



Title	The Influence of Consumer' s Prior Attitude,Message Acceptance,and Goal Orientation on the Behavioral Impacts of Electronic word of mouth
Author(s)	愼, 姫宰
Citation	大阪大学, 2018, 博士論文
Version Type	VoR
URL	https://doi.org/10.18910/69321
rights	
Note	

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The University of Osaka

Doctoral Dissertation
博士学位論文

**The Influence of Consumer's Prior Attitude,
Message Acceptance, and Goal Orientation
on the Behavioral Impacts of Electronic word of mouth**

(e クチコミ効果に及ぼす消費者の事前態度、
メッセージの受容度、目標志向の影響)

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Acknowledgements

First and foremost, I would like to express my sincere gratitude to my advisor, Prof. Wirawan Dony Dahana, for his huge support during my Ph.D. research. He has always assisted me in my whole academic life. Over the past five years, he has motivated me to overcome countless obstacles I have been facing through my research. I learned a lot of valuable things from his enthusiasm and tremendous knowledge. He made me grow up in every way and taught how to focus on only one thing. I was able to gain invaluable experience by working with Prof. Wirawan. He is the best mentor and also the greatest researcher who I met ever.

I am also grateful to my co-supervisors, Prof. Katsumata, Prof. Kobayashi, and Prof. Matsumura. They have supported my work and helped me get results of better quality.

Last, but not the least, I would like to thank my parents, Yongseo Shin and Yeongsuk Park, and my brother, Minjae Shin, for supporting me throughout my life. Without their precious support, it would not be possible to complete this research.

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Notes

The following chapters of this thesis are based on articles published in:

Chapter 3

Heejae Shin & Wirawan Dony Dahana (2017) The Moderating Roles of Prior Attitude and Message Acceptance in Electronic Word of Mouth, International Journal of Business and Information, 12(2), 183-207.

Chapter 4

Heejae Shin & Wirawan Dony Dahana (2017) Asymmetric Persuasive Effects of Gain- and Loss-related Messages in Electronic Word of Mouth, International Journal of Business and Management, 12(12). 82-96.

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Chapter 1

Introduction

1.1 Background

The development of Internet media and mobile devices has dramatically changed the way consumer-generated sources related with certain products or services are shared. Electronic word-of-mouth (eWOM) has drawn keen attention from numerous researchers in the past decades as one of the new consumer behavior patterns through online platforms. Hennig-Thurau et al. (2004) defined eWOM as any positive or negative statement made by potential, actual, or former customers about a product or company and made available to a multitude of people and institutions via the Internet.

eWOM occurs in a text-based context via online media, whereas traditional WOM (tWOM) generally occurs in a face-to-face context. Consumers tend to engage in eWOM communication with unknown individuals, however they communicate with each other through virtual communities that provide text-based information; thus, these conversations basically are observable. Moreover, eWOM is interpersonal communication generated by consumers who are not directly involved in product sales; therefore, individuals involved in these conversations tend to share their real opinions and experiences about certain brands without any commercial attempt. Advertising messages from marketing

managers try to emphasize only the positive parts or strengths of their product with the unconcealed commercial attempt to increase sales; however, eWOM information is created only by consumers who have prior product experience and, therefore tend to contain their real opinions. Thus, when consumers engage in eWOM communication, positive feedback is likely to simultaneously coexist with negative complaints. Consequently, in the context of eWOM, the mixture of positive messages with negative messages generated by consumers that have various perspectives sometimes tends to cause confusion in other consumers. How consumers respond to the coexistence of two conflicting messages (“message valence”) is an important research subject and the influence of eWOM message valency has been highlighted as a crucial research issue. According to previous literature, the eWOM message valence (i.e., positive message vs. negative message) is an influential moderator on the eWOM effect. Furthermore, a number of previous studies investigated that the influence of eWOM is likely to be asymmetrical for different message valences. However, the analysis results of previous studies about the salience of eWOM message valence are very conflicting; thus, the asymmetrical effect between positive WOM (PWOM) and negative WOM (NWOM) has been a popular research topic. For example, Keaveney (1995) suggested that positive WOM tends to be the main source of information when people consider adopting a new product. Gershoff et al. (2003) determined that positive eWOM messages have a stronger influence than negative ones. On the contrary, other previous research confirmed that negative information tends to have a stronger influence than either neutral or positive information (Herr et al., 1991; Lee et al., 2009; Yang & Mai, 2010).

Many studies have explored the moderating role of message valence on the eWOM effect. Moreover, they have discussed that the eWOM effect tends to be moderated by the eWOM receiver's individual characteristics or situational factors. Doh and Hwang (2009) conducted an experiment to determine that involvement and prior knowledge tend to moderate the eWOM effect. Similarly, Park and Kim (2008) showed that the effect of eWOM message processing on purchase intention tends to be moderated by consumer expertise. It is necessary to enhance our understanding of the determinants and significant moderators on the eWOM effect. This thesis also determines which factors affect consumer behavior such as brand attitude and brand choice. Furthermore, we especially tried to clarify how certain individual characteristics and situational factors motivate the asymmetrical eWOM effect between positive and negative valence.

Based on the above theoretical background, this research conducted several experiments to determine the effect of eWOM message valence and the moderating effect of the receiver's individual characteristics and situational factors. To summarize, our thesis confirmed an asymmetrical effect between PWOM and NWOM; moreover, we investigated how individual or situational factors moderate the effect of eWOM message valence.

1.2 Purpose

This thesis focused on the outcomes to eWOM receivers, i.e., the power of eWOM. Additionally, the moderating roles of eWOM message valence, individual characteristics, and situational factors are also investigated. Our study tried to address the following research questions:

RQ1: How do eWOM messages influence consumer decision making?

RQ2: How do individual characteristics moderate the power of eWOM?

RQ3: How do situational factors moderate the power of eWOM?

RQ4: How does message valence influence the power of eWOM?

We developed hypotheses and conducted several experiments to solve the above research questions.

Chapter 1 briefly reviews the theoretical background on electronic word-of-mouth in the context of consumer behavior. At the same time, Chapter 1 provides research purposes and outline of this thesis.

Chapter 2 provides the overall literature review on eWOM studies and mainly discusses the key antecedents of sending behavior and the outcomes of word-of-mouth communication through online platforms.

The purpose of Chapter 3 is to examine how the effect of electronic word-of-mouth on consumer decisions can be moderated by the factors of prior attitude and message acceptance. Chapter 3 investigates different potential effects of the two factors on the persuasive impact of eWOM for two message valences: positive and negative eWOM. Through an experimental study, we test some hypotheses concerning the moderating effects in the context of consumers' brand choice decisions.

The Chapter 4 examines the aggregate effect of electronic word-of-mouth communications containing multiple messages of different types of brand attitude. Chapter 4 also focuses on the moderating role of individuals' regulatory focus and message proportion in influencing the extent to which consumers respond to gain- and loss-related messages. In Chapter 4, we develop some

hypotheses regarding the interplay between the constructs and test them through two web-based experimental studies on online product reviews. In study 1 of Chapter 4, we examine the persuasiveness of four different reviews composed of several combinations of gain- and loss-related messages. In study 2, we modify the proportion of positive and negative messages to examine how the impact of eWOM is affected by disproportionate message structure.

Finally, in Chapter 5, we provide a summary of key theoretical and managerial implications and conclude with some limitations and directions for future research.

Chapter 2

The Effect of Electronic Word of Mouth

2.1 Electronic Word-of-Mouth (eWOM)

The effectiveness of interaction between consumers through electronic word-of-mouth communication has been well recognized in consumer behavior studies. The influence on consumer decision making through eWOM communication has been extended with the advent of online platforms such as social media. Through these online platforms, consumers can share their opinions, comments, or reviews of certain brands or products on weblogs, review websites, social networking services, or e-commerce sites (Cheung & Lee, 2012). The recent literature on consumer behavior are considerably focused on word-of-mouth communications through online platforms. Here, several previous study have already determined that Internet media tend to have a significant positive influence on consumer decision making such as brand awareness and brand image (Godey et al., 2016).

There are several differences between traditional word-of-mouth and eWOM. In the context of traditional WOM, communication about products tends to be shared by small groups of individuals and, in addition, information in traditional WOM is usually exchanged in private conversations in real life. Thus, traditional WOM is likely to be disseminated in a synchronous mode; however, in the context of eWOM communications, sharing information involves multi-way

exchanges in an asynchronous mode (Hung & Li, 2007). Additionally, eWOM communication does not need to be exchanged at the same time because it is basically text-based communication through online media platforms; thus, consumers can share eWOM information and communicate about products whenever or wherever if they have a personal computer or mobile device such as a smart phone or tablet PC. Furthermore, recent consumers tend to show higher accessibility to eWOM platforms and eWOM information by using their own devices rather than traditional word-of-mouth.

Table 1. Traditional WOM versus eWOM

Traditional WOM	eWOM
One-to-one opinion sharing in real life	Opinion sharing through online media
Small amount of information	Enhanced amount of information
Low accessibility	High accessibility
Oral-based Information	Text-based information
Synchronized communication	Unsynchronized communication

2.2 Antecedents of Sending eWOM

Numerous previous studies have tried to examine who has the highest possibilities to generate eWOM messages and why they share product reviews through Internet platforms. At the same time, these prior studies also have determined what motivates consumers to engage in eWOM communication. Here, the previous literature on eWOM sharing has tried to investigate the antecedents

of eWOM senders to understand why consumers generate eWOM messages by themselves.

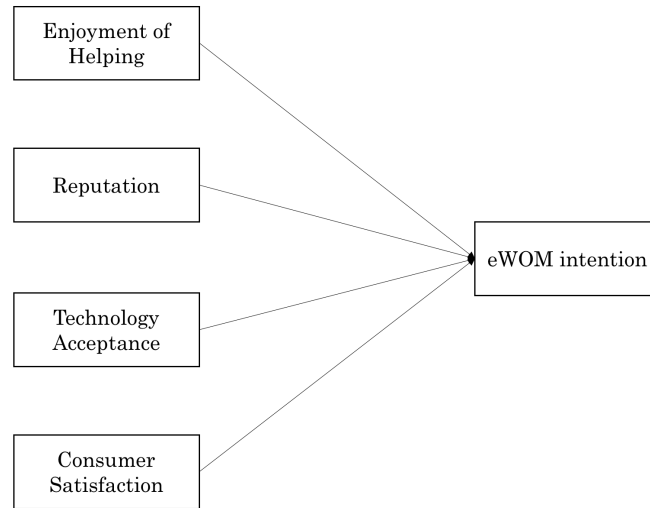


Figure 1. Antecedents of eWOM intention

Enjoyment of Helping

Several previous studies have explored the enjoyment of helping others (a desire to help other consumers) as one of the key factors to explain the eWOM communicator's intention to share their knowledge or experience toward certain brand through electronic networks such as online community sites or social networking services (Yoo et al, 2013). Customers are sometimes motivated to participate in knowledge exchange communication for helping unknown individuals by providing useful information without expecting any reward. For example, according to previous studies, consumers tend to engage in the information exchange process to feel the enjoyment of helping others (Bronner & Hoog, 2010; Cheung & Lee, 2012). In addition, Hennig-Thurau et al. (2004)

suggested that concern for other consumers is one of the primary factors leading to eWOM behavior. Consumers who share eWOM information through virtual communities can experience perceived satisfaction by helping other consumers through sharing their usage experience of certain products; thus, the eWOM communicator's perceived opportunity to help other people positively influences their eWOM intention (Cheung & Lee, 2012).

Reputation

Reputation is often investigated as an important antecedent of eWOM information sharing behavior. eWOM communicators tend to engage the information exchange process to generate self-enhancement opportunities. Here, Cheung and Lee (2012) explored how the perception of the opportunity to enhance one's reputation influences their eWOM intention. The analysis results of this study show that consumers who want to gain a high reputation in an online community are likely to have a higher tendency to generate eWOM messages. Chen et al. (2016) suggested that users of product review community websites who receive other user's contribution statistics show greater increases in the amount of monthly review postings. Therefore, consumers who want to build their own expertise and high reputation in the online community in which they are engaged are more likely to provide their knowledge about a product or brand. These prior studies showed that consumers who need a high reputation tend to send eWOM message more actively. Moreover, the opportunity to gain reputation also influences the quality of shared product information. For example, Racherla and Friske (2012) found that online eWOM senders with better reputations tend to generate high-quality reviews. In addition, the

reputation of eWOM senders had a direct influence on how eWOM receivers perceive the review's credibility (Xu, 2014).

Technology Acceptance

Technology acceptance toward eWOM platforms is also a crucial antecedent to activate eWOM communication. Technology acceptance mainly refers to perceived usefulness and perceived ease-of-use of the system (Kim et al., 2009). Technology acceptance toward Internet services plays an important role in eWOM communication because there is nobody who can participate in eWOM communication without using online platforms. Paris et al. (2010) suggested that perceived usefulness and perceived ease-of-use positively influence the user's attitude toward using social media. According to prior research, in the same vein, from the eWOM senders' point of view, the level of perception about usefulness and ease-of-use toward eWOM platforms tends to influence the eWOM sender's participation. For instance, Ayeh (2015) determined that online travelers' perceived usefulness toward consumer-generated media has a strong direct impact on media usage intention. In addition, Yang (2013) explored the moderating effect of technology acceptance factors on eWOM sharing behavior such as knowledge sharing motivations.

