think you can try other places for the quality crab cakes at the same price. Given the food quality and the service here, I felt it’s over priced. We will never go back.

Avery – New York, NY ★★★★★

I couldn’t agree with Alexis more. This was one of the worst and unpleasant experiences I’ve ever had. Service was efficiently unfriendly, they provided me with my food and drink with a no frills attitude. 2 Wait staff were arguing when we walked in - should have walked out at that point. We weren't at all familiar with the area so my husband thought that we should stay. They seated us in a corner, which was acceptable at the prime time. Generous portions of food-prices moderate/high - but horrible crab cakes with mostly filler. I tried to send mine back because of all the shell in it. After having to wait so long, they told me that they were that way because they used ONLY fresh crab at their restaurant. That’s ridiculous. It's a terrible restaurant with poor food and high prices - at least for our experience.

Dear Customers:

Thank you for taking the time to write a review about Jay’s Seafood Restaurant. We apologize for your unpleasant experience.

The problems that you mentioned have been brought to the attention of our management. After discussing the problem raised with staff, I can confirm that we put very little filler in the crab cakes, which make us stand out in this market. Regarding our price, it can seem pricey for first-timers, but regulars don't seem to mind since our food portions are very large. Additionally, we are located in a popular tourist location. While we strive for the best service, we might fail at times to satisfy every customer due to the excessive number of patrons during our peak demand times. We hope that our explanation helps you to understand why we may not have met your expectations.

Thank you again for your comments. We hope you give us another chance to serve you, if you happen to visit our restaurant in the future.

Best wishes,

Jill Zeffers, Manager

jill@mofwi.com

Jay’s Seafood Restaurant
APPENDIX D: Survey Instrument

The following questions ask you to give us your evaluation of this restaurant. Your evaluation may be based on the information provided in previous page (i.e. general information of restaurant).

Q 1. Please rate the restaurant on the following scales (please circle a number):

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bad</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Good</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unfavorable</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Favorable</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dislike</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Like</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Negative impression</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Positive impression</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

In the following page, you will be seeing online review pages about this restaurant. It describes the overall review rating along with rating distribution chart. Additionally, it will provide you with (1) one recent customer complaint that is followed by (2) four customer comments and (3) restaurant response to the complaint. Please read the reviews carefully and answer the questions that follow.

Consumer Reviews

Original Complaint

Comment 1

Comment 2

Comment 3

Comment 4

Restaurant Response
Q 2. With regard to **all the consumer reviews about this restaurant**, please indicate your level of agreement/disagreement with the following statements.

<table>
<thead>
<tr>
<th>Statement</th>
<th>1 strongly disagree</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7 strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>The majority of <strong>the comments</strong> supported the original complaint about the restaurant.</td>
<td></td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7 strongly agree</td>
</tr>
<tr>
<td>The majority of <strong>the comments</strong> differed from the original complaint about the restaurant.</td>
<td></td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7 strongly agree</td>
</tr>
<tr>
<td>Overall, <strong>consumer reviews</strong> indicate a negative impression of the restaurant.</td>
<td></td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7 strongly agree</td>
</tr>
<tr>
<td>There is a great deal of agreement among all the <strong>consumer reviews</strong>, providing a bad impression of the restaurant.</td>
<td></td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7 strongly agree</td>
</tr>
</tbody>
</table>

Q 3. Was there a restaurant’s response to the negative consumer review?

[ ] Yes    [ ] No

Q 4. With regard to **the restaurant’s response to consumer reviews**, please indicate your level of agreement/disagreement with the following statements.

<table>
<thead>
<tr>
<th>Statement</th>
<th>1 strongly disagree</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7 strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>The restaurant apologized for the problem.</td>
<td></td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7 strongly agree</td>
</tr>
<tr>
<td>The restaurant admitted responsibility for the problem.</td>
<td></td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7 strongly agree</td>
</tr>
<tr>
<td>The restaurant shifted the blame to others.</td>
<td></td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7 strongly agree</td>
</tr>
<tr>
<td>The restaurant disagreed and argued with the complaining customer(s).</td>
<td></td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7 strongly agree</td>
</tr>
<tr>
<td>The restaurant persuaded the complaining customer(s) to understand and accept the situation.</td>
<td></td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7 strongly agree</td>
</tr>
</tbody>
</table>
**Q 5.** The following questions ask you to give us your evaluation of this restaurant. Your evaluation this time may be based on all the consumer reviews as well as information about this restaurant provided in page 3.