Consumer Satisfaction

After a positive experience such as consumer satisfaction, consumers may feel inclined to generate a positive WOM message to actively recommend a good product or service to other consumers who have not yet experienced the product or service. Sundaram et al. (1998) investigated how the expression of positive

feelings works as one motive for generating WOM. Consumer satisfaction is a crucial key antecedent of eWOM sharing. For example, Jeong and Jang (2011) examined which restaurant experiences motivate customers to generate positive eWOM and they determined that consumer satisfaction such as a superior atmosphere in restaurants tends to elicit positive eWOM.

2.3 Outcomes to eWOM Communication

In general, the “outcomes” of eWOM communication refers to the response made to the communication by the receiver. eWOM is a social phenomenon that considerably influences consumer buying behavior. Furthermore, several studies have shown that eWOM receivers perceive eWOM messages as more trustworthy and persuasive than traditional mass media, such as personal selling or TV advertising. These consumer behavior studies identified brand attitude, purchase intention, and brand choice as the most frequent outcome variables of the eWOM effect.

Purchase Intention

Many prior researchers have suggested that eWOM communication positively influences consumer purchase intention. For example, Kamtarin (2012) confirmed the significant effects of eWOM on purchase intention. In addition, Mauri and Minazzi (2013) investigated that hotel purchasing intention increases in the case of the prevalence of positive reviews and decreases in the case of negative comments. Similarly, Bhandari and Rodgers (2017) suggested that brand feedback has a simultaneous positive and negative effect on purchase intention. Furthermore, eWOM on social media also significantly influences

purchase intention (Alhidari et al., 2015). Ladhari and Michaud (2015) also clarified the influence of comments written by Facebook friends on the intention to book a hotel and the attitude toward the hotel.

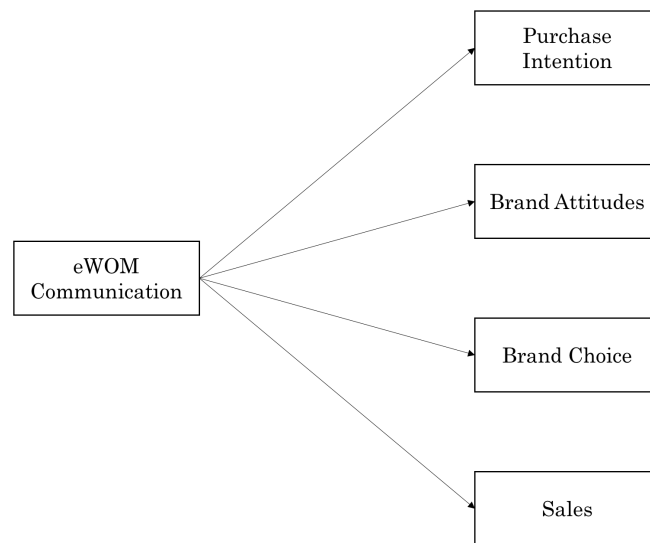


Figure 2. Outcomes of eWOM communication

Brand Attitudes

Previous studies have explored the eWOM effect on attitudes toward products or services. Gruen et al. (2006) suggested that customer know-how exchange influences customer perception of product value. These changes of consumer perceptions toward product value also bring a change of attitude toward a brand. Here, Lee et al. (2009) stated that consumer feedback significantly influences attitudes toward a brand. Thus, positive WOM and negative WOM generate opposite results on consumers' brand attitudes.

Similarly, compared with the absence of comments, the presence of positive feedback leads to a more favorable attitude toward the brand, whereas negative comments negatively influence the attitude toward the brand. In addition, Kim et al. (2016) determined that providing an eWOM recommendation changes the communicator's attitude. Interestingly, Chiou and Cheng (2003) also confirmed that negative reviews negatively influence brand attitudes; however, they emphasized it occurs only when the product has a weak brand image.

Brand Choice and Sales

Numerous studies have tried to clarify the existence of a direct relation between consumers' eWOM communication behavior and their actual brand choice. Here, Liu (2006) suggested that the enhanced volume of eWOM messages provides more opportunities for product awareness and greater awareness tends to generate increased sales. Furthermore, Duverger (2013) confirmed that reviews or comments about certain products generated by online users have a considerable influence on sales. In addition, other prior researchers determined that the eWOM of opinion leaders drives product sales due to their product experience and knowledge background (Bao & Chang, 2014). Moreover, Kim et al. (2015) found that the careful management of negative eWOM increases hotel performance.

2.4 Moderators on the eWOM Effect

Previous researchers have investigated the significant moderators on the power of eWOM. The outcomes of eWOM communication (purchase intention, brand attitudes, brand choice, sales, etc.) are likely to be moderated by several

factors. Here, for better understanding of the influences eWOM on consumer decision making, previous studies on moderators on the eWOM effect will be reviewed. In addition, a literature review of the moderators on eWOM effect will be provided: (1) individual characteristics, (2) situational factors, and (3) product characteristics.

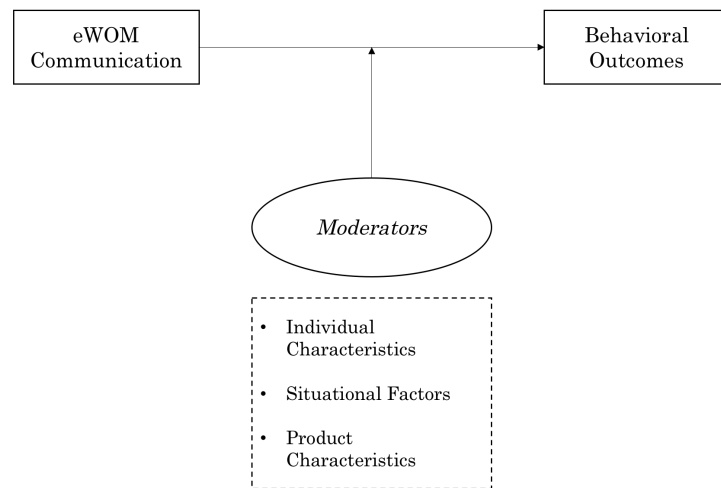


Figure 3. Moderators of eWOM effect

2.4.1 Individual Characteristics

Involvement

The eWOM literature shows that consumers' individual characteristics, such as involvement, are important moderators on the impact of eWOM content (Doh & Hwang, 2009). For instance, Lee et al. (2008) investigated that if involvement increases, the effect of negative eWOM is greater for high-quality eWOM than for low-quality eWOM. Similarly, Park and Lee (2009) also

determined that the moderating roles of receivers' involvement that for high involvement eWOM receivers, the perceived informativeness of an eWOM message has a higher effect on purchasing intention than the perceived product popularity. Furthermore, Fan and Miao (2012) suggested that involvement has the most significant effect on perceived eWOM credibility. Moreover, not only consumers' product involvement but also their social networking services (SNS) involvement is likely to have significant moderating effects on the eWOM effect. Consumers who have high SNS involvement generally spend more time and effort energy on SNS. Thus, highly involved SNS users would be more inclined to get information and ideas about brands and what people like or dislike. For example, Alhidari et al. (2015) suggested that SNS involvement influences eWOM and purchase intentions and it is an essential key moderator.

Perceived Usefulness

A receiver's perceived usefulness toward eWOM information is also a key moderator on the outcomes of eWOM communication. Thus, numerous researchers have tried to understand how the eWOM receiver's perceived usefulness moderates the power of eWOM. Here, Erkan and Evans (2016) suggested that the receiver's perception or attitude toward eWOM information is one of the key factors of eWOM that influence purchase intentions.

Credibility

eWOM credibility refers to the extent to which one perceives the recommendation as believable, true, or factual. eWOM is recommendation information from unknown individuals and generated by anonymous users on an

online platform. Thus, the receiver's perceived credibility toward the message is a crucial moderator on the eWOM effect. Here, Wathen and Burkell (2002) suggested that the receiver's information credibility is a key stage in their information processing. Moreover, the receiver's perceived eWOM credibility has a significant effect on their eWOM acceptance and purchase intention (Fan & Miao, 2012). Furthermore, the receiver's perceived source credibility can enhance the value of information in a message, thus, it positively influences the receiver's message adoption (Pornpitakpan, 2004). To sum up, perceived eWOM credibility has a significant moderating influence on the eWOM effects (Park et al., 2011).

Gender

Gender has been also investigated in several eWOM studies as it has been identified as an individual characteristic that has a moderating influence on the eWOM effect. In general, women tend to be more influenced by eWOM messages than men. For instance, Bae and Lee (2011) clarified that the effect of online consumer reviews on purchase intention is stronger for females than males. Furthermore, Kim et al. (2011) determined that consumers' motivating factors to read online reviews tend to be different by according to their gender. Women, for example, are more likely to read reviews for the purpose of convenience and quality and for risk reduction. Men's use of online reviews depended on their level of expertise.

2.4.2 Situational Factors

Message Valence

When searching eWOM messages, consumers are likely to encounter both positive and negative reviews. Positive eWOM messages focus on the strengths or benefits of products or brands and encourage other consumers to choose those products, whereas negative eWOM messages focus on the weaknesses or problems of products or brands, thus it encourages others to avoid the product (Dellarocas et al., 2007). Numerous prior studies on eWOM have focused on the impact of positive and negative WOM. The salience of valence is a key characteristic of eWOM effects. Chevalier and Mayzlin (2006) found a positive relationship between valence and product sales and the external influence propensity of online reviews. According to previous studies on message valence, the different review valences of eWOM tend to result in different outcomes of eWOM communication. In general, positive reviews tend to induce purchase, whereas negative reviews tend to reduce purchase.

However, the eWOM influence appears to be asymmetrical by eWOM message valence (Park & Lee, 2009). Some previous studies on eWOM message valence have shown that consumers perceive positive messages to be more persuasive than negative ones. For example, East et al. (2008) found the impact of positive WOM is generally greater than negative WOM on consumers' purchase probability. These previous researchers mainly emphasized that these effects are more salient for positive reviews than for negative ones.

On the other hand, other analysis results of previous studies on message valence also have shown. For example, Tsao (2014) investigated that the influence of positive eWOM on the evaluation of movies is stronger than are

negative; however, the influence of negative eWOM reviews on movie selection is stronger than that of positive eWOM. Several researchers have determined that negative eWOM has a greater influence on consumers than positive eWOM (Basuroy et al. 2003; Chevalier and Mayzlin 2006; Park & Lee, 2009). In addition, too much positive information might lead the consumer to question the reviewer's motives, which may hinder the trustworthiness and authenticity of the review (Doh & Hwang 2009; Schindler & Bickart 2012). Furthermore, Herr et al. (1991) also suggested that negative information tends to be more influential than positive information. Moreover, Sen and Lerman (2007) also found that consumers perceive negative reviews as more accurate, informative, and useful than positive reviews. Here, Kim and Gupta (2012) determined that negative emotions in the review have greater influence than positive emotions on the eWOM effect. Interestingly, this study conducted an experiment and their analysis of results showed that negative emotional expressions in a single negative review tend to decrease the review's information value and make the product evaluations less negative. However, positive emotional expressions in a single positive review do not influence product evaluation.

Information Quality and Trustworthiness

The quality and trustworthiness of eWOM messages is also a key moderator on the eWOM effect. Information quality and source credibility have a significant impact on information usefulness and information adoption (Peng et al., 2016). For example, Cheng and Ho (2015) determined that the higher level of expertise of the reviewer and the larger image count and word count positively make review receivers feel the message is more practical and useful. The

trustworthiness of review information is assumed to be an important conditional determinant of the influence of review valence on purchase intentions as only trustworthy information will be adopted and, therefore, influence consumer intentions, whereas information that lacks trustworthiness will not have any impact on consumer intentions (Wathen & Burkell, 2002). Moreover, many researchers have suggested that the interactions between review valence and review trustworthiness tend to influence consumer purchase intention. Similarly, according to other previous reviews, trustworthy reviews positively influence purchase intention in the same review valence. On the other hand, for untrustworthy reviews, a boomerang effect occurs; thus, positive reviews decrease and negative reviews increase purchase intention as a result of reactant behavior (Reimer & Benkenstein, 2016).

2.4.3 Product Characteristics

Product Type (search goods vs. experience goods)

Several product characteristics also tend to moderate the level of the eWOM effect. “Search goods” refers to products whose quality can be easily estimated based on product-related information even before purchase and “experience goods” refers to products whose quality is difficult to assess before direct experience (Nelson, 1970). According to a study on the eWOM effect related with product types, consumers were found to be more likely to choose the product recommended by others when choosing an experience good than a search good (Senecal & Nantel, 2004). Similarly, Park and Lee (2009) conducted an experiment to investigate how product categories influence the eWOM effect and confirmed that the impact of negative eWOM on the eWOM effect is greater for

experience goods than for search goods. Furthermore, Lee and Shin (2014) tried to explore how the product type moderates the influences review quality on purchase intention, this study determined there are a negative direct effect on the purchase intention for the experience good, with no corresponding effect for the search good. Moreover, Tsao et al. (2015) showed that the type of eWOM platform moderates the influence of eWOM quality on eWOM credibility and purchase intention, and this phenomenon is particularly significant in search goods.

Chapter 3

The Moderating Roles of Prior Attitude and Message Acceptance in Electronic Word of Mouth

3.1 Introduction

Consumers' participation in online activity is constantly increasing. At the same time, the development and dissemination of online environments has become great motivation for consumers to explore product information extensively on the Internet. Consumer knowledge sharing through online media, such as online discussion forums, electronic bulletin board systems, newsgroups, blogs, review sites, and social network sites, has become a popular research topic in recent years. Recently, it has been shown that many consumers actively utilize electronic word of mouth (eWOM) information delivered by anonymous people on shopping websites rather than friends' recommendations on social media to facilitate purchase decision (Erkan & Evans, 2016).

One of the issues that has received much attention is the effect of eWOM on consumer purchase decisions. eWOM is different from the traditional word of mouth, which is defined as oral and interpersonal communication concerning a brand, a product, or a service, between a receiver and a communicator whom the receiver perceives as a non-commercial agent (Arndt, 1967). Furthermore,

traditional WOM tends to rely on social interaction between the receiver and the communicator (Knapp & Daly, 2002). On the other hand, eWOM refers to a new form of word of mouth communication, with unknown individuals and through online media, including social network services or online communities. Compared to its traditional counterpart, eWOM is more diverse, more anonymous, unconstrained by space and time, and less time-consuming in research (Goldsmith & Horowitz 2006).

The fact that a multitude of consumers gather useful online product information and refer to other consumers' experiences to avoid risks of potential wrong decisions has become a common phenomenon. Consequently, marketers should pay attention to this issue, because eWOM can affect consumer loyalty (Gruen et al., 2006). Thus, for effective marketing strategies, it is critical to better understand how consumers respond to various eWOM messages spreading across various online social media platforms (Kietzmann & Cahoto, 2013). Previous studies have pointed out that this understanding is useful for predicting consumer future behavior, and therefore, the factors that potentially influence its effect should be investigated further (Hennig-Thurau et al., 2004; Park & Lee, 2009). For example, Yamamoto and Matsumura (2009) show that similarities between the sender and the receiver can affect the acceptance of eWOM messages. In another study, Godes and Mayzline (2004) try to explain how the amounts of word of mouth can drive sales. Further, Ladhari and Michaud (2015) suggested that eWOM generated on Facebook can influence consumer's intention of booking a hotel, trust in the hotel, attitude toward the hotel, and perception toward websites. Another study by Bataineh (2015) indicated that the effect of

eWOM on purchase intention is mediated by corporate image perceived by individuals.

This study examines how consumers' responses to eWOM would be influenced by prior attitude and message acceptance in a framework that builds on the Theory of Reasoned Action (Fishbein, 1967). The theory has been widely recognized as a useful model for predicting the intention to perform a certain behavior based on an individual's attitudinal and normative beliefs (Ajzen & Fishbein, 1977; 1980). We adopted TRA to explain how consumers decide to follow eWOM messages by investigating the interactions among message valence, prior attitude, and message acceptance. We aim to contribute to the literature by providing an understanding of behavioral patterns in the online environment that has not been addressed by previous studies.

Here, prior attitude is defined as the cognitive beliefs about the consequences of choosing a product or a brand, formed by consumers before they receive eWOM messages. Consumers might have gathered some information related to a product they consider buying prior to their encounter with eWOM. Depending on the content of the information, they may find the product favorable or unfavorable. The moderating effect is thought to stem from the congruence between the message valence and the prior attitude. In addition, this research explores the role of the consumer's message acceptance in influencing the eWOM's effect. It refers to the degree of consumers' intention to accept other people's messages or opinions (here, their motivation to comply with online advice), which is expected to moderate their responses to the messages. The analysis results show that the moderating effects of prior attitudes and message acceptance are asymmetric between positive and negative eWOM. We find that

the effect of eWOM on brand choice is significantly affected by prior attitudes only when subjects receive positive messages. On the contrary, the effect of eWOM appears to be influenced by message acceptance only when subjects receive negative messages.

For the remainder of this paper, we first review the literature on both the theory of reasoned action and the factors under consideration (eWOM message valence; prior attitude; message acceptance). Subsequently, we provide our conceptual framework based on some findings from previous studies, and then state some hypotheses. We further describe our experimental design used to manipulate the factors and the subject decision task. Finally, we discuss the results and several managerial implications for marketing strategies.

3.2 Theoretical Basis

Our investigation is based on TRA which is proposed by Fishbein (1967) and widely used to explain an individual decision to conduct a certain behavior, assuming attitudinal and normative beliefs as its primary determinants. Prior to the theory, attitude had been used as the only explanatory variable of behavior, mediated by behavioral intention. However, there have been numerous evidences of a large discrepancy between attitude and behavior (Lapierre, 1934; Mittal, 1988). To address this gap and to predict consumers' future behavior more accurately, the theory suggests one more determinant of behavioral intention called subjective norms (a social factor). It is premised that an individual's behavioral intention and his/her actual behavior are likely to be influenced by one's own judgment and by the social pressure toward the behavior. That is, TRA looks at both the person's attitudes towards that behavior, as well as the

subjective norms of influential people or groups that could affect behavioral outcomes (Fishbein & Ajzen, 1975).

According to the theory, both attitude and subjective norm are constituted by salient beliefs. Attitude is determined by salient behavioral beliefs that consist of importance and evaluation of the behavior outcome. On the other hand, subjective norm is determined by normative beliefs that consist of referent beliefs and the motivation to comply with others. Ultimately, behavioral intention is formed on the basis of a weighted average of attitude and subjective norm.

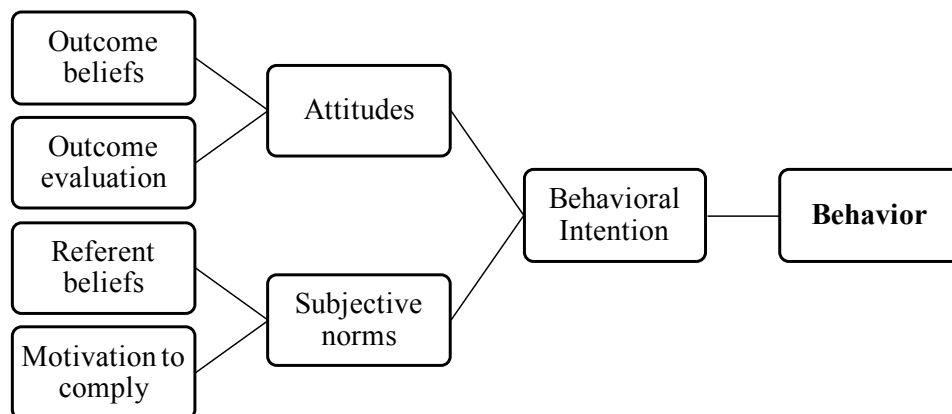


Figure 4. The Theory of Reasoned Action

Drawing from TRA, we develop a conceptual framework in which the relations among factors are hypothesized (Figure 4). In this framework, the eWOM message is considered as one of the referent beliefs sourced from an

online referral group (unknown individuals who communicate information concerning a product or brand through a certain online community site). Accordingly, the eWOM message, the attitude, and the motivation to comply with others, are expected to determine behavioral intention and, ultimately, consumer behavior. As stated by the theory, the extent to which an eWOM message influences behavioral intention will depend on its interaction with consumers' attitudes and motivations to comply with others. Thus, it can be expected that the net effect of eWOM is not only affected by its content (positive or negative), but is also subjected to the moderating effects of attitude and motivation to comply with others.

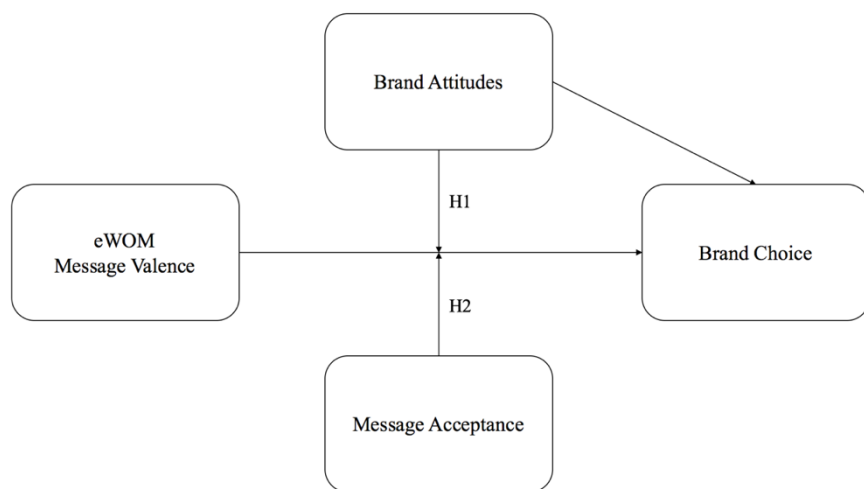


Figure 5. The conceptual framework of Chapter 3

As depicted in Figure 5, the determinants of behavior include three factors: eWOM message valence, prior attitude, and message acceptance. Note

that we consider brand choice behavior as a dependent variable. The use of actual behavior instead of behavioral intention is intended to rule out the potential gap between intention and behavior (Sheeran, 2002). Prior attitude refers to cognitive beliefs about a product, and is equivalent to attitudinal beliefs in TRA. It is formed through usage experience or searching activities that take place prior to the encounter with eWOM. Depending on the type of information gathered, prior attitude can be either favorable (positive) or unfavorable (negative). Consequently, the direction of the eWOM can be congruent or incongruent with that of the prior attitude (see Table 2). It is arguable that the magnitude of the effect of a message on consumer behavior will depend on this congruency (Chang, 2005; Updegraff et al., 2007; White et al., 2003). Finally, the message acceptance is a surrogate of some aspects of motivation to comply with others. It measures the extent to which consumers rely on others' opinions. Intuitively, it can be expected that the effect of eWOM messages will be greater for consumers who are highly dependent on other's opinions than for those who are more confident about their own opinions (Gupta & Harris, 2010; Xu et al., 2010). In the next section, we state the hypotheses concerning these influencing factors along with their interaction.

Table 2. Congruency between Message Valence and Prior Attitude

Prior attitude Message valence	Positive beliefs	Negative beliefs
Positive message	Congruence	Incongruence
Negative message	Incongruence	Congruence

3.3 Hypotheses

eWOM may contain either positive messages from satisfied customers or negative messages from unsatisfied customers. In most cases, it is very difficult for firms to control such messages, and thereby, consumers can simultaneously encounter both favorable and unfavorable content about a product. The fact that the effect of the WOM varies by its valence has been well-documented in the literature (Arndt, 1967; Herr et al., 1991; Richins, 1983). In general, positive and negative information leads to opposite consequences (East, Hammond, & Lomax, 2008). In particular, a positive message prompts the individual to perform the recommended action, and a negative message works conversely. According to Arndt (1967), positive WOM can encourage consumers to buy a product, whereas negative WOM tends to make them refrain from making a purchase.

Furthermore, a study by East et al. (2008) reveals that positive WOM tends to increase the choice probability of a brand, whereas negative WOM has the opposite effect. In fact, Cheung et al. (2008) show that purchase probability increases when consumers receive positive eWOM messages, and vice versa.

Prior to the encounter with eWOM messages, consumers may have some knowledge about the product. Such knowledge can be obtained through usage experience or external search. The literature on consumer behavior conceptualizes prior knowledge as a multidimensional construct encompassing familiarity, expertise, and experience (Alba & Hutchinson, 1987; Rao & Monroe, 1988), or objective-subjective knowledge (Brucks, 1985). Johnson & Russo (1984) point out that consumers who have a higher level of knowledge are better able to focus on the product information under consideration. Furthermore, Brown and

Reingen (1987) suggest that prior knowledge is one of the influential factors in consumers' product selection.

As suggested by previous studies, the level of prior knowledge can affect the way consumers gather and evaluate product information (Duhan et al., 1997; Park & Lessig, 1981). Therefore, consumers' knowledge about a product can lead to the formation of attitudes. If consumers receive favorable (unfavorable) information about a product, then we can expect that they will have positive (negative) attitudes. The responses can be actualized in terms of verbal or nonverbal cognitive, affective, or conative attitudes (Ajzen & Fishben, 1980).

Consistent with TRA, under certain conditions, the direction of prior attitude toward a product governs the decision to adopt it. If consumers have positive beliefs about the product, then the likelihood of choosing it will be higher, and vice versa (Ajzen & Fishben, 1977; Homer & Kahle, 1988). In an empirical study, Smith and Swinyard (1983) show that attitudes formed through a product trial can accurately predict purchases. However, this might not be the case when attitudes arise from advertising exposure. Another study by Laroche et al. (1996) confirms that positive attitude toward a brand has positive correlation with the intention to purchase that brand.