Please rate the restaurant on the following scales:

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bad</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unfavorable</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unfavorable</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dislike</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dislike</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Negative impression</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Positive impression</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Q 6.** Sometimes you give more weight to a piece of information, because you think it is important and sometimes you give less weight to it because you don’t consider it to be really important in your decision.

How much weight did you give to the original complaint when you evaluated this restaurant?

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very little Weight</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A lot of Weight</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

How important was what was being discussed in the original complaint to you when you evaluated this restaurant?

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not at all Important</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Very Important</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Q 7.** The following questions also pertain to your evaluation about the original complaint.

Please indicate your level of agreement/disagreement with the following statements.

<table>
<thead>
<tr>
<th>1 strongly disagree</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7 strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>I will refer to this complaint message in a purchase decision.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Overall, I think this complaint message is credible.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Overall, I think this complaint message is important.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>This complaint message will crucially affect my purchase decision.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
**Q 8.** The following questions pertain to your evaluation of the problem described in the original complaint. Please indicate your level of agreement/disagreement with the following statements.

<table>
<thead>
<tr>
<th>The unpleasant events were due to factors outside the restaurant’s control.</th>
<th>1 strongly disagree</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7 strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>I get the impression that unforeseen factors influenced the restaurant’s performance.</td>
<td>1 strongly disagree</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7 strongly agree</td>
</tr>
<tr>
<td>The unpleasant events were due to bad luck.</td>
<td>1 strongly disagree</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7 strongly agree</td>
</tr>
</tbody>
</table>

**Q 9.** To whom do you assign the responsibility of the problem described in the original complaint? (Choose only one)

- [ ] The restaurant
- [ ] The complainer (i.e., Alexis)

**Q 10.** How responsible is the restaurant for the problem described in the original complaint?

<table>
<thead>
<tr>
<th>1 Not at all responsible</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7 Very responsible</th>
</tr>
</thead>
</table>

**Q 11.** How responsible is the complainer (i.e., Alexis) for the problem described in the original complaint?

| 1 Not at all responsible | 2 | 3 | 4 | 5 | 6 | 7 Very responsible |
Q 12. How many times have you posted a complaint on a consumer review Web site? #

Q 13. In general, how many consumer reviews (regardless of whether they are positive or negative) do you read before making a purchase-decision?#

Q 14. To what extent do you rely on the customer reviews when making a purchase-decision?

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Not at all</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Very Much</td>
</tr>
</tbody>
</table>

Q 15. To what extent do you rely on the aggregate review rating (e.g., ★★★★☆ 3.0 out of 5.0) when making a purchase-decision?

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Not at all</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Very Much</td>
</tr>
</tbody>
</table>

Q 16. Your Age: _________________

Q 17. Your Gender: [ ] Male [ ] Female
Chung Hun Lee was born in Daejeon, Korea on October 9, 1980. He received a Bachelor of Business Administration degree in Hospitality and Tourism Management at Sejong University in February 2006. The following August he came to the Pennsylvania State University where he earned his Master of Science and Doctor of Philosophy degrees in Hotel, Restaurant and Institutional Management, in December 2007 and August 2011, respectively. His research interests lie within the areas of consumer information processing and decision-making in Web-based environments as well as strategic implementation of information technology. In addition, he is interested in online public relations and complaint management. His research has appeared in such journals as the *Tourism Management, Journal of Hospitality and Tourism Research,* and *Journal of Hospitality Marketing and Management.*

Beginning fall 2011, he will serve as an Assistant Professor of Hospitality Management in the School of Recreation, Health and Tourism at the George Mason University.