3.3.1. Message Valence and Prior Attitudes

Research studies have indicated the influence of consumer's own cognitions and attitudes toward product information produced by other parties. For example, a study in social psychology showed that people were more sensitive to messages promoting regular dental flossing when their motivational orientation matched the content (Updegraff et al., 2007). In another study,

investigating the credibility of messages informing the presence of risk, White et al. (2003) found that prior attitudes significantly moderated the effect of message valence on trust. In addition, Chang (2005) suggested that when positive emotions were evoked by positive ad framing, people would respond more positively to the self-congruent ad.

The theory of reasoned action asserts that behavioral intention results from the weighted combination of attitude toward acts and subjective norms. In this study, we examine potential interactions between consumer's own attitudes and the subjective information about products from other unknown consumers (eWOM). Here, the message may contain positive or negative information about certain brand or product. Similarly, individual own attitude measured before receiving eWOM information, can be positive (favorable) or negative (unfavorable). The congruency between prior attitudes and eWOM message valence is expected to be a significant variable that determines the probability of brand choice. A positive eWOM message would be more effective if it is received by consumers who have positive attitude, and vice versa.

However, the influences are likely to be asymmetrical for different message valences, because positive and negative messages appear to have different consequences. It should be noted that the results from previous studies about message valence are conflicting. Some researchers argue that positive WOM has greater influence than negative WOM. For example, Keaveney (1995) finds that positive WOM tends to be the main source of information when people consider adopting a new product. Another study points out that positive messages are likely to be more frequent than negative ones, and thereby the impact of the former is generally greater than that of the latter (East et al.,

2008). In addition, Fang and Yu (2017) show that positive eWOM have a higher effect on consumer purchase intention than negative eWOM. On the other hand, Skowronski and Carlston (1989) show that consumers attach more weight to negative rather than positive information when forming overall evaluations. This argument has considerable theoretical and empirical support in the literature (Arndt, 1967; Homer & Yoon, 1992; Park & Lee, 2009; Richins, 1983). In addition, based on the information richness theory, Liao et al. (2015) demonstrate that negative eWOM has a stronger effect in generating eWOM information richness than positive eWOM. Given the conflict, therefore, it is important to examine the moderating effect of each message valence, as follows:

H1-1: When receiving positive eWOM messages about a product, subjects who have a positive prior attitude about the product are more likely to select it than those with a negative prior attitude.

H1-2: When receiving negative eWOM messages about a product, subjects who have a negative prior attitude about the product are more likely to select another product than those with a positive prior attitude.

3.3.2 Message Valence and Message Acceptance

The influence of any information received from other people on the behavior of recipients depends on how they are motivated to accept it. Iyengar et al. (2015) classify this type of social contagion as informational and normative influence. Informational influence occurs when people change their beliefs about the true state of an object after receiving information about it from other people.

Normative influence occurs when people are motivated to get a reward or avoid punishment due to the conformity of their act to the norm, or when they have a desire to be recognized as having accomplished their role. In relation to TRA, the latter is associated with the motivation to comply with others. In the context of the present research, we use the term message acceptance, which refers to the intention to behave in a determined way, according to the comments, recommendations, or suggestions of other community members (Luis et al., 2011). This is similar to the concept of social conformity in the context of eWOM used by Fang and Yu (2017) but puts more emphasize on individual intention to accept messages.

Previous studies have shown that the message acceptance determines the extent to which people process the information and behave in accordance with its content. Xu et al. (2010) point out that the effectiveness of an advanced traveler information system in improving the traffic environment largely depends on travelers' intentions to accept the information. Iyengar et al. (2015) find that acceptance of a peer's advice can increase the adoption and repeat usage of new drugs by physicians. Gupta and Harris (2010) show that consumers who are willing to accept eWOM recommendations are likely to have higher motivations to process information and tend to choose optimal products. Similarly, Tsao et al. (2015) find that conformity, which is defined as tendencies in thinking and behavior aimed at gaining group approval and meeting group expectations, can affect consumer's purchase intention. Therefore, we predict that the effect of eWOM will be moderated by the intention to accept its message. Analog to the previous hypotheses, we test two others, for positive and negative messages respectively, to account for the asymmetric effect of different message valences.

H2-1: When receiving positive eWOM messages about a product, subjects who have a high intention to accept them are more likely to select the product than those with low intention.

H2-2: When receiving negative eWOM messages about a product, subjects who have a low intention to accept them are more likely to select the product than those with high intention.

3.4 Methodology

3.4.1 Experimental Sample

We conducted an experiment to examine the interaction among message valence, prior attitude, and message acceptance. 100 undergraduate and graduate students participated in this experiment. Each subject was rewarded a gift card worth 1,000 yen, and an experimental or dummy product to be chosen by her or his self. For the products, we chose two brands from the facial cleansing product category. Both products are of different sizes and prices. However, as it will be described later, a control was imposed to rule out any potential bias that might arise from these differences. The dummy is the one that has been marketed for a long time, and it is the top share brand in this category. Thus, we expect that all of the subjects are able to recognize its brand name. On the other hand, the experimental object is a relatively new product. Some of the subjects may have never heard about it. Therefore, eWOM is expected to be prominently influential in its adoption.

We also anticipate that a portion of the subjects may have used this product, but we conjecture that eWOM still has effects on the decision to choose it instead of the dummy. The reason is that it usually takes time to learn from personal experience; hence, some consumers may rely on the judgment of other people when deciding whether or not to make repeat purchases (Iyengar et al., 2007). We utilized a consumer review site called @COSME, one of the most famous online community sites for cosmetic products in Japan (www.cosme.net), to control for message valence. The amounts of eWOM messages on the cosmetic community site are comparatively similar between these two products.

3.4.2 Experimental Procedure

This experiment was conducted at a computer lab to let subjects have immediate access to the site. It was conducted in two waves, the first one for the group exposed to positive messages, and the second one for the group exposed to negative messages. We firstly informed the subjects that we were investigating consumers' perception and valuation of a new product in order to camouflage the true objective. We told them that the experimental object was the one under consideration. We then asked them whether they know and have already used the product before. Subsequently, we performed the measurements of prior attitude and message acceptance by asking subjects to answer the questions shown in Table 3. After answering the questions, subjects were asked to access the @COSME site and find the page for the experimental product. Then, they were asked to write a summary of as many consumer reviews concerning the product as possible from the site in 15 minutes. Each group was required to summarize reviews of either message valence. We recognized that both positive

and negative reviews could be displayed simultaneously on the PC monitor. However, we were convinced that the task above allowed us to isolate reviews of one valence from the other by forcing subjects to concentrate on the reviews of the assigned message valence. At the end of the experiment, all participants were asked to select between the object product and the dummy as reward for participation. To rule out the bias from size differences, we exhibited the pictures of both products, which were of the same size. We also randomized the order in which the pictures were shown in order to eliminate ordering bias.

3.4.3 Measurements

Table 3 shows the measurements of the variables under consideration. We asked about the subjects' prior knowledge and usage experience in Question 1. Prior attitude and message acceptance were measured by Questions 2 and 3. Scale items to measure message acceptance were revised and developed by adopting several previous studies of message adoption (Cheung et al., 2009; Lee & Koo, 2012). They were rated on a 7-point Likert scale (1=strongly disagree, 7=strongly agree), and summed up to get a single measure. The alpha coefficients of both scales were greater than 0.7 and, as such, internal validity was confirmed.

Table 3. The measurements

Questions	Mean	Std.
<i>Q1. Product knowledge and usage experience</i>		
(1) I have already known this product before. Yes / No		
(2) I have already tried and used this product before. Yes / No		
<i>Q2. Prior attitude</i>		
(1) This product can wash off dirt on your face efficiently.	4.9	1.06
(2) I feel comfortable when I use this product.	5.1	1.21
(3) I Think this product can make me feel good.	5.3	1.28
(4) This product has possibility of the skin troubles therefore I feel some anxiety when I use it.	4.9	1.49
(5) Considering the quality of this product, it is overpriced.	4.9	1.34
<i>Q3. Message Acceptance</i>		
(1) I always enjoy seeking information on the online community sites.	4.8	1.66
(2) When I want to evaluate a product, the online consumer reviews are really helpful.	5.3	1.29
(3) I always check the safety and quality of a product by reading online reviews.	5.4	1.26
(4) I am not likely to care about others` opinion when I select a product.	5.2	1.34
(5) I think that it is important to rate the quality of a product by myself.	2.9	1.43
<i>Q4. Message valence</i>		
Group A (Positive eWOM message valence)		
Summarize as many positive evaluations of this product as possible on your survey sheet by using online consumer reviews from the following online community site. (www.cosme.net).		
Group B (Negative eWOM message valence)		
Summarize as many negative evaluations of this product as possible on your survey sheet by using online consumer reviews from the following online community site. (www.cosme.net).		
<i>The control of product selection</i>		
Subjects are asked to select between the object product and the dummy as a reward for their participations after finishing all experimental procedures.		

3.5 Analysis and Results

3.5.1 Manipulation Checks

After the main experiment, manipulation checks for message valence were conducted. To check the manipulation for review valence, additional participants for these manipulation checks (21 people, 9=males/12=females) were recruited. All participants received website links of online survey and were asked to participate in survey about product strategy. Five most frequent positive features about object product (a cleansing foam) and five most frequent negative features were picked up based on experimental survey sheets submitted from 100 experiment participants (5 positive features: lathers well, feel moist, feel refreshed, great cost performance, easy accessibility to buy/5 negative features: feel dry, weak cleansing power, containing several harmful ingredients, irritant to skin, too strong scent). For these manipulation checks, all participants were received positive and negative explanations about product, and were asked “how these explanations describe product (5=positively described/1=negatively described)”. Results from the t-tests shown that participants rated positive features higher than negative features ($M_{\text{positive}}=4.57$, $M_{\text{negative}}=1.33$, $t(20)=19.31$, $p<0.00$). These results suggest that the manipulation were successful.

3.5.2 Hypotheses testing

We tested data from the experiment by utilizing logistic regression analysis. Here, both model without interaction effects and with interaction effects were tested for hypothesis testing. The dependent variable is indicator function that takes value 1 if the object brand was chosen and 0 if otherwise. The simple main effects were tested by two explanatory variables, message valence (positive

valence=1 / negative valence=0) and prior attitudes. The interaction effects were tested by two interacting variables, message valence vs. prior attitudes and message valence vs. message acceptance. In addition, brand recognition and usage experience were tested as control variables.

Table 4 shows the analysis results of parameters. Firstly, for the main effect, a coefficient of message valence is positively significant ($\beta=0.39$, p -value=0.05). This result shows that consumers who received positive word of mouth tends to select object brand instead of dummy, compared with consumers who received negative messages. Another explanatory variable of main effect, prior attitudes also shows statistically significant result ($\beta=0.53$, p -value=0.02). Consumers who have favorable prior attitudes on object brand tend to select object compared with consumer who have unfavorable attitudes. The coefficient of interaction effect, message valence with prior attitudes and message valence with message acceptance are also significant, and the moderating effects of prior attitudes and message acceptances were clarified.

Table 4. The Estimation Result of logistic regression

Variables	Coefficient	P-values	Coefficient	P-values
Intercept	0.62	0.02	0.56	0.03
Message valence	0.42	0.05	0.39	0.05
Prior attitudes	0.58	0.01	0.53	0.02
Message Acceptance	-0.12	0.42	-0.04	0.47
Message valence*Prior attitudes			1.24	0.00
Message valence*Message Acceptance			-0.93	0.01
Brand recognition	0.07	0.38	0.02	0.42
Usage experiences	0.34	0.07	0.25	0.12
AIC	130.26		127.18	

Notes. Bold fonts show the significant results.

Next, all experimental data was split into two parts by two different message valences to test hypothesis 1-1, 1-2, 2-1, and 2-2. We then repeated the analysis of logistic regression for different sub data. Table 5 shows the following analysis results. First, when participants received positive word of mouth, the prior knowledge positively influences their brand choice ($\beta=2.71$, $p\text{-value}=0.05$). Here, consumers who show congruency prior attitudes with message valence, tend to have high possibility on brand choice. This analysis result shows that the hypothesis 1-1 is supported. However, in case of negative messages, the coefficient of prior attitudes was not significant ($\beta=1.28$, $p\text{-value}=0.17$). Therefore, in the case of negative word of mouth, brand choice probability appeared to be indifferent between objects who have favorable and unfavorable prior attitudes. Consequently, hypothesis 1-2 was not supported in this model.

Table 5. The Estimation Result divided into message valences

Variables	Positive valence		Negative valence	
	Coefficient	P-values	Coefficient	P-values
Intercept	1.13	0.03	-0.97	0.05
Prior attitudes	2.71	0.05	1.28	0.17
Message Acceptance	0.44	0.21	-1.68	0.04
Brand recognition	0.00	0.48	0.05	0.36
Usage Experiences	0.12	0.24	0.19	0.15

Notes. Bold fonts show the significant results

Finally, we tested the interaction effect of message acceptance. In case of positive messages, the analysis result of its coefficient was not significant ($\beta=0.44$, $p\text{-value}=0.21$). This means that when consumers received positive messages, brand choice behavior was independent from the extent of message acceptance. Thus, hypothesis 2-1 was rejected. However, in case of negative word of mouth, the negative effect of message acceptances was significant ($\beta=-1.68$, $p\text{-value}=0.04$), in support of hypothesis 2-2. Thus, when consumers received negative messages, those who have higher message acceptance would be greatly affected, and as a result, have lower probabilities of choosing the focal brand.

3.6 Discussion and Implication

3.6.1 Discussion

Investigating the effectiveness of eWOM to better understand consumer behavior is important from both theoretical and managerial points of view. We explored some aspects of eWOM effectiveness based on the theory of reasoned action so as to derive some useful insights for marketers. We focused our consideration on the moderating roles of prior attitude and message acceptance in the context of brand choice decision-making to clarify how eWOM received from unknown individual influences consumer's actual behavior. Using the proposed framework, we built and tested four hypotheses concerning the main and moderating effects.

Previous studies have suggested that positive eWOM as well as prior attitude encourage consumers to choose a brand, whereas negative eWOM and unfavorable prior attitudes have the opposite effect (Arndt, 1967; East et al., 2008). This study confirmed that consumers who encounter favorable messages

(positive eWOM) about a brand are more likely to choose it, whereas consumers who encounter unfavorable messages (negative eWOM) about a brand are likely to choose other brands. Similarly, consumers who have favorable prior attitudes toward a brand tend to select the brand than other brands, whereas consumers who have unfavorable attitudes toward the brand tend not to select it. In this study, we predicted that congruency between these two variables (message valence and prior attitudes) will enhance the influence of eWOM. The result revealed that the congruency of prior attitude with message valence governs the magnitude of the eWOM effects. However, the moderating effects were different for positive and negative message valences. For the case of positive eWOM, its effect on brand choice decision is moderated by prior attitude. However, the moderating effect is not likely to occur for negative eWOM, indicating the greater impact of negative eWOM over the positive one (Figure 6).

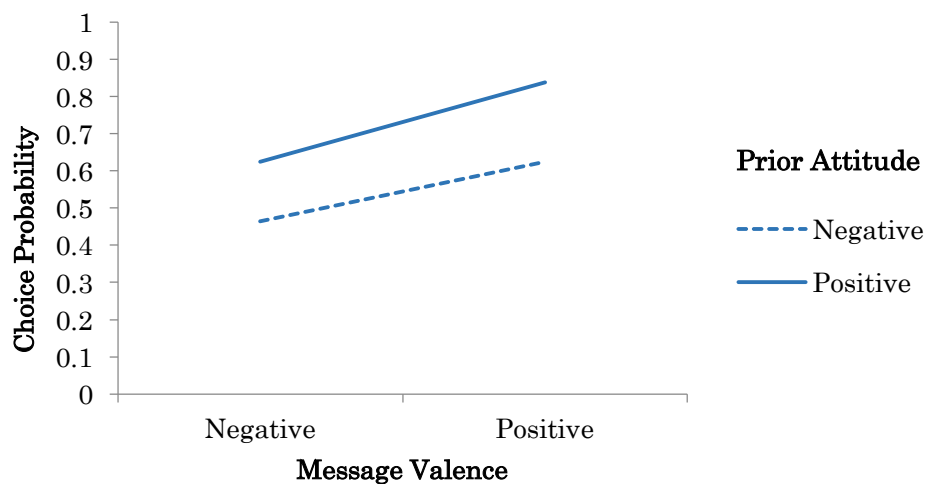


Figure 6. A Moderating Effect of Prior Attitudes

Finally, this study diagnosed the interaction between eWOM message valence and message acceptance. The results revealed that when consumers received negative messages about a product, their responses were significantly affected by their intention to accept them. However, this was not true for positive messages (Figure 7). This implies that positivity overwhelmed the moderating role of the message acceptance.

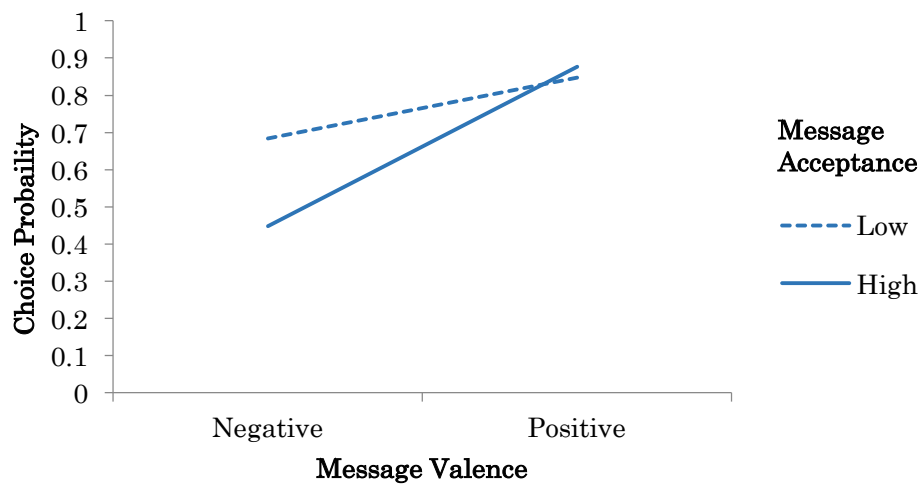


Figure 7. A Moderating Effect of Message Acceptance

3.6.2 Implications

This study verified the moderating roles of prior attitude and message acceptance on the effectiveness of eWOM. An immediate implication is that firms can anticipate how eWOM may affect their new products. Positive eWOM can help reduce risks about a new product and encourage consumers to adopt it. This effect would be even greater for consumers who have positive prior attitudes, or

whose message acceptance is high. Thus, if firms know that most of their prospective customers evaluate their products favorably, or proactively search for others' opinions, then they can expect that the sales of a new product will increase with positive eWOM. However, the effect of positive eWOM would be less effective if most customers have unfavorable attitudes toward the product, or are unwilling to rely on such information.

The second implication that needs much consideration is the strong effect of positive eWOM. When consumers received negative electronic word of mouth, the possibility of brand choice of consumers who have high message acceptances tends to be high, compared with consumers who have low message acceptances. Thus, in the case of positive electronic word of mouth, the levels of message acceptances cannot influence their brand choices, however, in case that consumers receive more negative messages than positive one, message acceptances significantly influence their actual behaviors.

3.7 Conclusion

In this study, we investigated the influence of prior attitude and message acceptance in determining the effectiveness of eWOM. We conducted an experimental design to test the moderating effects of the two variables in a context of brand choice decision. The results revealed that the moderating effects were asymmetric with respect to message valence. One of the key findings is that prior attitude significantly moderated choice probabilities only when subjects received positive messages (vs. negative messages). That is, choice probabilities were enhanced when subjects with favorable attitudes encountered positive eWOM. Conversely, the moderating effect of message acceptance was observed to

be significant only when subjects received negative messages (vs. positive). That is, when receiving negative messages, choice probabilities of subjects with higher message acceptance were significantly smaller than those with lower message acceptance. We argue that these results can provide important insights that are useful for anticipating the sales impact of eWOM.

Despite some important findings that it has produced, this study has several limitations. First of all, only one product category (facial cleansing foams) was utilized in the experiment. However, another product category may yield different results. For example, the moderating effects may be different for search goods and experience goods. Secondly, while there are many types of online media generating electronic word of mouth messages, this study explored only one sort of media platform (consumer reviews). Finally, subjects that participated in the experiment were sampled from the student population, and thus they may not well represented overall consumer population. Accordingly, further research is needed to improve its generalizability by utilizing different product categories, different media platform, and wider population group.

Chapter 4

Asymmetric Persuasive Effects of Gain- and Loss-related Messages in Electronic Word of Mouth

4.1 Introduction

The persuasive impact of eWOM on various aspects of consumer behavior has been well recognized in the literature. Studies have shown that eWOM can affect consumers' attitude toward a brand (Lee, Park, & Han, 2008; Lee, Rodgers, & Kim, 2009; Wu & Wang, 2011), product evaluation (Zhang, Craciun, & Shin, 2010; Kim & Gupta, 2012; Dou et al., 2012), purchase intention (Wang, Yu, & Wei, 2012; Jimenez & Mendoza, 2013; Fang & Yu, 2017), and brand choice (Senecal & Nantel, 2004; Cheung, Lee, & Rabjohn, 2008; East, Hammond, & Lomax, 2008). Recent research has indicated the growing number of consumers who perceive eWOM as more reliable than firm-generated communication tools such as prints ads, personal selling, or TV commercials (Trusov, Bucklin, & Pauwels, 2009; Lee & Youn, 2009). The primary distinction between eWOM and traditional marketing communications is that the former may contain positive as well as negative messages about a product or service (Hennig-Thurau et al., 2004). Thus, while firm-generated communications are expected to influence consumers in favorable ways, eWOM can cause unfavorable impacts on consumers' attitudes or decisions.

Accordingly, how individuals will be ultimately affected by each message that constitutes an eWOM has been a primary concern among academicians and practitioners (King, Racherla, & Bush, 2014).

However, despite a large body of research on this topic, there is an ongoing conflict about the intensity of eWOM messages. On one hand, a research stream contends that positive messages are more influential than negative messages, a phenomenon well-known as the positivity bias (East et al., 2008; Fang & Yu, 2017). On the other hand, other researchers assert the negativity bias, that is, the impact of negative messages is greater than positive messages (Skowronski & Carlston, 1989; Park & Lee, 2009). With this regard, there is ample work intended to reconcile the conflicting ideas and figure out potential conditions under which positivity or negativity biases are likely to occur. Recent studies have revealed that factors such as product characteristics (Park & Lee, 2009; Pan & Zhang, 2011), recipient characteristics (Sen & Lerman, 2007; Jones, Aiken, & Boush, 2009), provider characteristics (Shin, Song, & Biswas, 2014; Hornik et al., 2015), and message characteristics (Park & Kim, 2008; Melián-González et al., 2013) are likely to moderate the extent to which consumers evaluate and accept a particular message. Focusing on recipient characteristics, few researchers have recently found that regulatory focus theory (Higgins, 1997) can be used to better explain under what condition positive messages overwhelm negative messages, and vice versa. Drawing on the theory, positivity (negativity) bias is postulated to occur when promotion (prevention) focus consumer is exposed to positive (negative) messages.

The explanation based on regulatory focus theory seems to be plausible, given the ample evidence that individuals' goal orientations are associated with

their attentions and responses to a particular persuasion (Aaker & Lee, 2001; Lee & Aaker, 2004; Keller, 2006; Wang & Lee, 2006). Specifically, when the valence of a message is congruent with consumers' regulatory foci, its effect would appear to be more salient because consumers are more inclined to pay attention and behave in a determined way recommended by the message. However, we argue that the existing literature grounded on the theory have some limitations in the assessment of eWOM effects. First, most studies have focused on a single message that is either positive or negative. This is impractical because in general consumers encounter with eWOM constituted by both positive and negative messages. Therefore, the ultimate effect of eWOM on any outcome variable must be assessed as the net effect of all messages contained. Few studies including Doh and Hwang (2009) and Melián-González et al. (2013) indeed examined the aggregate effects of multiple messages but they did not consider consumers' regulatory focus. Second, existing studies did not account for the fact that for a given message valence, its congruency with consumers' regulatory foci would depend on the type of the message. For example, a positive message can either be the one that conveys the presence of product advantages (gain) or the absence of product disadvantages (non-loss). The impacts of gain and non-loss messages should be different for promotion and prevention focus consumers (Idson, Liberman, & Higgins, 2000, Liberman, Idson, & Higgins, 2005). This is also the case for any negative message that can be either the one telling the presence of product disadvantages (loss) or the absence of product advantages (non-gain).

These gaps in the literature remain some open questions: (1) How would consumers' responses to eWOM containing, for example, gain and non-loss messages be different from their responses to that containing gain and loss

messages? (2) How can the differences be explained by using regulatory focus theory? (3) How would the outcome change if one of the message types outnumbered the other? In this study, we aimed to address these questions by examining the aggregate effects of online product reviews which are composed of various messages of different types, where brand attitude is considered as the outcome variable. For this purpose, we developed testable relevant hypotheses based on the literature and subsequently conducted two web-based experiments in which we exposed subjects to ten reviews concerning a product in a single board and then asked their attitudes toward the focal product. Individual's regulatory focus was measured by using a scale frequently used in the previous studies. In study 1, we tested the persuasiveness of four different eWOM designed as some combinations of gain-related (gain or non-gain) and loss-related (loss or non-loss) messages. For each eWOM, we balanced the proportion of message valences so that it has five positive and negative messages. In study 2, we extended study 1 by modifying the proportion of positive and negative messages to examine how the results would change when a type of message outnumbered the other.

The main contribution of the present research is that it expands the existing literature on eWOM by taking into account the net effect of several message types: gain, non-gain, loss, and non-loss messages. In that sense, the focus is beyond on positivity and negativity nature of a message as in past studies since it includes the examination of message intensity in terms of individual's goal orientation. The analysis of two studies resulted in some important insights. First, we found that different combinations of message types lead to different responses to eWOM. Second, subjects' responses to eWOM are moderated by their goal

orientations. Third, the moderating effect of regulatory focus appears to be altered by message proportion.

The remainders of this paper are organized as follows. In the next section we discuss the theoretical backgrounds underpinning our expectation the role of one's goal orientation in influencing message intensity. Subsequently, we illustrate the analytical framework used to examine the effect of eWOM. We then describe the experimentation designs and present the results of study 1 and study 2. Following these sections, we discuss the theoretical and managerial implications of our findings. Finally, we conclude with some limitations and directions for future research.

4.2 Theoretical Background

4.2.1 Positivity and Negativity biases

Research studies have shown the asymmetric effects of positive and negative messages. However, the results are inconclusive because some researchers found positive messages are stronger than negative messages (i.e., the positivity bias), whereas some others found the other way around (i.e., the negativity bias). For example, it has been shown that people tend to utilize positive WOM, rather than negative WOM, as a main source in the adoption of new product (Keaveney, 1995). Further, East et al. (2008) pointed out that because, in many cases, positive messages outnumber negative messages, the impact of the former appears to be greater than the latter. In the context of eWOM, a recent study by Fang and Yu (2017) suggested that positive messages have a greater effect on purchase intention compared to its negative counterparts. By contrast, an early study on traditional WOM by Arndt (1967) revealed that negative messages have

greater effect on consumer decision to buy a new product. In the context of product evaluation, Skowronski and Carlston (1989) suggested that consumers put more weight to negative rather than positive information in forming their judgments. More recently, Liao et al. (2015) provided evidence that negative eWOM has a stronger effect in generating information richness than positive eWOM. Other studies supporting negativity bias include Homer and Yoon (1992), Park and Lee (2009) and Richins (1983).

4.2.2 Regulatory Focus Theory

Regulatory Focus theory (Higgins, 1997) suggests two motivational orientations that influence individual's behavioral intention or decision making: promotion and prevention focus. According to the theory, promotion- and prevention-focused individuals are influenced by different strategic means; that is, the former tend to employ an approach strategy and the latter tend to employ an avoidance strategy. Specifically, promotion focused individuals would pay more attention to the presence or the absence of gain (an approach strategy), whereas prevention focused consumers are more concerned with the absence or presence of loss (an avoidance strategy) (Aaker & Lee, 2001; Higgins, 1997; Tuan Pham & Chang, 2010). Therefore, promotion focused consumers are likely to be sensitive to positive outcomes, whereas prevention focused consumers are likely to be sensitive to negative outcomes.

With regard to individual's response to particular information, the theory implies that the fluency of processing and the likelihood of acceptance of the information should depend on the congruency between its content and the goal of her/his own (Higgins, 2000). That is, information concerning gain (loss) is more

likely to be processed and perceived to be more persuasive by promotion- (prevention-) focused individuals. A study by Aaker and Lee (2001) suggested that individuals demonstrate greater recall and more favorable attitude toward information that is compatible with regulatory focus, providing a support for this contention. In the context of eWOM, Kim and Lee (2015) found that promotion-focused subjects rated the usefulness of a positive product review higher than did prevention-focused subjects. The result was reversed when subjects were exposed to a negative product review. Similarly, Zhang, Craciun, and Shin (2010) pointed out that consumers with promotion (prevention) goals tend to perceive positive (negative) reviews to be more persuasive than negative (positive) ones when making product evaluation. In another study, however, the moderating effect of individual regulatory focus was insignificant when message credibility was treated as the outcome variable (Lee and Koo 2012). This is in contradiction with the work by Lee and Yi (2010) who partially found significant moderating effect of regulatory focus on the credibility of negative product reviews, although they did not find the same result for positive reviews.

4.2.3 Message Intensity

Based on regulatory focus and message valence, we can categorize eWOM messages into four types: gain, non-loss, non-gain, and loss (see Table 6). The first two are positive messages presenting the presence (absence) of product advantages (disadvantages) and the last two are negative messages presenting the absence (presence) of product advantages (disadvantages). While most studies on eWOM have focused on the persuasiveness of messages of different valence, it can be expected that for the same valence, the outcomes would vary depending on whether

they are gain-related or loss-related messages. In fact, Lee and Aaker (2004) confirmed that gain-framed (i.e., gain and non-gain) messages appeared to be more persuasive when presented to promotion focused subjects than prevention focused subjects, and vice versa. Further, drawing on the principle of loss aversion (Kahneman & Tversky, 1979), Liberman, et al. (2005) predicted that losses would be perceived as more intensely negative than non-gains, and that non-losses would be perceived as more positive than gains. Their results revealed that this is the case for the former relation, but not for the latter relation. This finding suggests that loss (gain) messages would have greater negative (positive) effect than non-gain (non-loss) messages. However, as the study did not account for individuals' goal orientation, how the results would be different for promotion and prevention focused individuals remains unexplored.

Table 6. Message Categorization by Valence and Regulatory Focus

Message valence	Regulatory focus	
	Promotion focus	Prevention focus
Positive	Gain	Non-loss
Negative	Non-gain	Loss

4.3. Analytical Framework and Hypotheses

4.3.1. Analytical Framework

We show the analytical framework of this study in Figure 8. As previously outlined, we aim to examine the aggregate effect of eWOM containing multiple messages of different type on brand attitude. In particular, we consider consumers'

responses to online product reviews sent by individuals who have usage experiences of the focal product. There are four message type combinations to examine, each of which contains both positive and negative messages. Note that we exclude the combination containing only negative (loss + non-gain) and positive (gain + non-loss) reviews because besides unrealistic, such one-sided contents may give rise to a severe problem of credibility pertaining to the message (Doh & Hwang, 2009).

The basic premise of this study is that product reviews containing different message combinations would result in different level of attitude toward a brand. For example, we expect consumers' responses to a combination of gain and non-gain messages would be different from the responses to a combination of gain and loss messages. In so doing, this study measures the aggregate effect of eWOM rather than the effect of individual message. Further, we expect the intensity of each message combination varies across consumers depending on their regulatory focus. That is, brand attitudes resulted from a message combination should be different for promotion- and prevention-focused consumers. Moreover, we also account for the moderating role of message ratio to examine how the results would be altered if either message valence outnumbered the other. We examine the interplay between message combinations and regulatory focus in study 1 and the moderating role of message ratio in study 2.

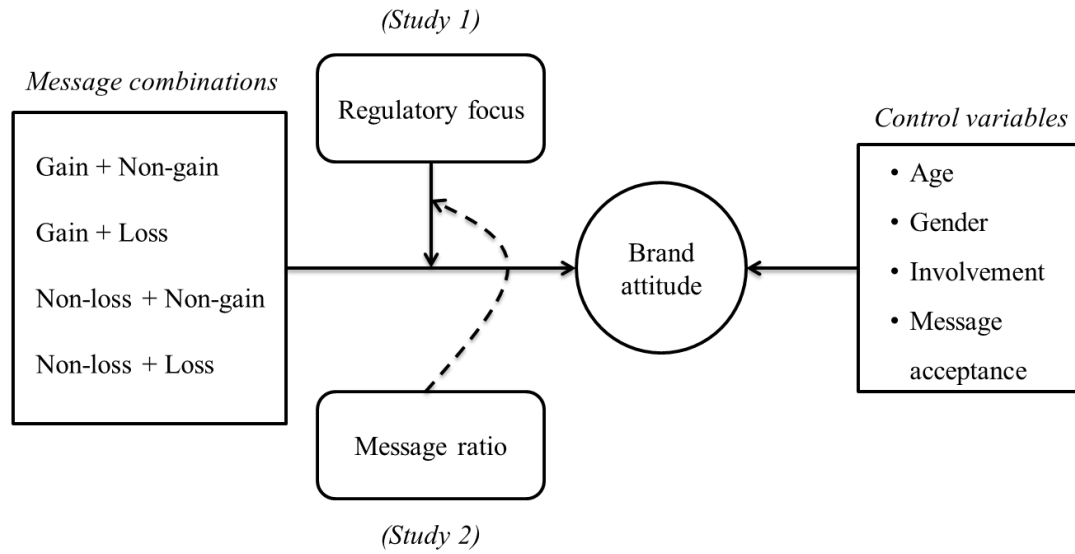


Figure 8. Analytical Framework of Chapter 4

Additionally, we control for age, gender, involvement, and message acceptance in our analysis. Recent studies on e-commerce suggested that younger consumers shop online more frequently than do older consumers (Shim & Drake, 1990), indicating that perceived risks toward online shopping are high among elderly (Liebermann & Stashevsky, 2002). Given that online product reviews can reduce the risks associated with online buying, older consumers should be more responsive to the messages. This stream of research also pointed out that men use the Internet more frequently and for a longer time than women (Garbarino & Strahilevitz, 2004; Sheehan, 1999), implying that women perceived higher risks on online stores than men (Shim & Drake, 1990). Accordingly, eWOM should be more influential for women than men. Further, Higgins (2000) argued that the influence of regulatory focus would be more salient for low-involvement individuals because they lack ability to make objective evaluation about the encountered information. Thus, the magnitude of its moderating effect should depend on the

extent of involvement. Finally, the literature has shown that message acceptance determines the extent to which individuals process a message and behave in accordance with its content (Xu et al., 2010; Iyengar et al., 2015; Gupta & Harris, 2010). In our context, this implies that the persuasiveness of product reviews would be larger for individuals who are more inclined to accept the messages.

4.3.2 Hypotheses

As suggested by regulatory focus theory, individuals attach different weights to gains and losses according their goal orientations (Halamish et al., 2008; Zhang et al., 2010). This implies that the persuasive effect of a message depends on whether it conveys gain-related or loss-related information (Higgins, 2000). Promotion (prevention) focused individuals will pay more attention to and are more likely to be influenced by gain-related (loss-related) messages. Thus, the impacts would be enhanced when there is congruency between message type and regulatory focus. For example, the fit between information type and individuals' goal orientation should result in better recall and attitude toward the content of the information (Aaker & Lee, 2001). This argument should also apply in the context of eWOM, where consumers perceive its messages as more persuasive if the valence of the messages is congruent with their regulatory focus. Hence,

H1: Individual's regulatory focus moderates the impacts of eWOM containing different type of messages on brand attitude.

Furthermore, as pointed out by Idson et al. (2000) and Liberman et al. (2005), individuals perceive that the pleasure from gains is greater than the

pleasure from non-losses. While these studies built the premise for a single message, it is plausible to expect the same to hold for the case when multiple messages are exposed simultaneously. However, the results should vary depending on individual's regulatory focus. For promotion focused consumers, an eWOM containing gain and non-gain messages should result in more favorable attitudes than that containing non-loss and non-gain messages, provided that they attach greater weight to gain-related messages (Lee & Aaker, 2004). By contrast, for prevention focused consumers, the latter should lead to more favorable attitudes than do the former because they are more influenced by non-loss messages than by gain messages. In other words, the positivity of gain messages is less influential than that of non-loss messages for these consumers. Using the same reasoning, we expect to observe the same results when gain and non-loss messages are combined by loss messages. Hence,

H2: Promotion (prevention) focused consumers will have more (less) favorable brand attitude when receiving gain/non-gain eWOM than they will when receiving non-loss/non-gain eWOM.

H3: Promotion (prevention) focused consumers will have more (less) favorable brand attitude when receiving gain/loss eWOM than they will when receiving non-loss/loss eWOM.

Another important finding from the study by Liberman et al. (2005) is that the pain from losses is greater than the pain from non-gains, which is consistent with the principle of loss aversion (Kahneman & Tversky, 1979; Tversky, 1994). In

line with our previous predictions, we expect the argument to hold when loss and non-gain messages are combined with gain and non-loss messages. Specifically, it can be expected that eWOM containing loss and gain messages should result in unfavorable attitudes compared to those containing non-gain and gain messages for prevention focused consumers, provided that the negativity of loss messages is more salient for these consumers. By contrast, promotion focused consumers are likely to find the former to be less negative than the latter because they are less influenced by loss-related messages. Applying the same reasoning to the case when the negative messages are combined with non-loss messages, we expect the same results for (loss + non-loss) and (non-gain + non-loss) combinations. Hence,

H4: Promotion (prevention) focused consumers will have more (less) favorable brand attitude when receiving loss/gain eWOM than they will when receiving non-gain/gain eWOM.

H5: Promotion (prevention) focused consumers will have more (less) favorable brand attitude when receiving loss/non-loss eWOM than they will when receiving non-gain/non-loss eWOM.

Additionally, being composed of both positive and negative messages, eWOM persuasiveness may be affected by the ratio of message valences. Intuitively, if positive messages outnumber negative messages, then the positivity of the eWOM will become more intense, and vice versa. A study by Doh and Hwang (2009) revealed that a higher ratio of positive messages in eWOM results in more favorable attitudes and higher purchase intentions. However, they result also

suggested that when all messages contained are positive, the credibility of the eWOM turns to diminish. In the context of this study, message proportions may enhance the role of message valence in consumer evaluation about a brand, altering the moderating effect of regulatory focus. For example, an eWOM containing the same number of gain and loss messages should result in favorable (unfavorable) brand attitude for promotion (prevention) focused consumers. However, when positive messages outnumber negative messages, prevention focused consumers are likely to have favorable brand attitude, as promotion focused consumers do. Hence,

H6: When messages of either valence outnumber the others, the effect of message valence on brand attitude will overwhelm the effect of regulatory focus.

4.4 Study 1

4.4.1 Outline

In study 1, we conducted a web-based experiment to examine the moderating effect of regulatory focus and brand attitude differences as stated in H1 through H5. We designed four online reviews concerning a toothpaste product, each of which contains 5 positive and 5 negative statements (see Appendix A), representing message combinations depicted in Figure 8. To measure brand attitude, the dependent variable, we used four items rated in a five-point scale: low/high quality, bad/good, unfavorable/favorable, and negative/positive (Swaminathan et al., 2007). Individual's regulatory focus was measured by a scale used in Lockwood et al. (2002) and Lee and Koo (2012). The scale is composed of

eight items representing the extent to which an individual is inclined to pursue gains and avoid losses. The sum of the latter items was subtracted from that of the former items, and then the median of the differences was used to split the subjects into promotion- and prevention-focused consumers. Further, we measured product involvement by asking how the subjects perceive the toothpaste category in a seven-point scale: unimportant/important, unattractive/attractive, and uninteresting/interesting (Zaichkowsky, 1985). In addition, message acceptance was measured by the scale proposed by (Lee & Koo, 2012; Cheung et al., 2009; Zhang & Watts, 2008).

4.4.2 Sample and Procedure

The experiment was conducted by an online research company targeted at randomly chosen 200 subjects (100 men). The ages of the subjects range from 15 to 69 years old, and the average was 40.28 years old. Table 7 shows the experimental design of this study. There are four groups receiving 10 product reviews containing different message combinations. We assigned each subject to one of the groups, and thus, all groups have 50 subjects. At the beginning of the experiment, we presented the product reviews in a single board to the subjects and asked them to read the reviews carefully. The order of the reviews shown to each subject was randomized to rule out the primacy and recency effects. After completing this task, we asked the subject evaluate the toothpaste brand to measure their attitudes. Finally, we asked them to answer the questionnaire on involvement, message acceptance, and regulatory focus.

Table 7. Experimental Design

Message combination	Regulatory focus
5 gain + 5 non-gain	Promotion-focused
	Prevention-focused
5 gain + 5 loss	Promotion-focused
	Prevention-focused
5 non-loss + 5 non-gain	Promotion-focused
	Prevention-focused
5 non-loss + 5 loss	Promotion-focused
	Prevention-focused

4.4.3. Manipulation Check

To assure that the gain- and loss-related messages are perceived as different message types, we conducted a manipulation check targeted at 30 undergraduate and graduate students (13 males). First, we showed them the product reviews containing 5 gain, 5 non-gain, 5 loss, and 5 non-loss messages, and then asked them whether each message was telling the presence (or absence) of the advantages (or disadvantages) of the product. Subsequently, we conducted a chi-squared test to examine whether the answers were close enough to the assumed values. The result of the chi-squared test suggested that there is no significant differences between the answers and the assumed values ($\chi^2(3) = 2.17$, $p > 0.10$)

Table 8. Internal Reliability and Convergent Validity

Item	Internal reliability		Convergent validity		
	Cronbach α	Item-total correlation	Loading	Composite reliability	Variance extracted
<i>Brand attitude</i>	0.93			0.93	0.76
Low Quality / High Quality		0.82	0.89		
Bad / Good		0.84	0.80		
Unfavorable / Favorable		0.80	0.92		
Negative / Positive		0.86	0.88		
<i>Promotion focus</i>	0.80			0.82	0.70
I frequently imagine how I will achieve my hopes and aspirations.		0.74	0.71		
In general, I am focused on achieving positive outcomes in my life.		0.81	0.83		
I often imagine myself experiencing good things that I hope will happen to me.		0.75	0.72		
Overall, I am more oriented toward achieving success than preventing failure.		0.72	0.78		
<i>Prevention focus</i>	0.80			0.81	0.72
I frequently think about how I can prevent failure in my life.		0.83	0.88		
In general, I am focused on preventing negative events in my life.		0.79	0.71		
I often imagine myself experiencing bad things that I fear might happen to me.		0.80	0.78		
I am more oriented toward preventing losses than I am toward achieving gains.		0.82	0.87		
<i>Involvement</i>	0.87			0.89	0.70
Unimportant / Important		0.78	0.76		
Appealing / Unappealing		0.79	0.84		
Uninterested / Interested		0.81	0.90		
<i>Message acceptance</i>	0.85			0.87	0.77
Consumer reviews are helpful to me when deciding on brands to buy.		0.78	0.88		
Consumer reviews can motivate me to purchase products.		0.81	0.88		

4.4.4 Reliability and Validity Assessment

We tested the reliability and validity of the constructs (attitude, promotion focus, prevention focus, involvement, and message acceptance) by conducting an exploratory factor analysis and confirmed that all items converged to the intended factors. Internal consistency reliability was evaluated by using the Cronbach alpha and item-to-total correlations (see Table 8). The values of the Cronbach alpha ranged from 0.82 to 0.89, and the values of item-total correlations ranged from 0.65 to 0.82, which were greater than the recommended value (Kline, 2000). The convergent validity of the measurement items was tested by factor loadings, composite reliability, and the variance-extracted measures. We confirmed that the factor loadings of all items were greater than 0.60. Likewise, all the composite reliabilities were greater than 0.80, and all variance-extracted measure were greater than 0.50, suggesting the convergence of the measurement items (Kline, 2000). Finally, we compared the error-adjusted inter-construct correlations with their respective variance extracted measures to test the discriminant validity (Fornell & Larcker, 1981). The results revealed that all correlations were less than the variance extracted measures of the respective constructs; thus, we confirmed discriminant validity among the constructs.

4.4.5 Results and Discussion

To examine the moderating role of regulatory focus, we conducted a 4 (message combination) $\times$ 2 (regulatory focus) analysis of covariance (ANCOVA) by treating gender, age, involvement, and message acceptance as control variables. The result is shown in Table 9. As can be seen, the interaction effect between message combination and regulatory focus is significant ($F(3,188) = 3.24, p = 0.02$),

providing a support for H1. Thus, given a fixed message combination, we confirmed that individual's response to the product review is partly determined by her/his goal orientation. However, we note that regulatory focus alone does not describe brand attitude differences, provided that its main effect was insignificant ($F(1,188) = 0.48, p > 0.10$). Further, we also found that the main effect of message combination was significant ($F(1,188) = 2.81, p = 0.04$), indicating that different message combination would result in different brand attitude for average consumers. Additionally, product involvement appeared to have significant effect on brand attitude, suggesting that the failure to account for its effect would result in biases in the estimates of the key variables. For other control variables, we observed that the effects were insignificant.

Table 9. The Result of ANCOVA (Study 1)

Variable	F value	Pr(>F)
Message combination (MC)	2.81	0.04
Regulatory focus (RF)	0.48	0.49
MC $\times$ RF	3.24	0.02
Gender	0.03	0.87
Age	0.03	0.89
Involvement	3.92	0.05
Message acceptance	0.40	0.53

Notes. Bold indicates significant effect at $\alpha=0.05$.

Figure 9 shows the average brand attitude for all experimental groups. First, we compared the values with respect to Gain/Non-gain and Non-loss/Non-gain groups. For promotion-focused consumers, the difference of mean attitudes between the two groups was significant ($t(48) = 2.01, p = 0.03$), in support of H2. However, this

is not the case for prevention-focused consumers for which the difference was insignificant ($t(48) = -0.09, p > 0.10$). Thus, we concluded that H2 was supported only for promotion-focused consumers. Next, we tested the difference between Gain/Loss and Non-loss/Loss groups. The result indicated that the difference was significant for promotion-focused consumers ($t(48) = 1.97, p = 0.03$). Likewise, we observed that the difference was also significant with the expected sign for prevention-focused consumers ($t(48) = -3.21, p < 0.01$), provided a support for H3. Our analysis revealed that, for promotion-focused consumers, the positivity intensity of gain messages are greater than that of non-loss messages, which is true even when the messages are combined with other messages of different type. By contrast, the positivity of gain messages appeared to be less influential for prevention-focused consumers, perhaps because they were more interested in loss-related messages than gain-related messages.

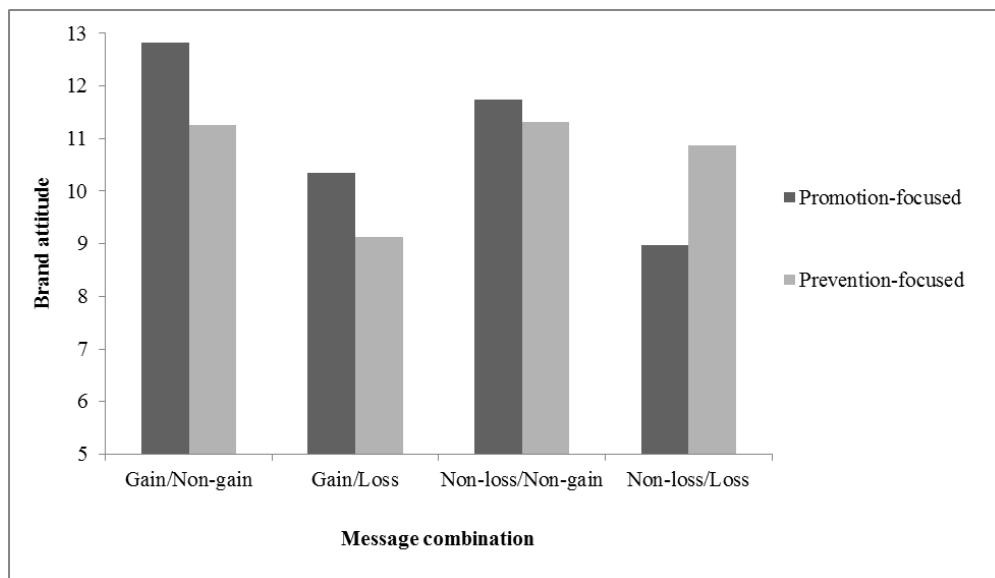


Figure 9. Average Brand Attitude of Each Experimental Group

Next, we compared the difference between Gain/Loss and Gain/Non-gain groups. The result for promotion-focused consumers was significant ($t(48) = -2.26$, $p = 0.01$); however, the average of the former was smaller than that of the latter, which is in contradiction with our prediction, leading to the rejection of H4. By contrast, the result for prevention-focused consumers was moderately significant and with the expected direction ($t(48) = -1.96$, $p = 0.03$). Accordingly, H4 was supported for these consumers. Finally, we tested the difference between Non-loss/Loss and Non-loss/Non-gain groups. For promotion-focused consumers, although significant, the average value of the former group appeared to be smaller than that of the latter group, resulting in the rejection of H5 for the consumers. The result for prevention-focused consumers was insignificant ($t(48) = -0.35$, $p = 0.36$), which again resulted in the rejection of H5. These results suggest that the negativity of loss messages are perceived to be intense not only by prevention-focused but also by promotion-focused consumers. Thus, while prior studies pointed out that promotion-focused consumers pay less attention to loss-related messages (e.g., Aaker & Lee 2001; Lee & Aaker 2004), our analysis shows that this might not be the case in a situation when multiple messages of different types are simultaneously exposed to consumers.

4.5. Study 2

4.5.1. Outline

In study 2, we modified the proportion of message valences shown in a single board so that either positive or negative messages outnumber the others. In particular, we designed some message combinations containing 7 positive (negative) messages and 3 negative (positive) messages. This resulted in eight

experimental groups which were exposed to different message type and proportion (see Table 10). We expected positivity (negativity) biases become more salient when positive (negative) messages were dominant in the product reviews, diminishing the moderating roles of regulatory focus.

Table 10. Experimental Design of Study 2

Group no.	Message valence	
	Positive messages	Negative messages
1	7 gain	3 non-gain
2	7 gain	3 loss
3	7 non-loss	3 non-gain
4	7 non-loss	3 loss
5	3 gain	7 non-gain
6	3 gain	7 loss
7	3 non-loss	7 non-gain
8	3 non-loss	7 loss

4.5.2. Sample and procedure

As in study 1, we conducted a web-based experiment to a randomly chosen 400 sample (200 men). Each subject was assigned to one of the eight experimental groups such that each group was composed of 50 subjects. The procedure was completely identical to that used in study 1. That is, we presented the product reviews to the subjects and then asked their attitude toward the brand under consideration along with involvement and message acceptance variables. However, to enhance external validity, in study 2 we selected a brand from body soap category as the experimental object rather than toothpaste category used in study 1.

4.5.3. Manipulation check

To assure that the reviews containing 7 positive (negative) messages are perceived as positive (negative) reviews, we conducted a manipulation check targeted at 56 undergraduate student enrolling a marketing course in a large state university in Western Japan. The participants were exposed to one of the eight message combinations and then asked to evaluate the reviews whether it sounded positive or negative in aggregate in a 5-point Likert scale (1=negative, 5=positive). We subsequently conducted pairwise comparisons between two combinations of the same message type but with different proportion, and confirmed that positive dominant reviews are perceived as more positive than negative dominant reviews, and vice versa. For example, the test between the first group (7 gain : 3 non-gain) and the fifth group (3 gain : 7 non-gain) resulted in the rejection of the null hypothesis that there is no difference between the two ($t(54) = 4.82, p < 0.01$).

4.5.4. Result and discussion

We applied ANCOVA to subsamples with different message ratio to examine the influence of disproportionate message structure. Table 11 shows the results of the test. First, when positive messages outnumber negative messages, the interaction effect between message combination and regulatory focus turned to be insignificant ($F(3,188) = 0.62, p = 0.60$), indicating that the moderating role of regulatory focus was weakened for product reviews dominated by positive messages. Further, when negative messages accounted for a larger portion in the product reviews, the interaction effect was significant ($F(3,188) = 2.97, p = 0.03$); however, the magnitude of the F-value was smaller than that when positive and negative messages are of the same ratio as in study 1 (2.97 vs. 3.24). Because the

F-value can be interpreted as the degree of deviance from the null hypothesis, we concluded that the moderating effect of regulatory focus is also weakened when negative messages outnumber positive messages.

Table 11. The Result of ANCOVA (Study 2)

Variable	Positive > Negative		Negative > Positive	
	F value	Pr(>F)	F value	Pr(>F)
Message combination (MC)	3.14	0.03	7.42	0.00
Regulatory focus (RF)	0.39	0.53	0.28	0.59
MC $\times$ RF	0.62	0.60	2.97	0.03
Gender	0.05	0.82	0.09	0.76
Age	0.04	0.84	0.01	0.92
Involvement	2.17	0.14	3.14	0.07
Message acceptance	0.43	0.51	0.36	0.54

Notes. Bold indicates significant effect at $\alpha=0.05$.

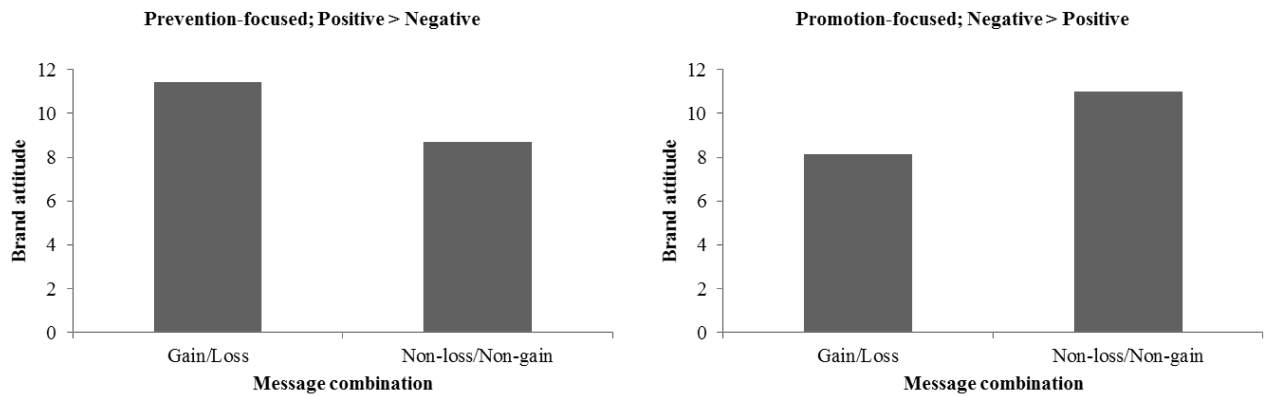


Figure 10. Average Brand Attitude for Different Message Ratio

We further investigated the effect of message ratio by comparing group-level brand attitude for gain/loss and non-loss/gain combinations (see Figure 10).

The idea is that if message ratio reduces the moderating effect of regulatory focus, then prevention-focused consumers should have favorable attitude toward a brand when positive messages outnumber negative messages, owing to the intense positivity of gain or non-loss messages. Likewise, promotion-focused consumers should have unfavorable attitude toward a brand when negative messages outnumber positive messages, provided the increasing negativity of loss or non-gain messages. When this is the case, individual's regulatory focus becomes less important, and attitude formation is largely governed by the valence of the messages. Recall that we measured brand attitude as the sum of four items in a five-point scale. Thus, the attitude of a subject is said to be unfavorable if it takes a value less than 8 (2×4 items). Accordingly, we can verify the argument by conducting a test whether the attitude of prevention-focused (promotion-focused) consumers is greater (less) than 8 when positive (negative) messages outnumber negative (positive) messages.

The result of the former for Gain/Loss combination revealed that the attitude of prevention-focused consumers was significantly greater than 8 ($t(48) = 2.20, p = 0.02$). By contrast, the result was insignificant for Non-loss/Non-gain combination ($t(48) = 0.28, p = 0.39$). The results imply that the evaluation made by prevention-focused consumers turns to be favorable only when gain messages outnumber loss messages, but not when non-loss messages outnumber non-gain messages. We conjecture that this might be because the positivity of non-loss messages is weak, resulting in insignificant increase in brand attitude even when they dominate non-gain messages. For the case in which negative messages outnumber positive messages, the test revealed that the null hypothesis cannot be rejected ($t(48) = 0.08, p = 0.47$), indicating that promotion-focused consumers tend

to have unfavorable attitude toward the brand when loss messages outnumber gain messages. However, for Non-loss/Non-gain combination, brand attitude of the consumers was significantly greater than 8 ($t(48) = 1.99, p = 0.03$), suggesting that higher proportion of non-gain messages did not lead to unfavorable attitudes. In sum, the results show that disproportionate message structure can increase the effect message valence and decrease the effect of regulatory focus, particularly for Gain/Loss combination, providing partial support for H6.

4.6. Implications

4.6.1. Theoretical implications

Research studies on the intensity of positive and negative information have resulted in a contention about which message valence is more influential. The consensus on this issue has not been reached because both conflicting ideas have empirical supports from the literature. The application of regulatory focus theory provides an alternative explanation concerning certain conditions under which positivity and negativity biases tend to occur (Kim & Lee, 2015; Zhang et al., 2010). This study extended previous findings by examining multiple messages of different type contained in a product review simultaneously. Consistent with previous findings, we confirmed that consumers' responses to eWOM vary depending on their goal orientations. Further, our results suggested that positivity bias is likely to occur when promotion-focused consumers receive eWOM containing gain messages. Likewise, negativity bias is likely to occur when prevention-focused consumers are exposed to eWOM containing loss messages. However, the extent of the biases appeared to be lower when promotion-focused consumers receive non-loss messages or when prevention-focused consumers receive non-gain messages.

Our study also revealed that the moderating role of regulatory focus can be altered when eWOM contains disproportionate message valences. Specifically, when eWOM is dominated by gain messages, positivity bias can occur for prevention-focused consumers. Similarly, when loss messages are dominant, negativity bias may occur among promotion-focused recipients. Thus, our research contributes to the literature by elucidating how the interplay among message type, regulatory focus, and message ratio can give rise to positivity and negativity biases.

4.6.2. Managerial implications

In addition, our findings may also be useful for marketers to anticipate the sales impacts of eWOM. First, when the proportion of positive and negative messages is approximately equal, gain messages will result in more favorable brand attitude than non-loss messages, regardless of the type of other messages combined. Thus, marketers may expect an increase in the sales of their products if many consumers tell the others about the advantages of their products. In similar vein, they should concern with the negative impacts of loss messages, rather than non-gain messages, because they may inflict appalling damage on their brand image, which eventually reduces consumers' purchase intention. Our analysis also suggest that marketers should design their marketing communications to improve consumers' understanding of the value of their products so that the consumers will help them spread positive eWOM, particularly gain messages, about the products.

More importantly, marketers should concern with the negative impacts of loss messages, rather than non-gain messages, because they may inflict appalling damage on their brand image, which eventually reduces consumers' purchase intention. Thus, if many consumers send loss messages about a product, this would

result in a considerable decrease in the future sales. For this reason, some researchers emphasize the importance of managing negative online reviews to minimize the damage they would make (Lee et al., 2008). Although in many situations it would be difficult to restrict the number of such reviews, larger online providers like Amazon.com has been successful in reducing the number of harmful loss messages by providing guidelines that prohibit “profanity, obscenities, or spiteful remarks” for consumers who are willing to write a review. Further, if a manager is able to decide the order in which the reviews are displayed, she may place gain messages in the first order to be easily visible, and loss messages after the others, as suggested by the primacy effect (Lee & Koo, 2012).

4.7. Conclusion

This study investigated the aggregate effect of eWOM communication on brand attitude by taking into account the role of message valence, individual’s regulatory focus, and message ratio. Through two web-based experimental studies, we examined how consumers’ responses varied depending on message combination and regulatory focus, and the results supported the interaction effect between these variables. Further, this study provided evidence that the positivity (negativity) of gain (loss) messages is greater than that of non-loss (non-gain) messages in the context of eWOM. Finally, we confirmed the influence of message ratio in altering the moderating effect of regulatory focus. However, despite the substantial contribution it made to the body of knowledge, we note some limitations of this study. First, we only considered two grocery products whose attributes are relatively easier to evaluate prior to direct inspection. Thus, different results are likely to be derived if the analysis is conducted on experience

goods such as automobiles or cosmetics for which the impact of eWOM on consumer decision tends to be greater. Second, we did not examine the potential effect of the order by which the messages are presented to the subjects. As suggested by previous studies, successive opposing messages can influence the final judgment or evaluation of a product (Haugtvedt & Wegener, 1994; Brunel & Nelson, 2003). Future research could address these issues by manipulating the message order and examining a wider range of products to improve its generalizability.

Appendix A

Table A. Exemplar of Product Reviews Used in Chapter 4

Message type	Review Statements
Gain	The foaming and texture are so good. I think it is suitable for the electric toothbrush that I have been using recently because it produces less bubbles. I was very satisfied. The foaming of the toothpaste is just perfect. I use it with an electric toothbrush, and the touch feels so good. My husband was using a different one before, but now, he is using this toothpaste. When I am using this, I feels so good. It makes me refreshing. I would like to use it again. I am going to use up this product soon, and the texture is so good. It is so fresh and smooth. I will repeat to buy it. The texture is really good. It is easy to use because this toothpaste produce less bubbles. I am going to buy it again.
Non-gain	Well...as it was developed for hospital use, I expected this product was better than other ones, but I did not feel so. It didn't meet my expectation. It was harder to make bubbles than other products. I doubt that whether it is good or bad for my teeth. Firstly, the dirt wasn't removed well. The stains did not fall, I am going to look for other things. Is it really effective? I have brushed my teeth every day, and I used this many times, but I always got a cavity, even though I spent quite a lot of time for brushing my teeth. Compared to other products, I can say neither it is better nor worse. I think I would not buy it again.
Non-loss	This product is hypo-allergenic product. This toothpaste doesn't make my teeth tingle. Also, since I started to use this, I feel much better when I brush my teeth. The price is so reasonable. I think this product cheaper than other products. There was no outstanding weakness for this product. There were no weird flavors. Also, it doesn't have burning tastes. I love it. It has mild mint flavor, but there were no burning tastes. I found my children also like this product. At first, this product has no burning tastes. And its flavor is so soft and mild, I could brush my teeth very slowly.
Loss	My hypersensitivity became worse. It is not a good product. I doubt whether it is really hypoallergenic. Well... I don't think this toothpaste is a good product because it causes bad breath. This is obviously not good. I changed to other toothpastes because when I used this product, my teeth were bleeding. I heard that fluorine toothpaste is good to prevent cavities, however, since I use this product, my teeth was getting yellow. I stopped use this product immediately. I don't want to put it in my mouth because this product contains two harmful components (propylene glycol, lauryl sulfate).

Chapter 5

Conclusion

5.1 Conclusion

This thesis provides several crucial contributions to the consumer behavior literature regarding electronic word-of-mouth. One of the key findings of Chapter 3 is that prior attitude significantly altered choice probabilities only when the subjects received positive messages. Conversely, the moderating effect of message acceptance was significant when subjects received negative messages, but this was not the case when they encountered positive messages. The results provide some important insights that are useful for anticipating the sales impact of eWOM.

In Chapter 4, the results reveal that different combinations of message types lead to different evaluations of the focal brand. Furthermore, subjects with different regulatory focus exhibit different attitudes toward the focal brand when exposed to the same message combination. In addition, the moderating effects of regulatory focus appear to be altered by eWOM message proportion.

We derive insight through these theoretical and managerial discussions of outcomes of eWOM communication (such as brand attitudes or brand choice), determinants, and moderators. Moreover, we propose an integrative framework to describe how these outcomes of eWOM behavior and significant moderators on the eWOM effect are involved in the consumer decision making process. We

believe that our literature review and theoretical framework will contribute to the understanding of consumers' eWOM behavior and inspire more related consumer behavior research in the future.

5.2 Future Research Designs

Despite several crucial findings that our study has provided, this study has several limitations. First, we did not consider the potential moderating roles of product characteristics such as product category. In Chapter 3, only one product category (a facial cleanser) was utilized in the experiment. Similarly, in Chapter 4, we also utilized only two grocery products (toothpaste and body wash). Thus, if the product characteristics were considered as moderators in our study, then the impact of eWOM on consumer decision tends to be moderated by product categories (search goods vs. experience goods). Second, while there are many types of online platforms generating electronic word-of-mouth messages, in this study, only one sort of platform was utilized for each experiment. Thus, future research could examine various online platforms that are deeply involved in the dissemination of eWOM as one of the possible moderators on the eWOM effect.

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