

## **Effects of Perceived Risk, Message Types, and Reading Motives on the Acceptance and Transmission of Electronic Word-of-Mouth Communication**

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### **ABSTRACT**

Electronic word-of-mouth communication has a powerful impact on service industries. This study specifically examines negative messages on Internet forums to determine the impact of service characteristics (high versus low perceived risk), message types (affective versus instrumental), and consumer reading motives (informational versus interpersonal) on opinion acceptance, boycott intentions, and transmission intentions. Consumers have higher boycott intentions toward high perceived risk services after they read negative messages. Moreover, instrumental messages are more influential than affective messages, and consumers driven by interpersonal motives are more likely to transmit messages than are those driven by informational motives. Finally, a significant interaction effect exists between message types and reading motives.

**Keywords:** Word-of-Mouth Communication, Negative Message, Perceived Risk, Instrumental Message, Affective Message, Reading Motive

## **INTROUDUCTION**

With the growth of technology, the Internet has become an important communication tool that transmits word of mouth (WOM) through e-mails, newsgroups, discussion forums, chat rooms, bulletin board systems (BBS), and so on (Gelb & Sundaram, 2002; Hanson, 2000). Previous research has demonstrated that negative messages are more influential than positive messages (Arndt, 1967), but whether people may serve as both negative message receivers and transmitters simultaneously remains unexplored. Although previous research indicates that greater perceived risk associated with a service causes people to seek WOM information more actively (Bansal & Voyer, 2000), the impact of this perceived risk on transmission intentions is unknown. Moreover, though many studies of virtual opinion platforms exist, little research examines the effects of message content and consumer motives on those platforms.

In addition, WOM is crucial to decision processes associated with services rather than goods (Buttle, 1998; Murray & Schlacter, 1990). Therefore, this study focuses on the impact of negative messages on consumers' WOM communication in a service context through virtual opinion platforms. Furthermore, according to an Eastern-Integrated Consumer Profile survey, more and more people keep pets and consider them important in their daily lives. When choosing among pet products and services, pet owners often rely on WOM information. Therefore, this study uses the pet industry as a context. Finally, we classify services on the basis of their perceived risk and whether messages contain an affective or an instrumental perspective, which enables us to examine the impact of message content and perceived risk on opinion acceptance, boycott intentions, and transmission intentions.

Finally, to investigate the impact of a virtual opinion platform on consumer behavior, we must understand consumers' motives to read information available on that platform. Therefore, we also examine the influence of different motives to read information on boycott and transmission intentions toward negative Internet messages.

## **WORD-OF-MOUTH COMMUNICATION**

Internet WOM, also known as electronic WOM (eWOM) or word of mouse, diffuses information more rapidly than traditional interpersonal WOM communication and thus is particularly influential (Buttle, 1998; Hagel & Armstrong, 1997; Shea, Enghagen, & Khullar, 2004). The Internet has caused considerable changes in communication behavior, which requires an extension of traditional WOM to eWOM.

Prior research into WOM communication can be classified into three categories: the comparison of positive and negative messages, investigations of message recipients who seek or accept WOM information (input WOM), and considerations of the transmission of WOM information from the viewpoint of message transmitters (output WOM). Among the vast research comparing the influences of positive and negative messages, many studies confirm a negativity effect (e.g., Maheswaran & Meyers-Levy, 1990; Wright, 1974), which suggests that negative information is considered more useful, correct, and important. Herr, Kardes, and Kim (1991) indicate that negative information is more diagnostic when consumers evaluate products. Therefore, we discuss only the effects of negative messages in this study.

The second stream of research takes message recipients' viewpoint and discusses why consumers seek or believe WOM information. Consumers seek WOM information primarily to reduce their decision risks or cognitive dissonance (Buttle, 1998; File, Cermak, & Prince, 1994), and because services are more intangible and harder to evaluate, consumers are more likely to seek WOM information from experienced consumers before they purchase (Murray, 1991). However, message contents and consumers' reading motives also may affect their seeking or acceptance of WOM messages, as we consider herein.

The third research stream centers on message transmitters' viewpoint to determine why consumers transmit WOM information. Unsatisfied customers are more likely to transmit WOM messages, primarily because of their affective commitment (Harrison-Walker, 2001). In addition, a market maven role is important in WOM communications (Gelb & Johnson, 1995). However, message contents and consumers' reading motives may influence WOM transmission behaviors, and will be discussed in this study.

In summary, most previous studies focus on factors that influence either receivers or transmitters. However, we suggest that any discussion of WOM transmission behaviors must start with an analysis of opinion acceptance. Thus, we discuss the roles of both message receivers and senders and analyze the effects of message factors, perceived risk, and reading motives on the process of accepting and transmitting negative messages through virtual opinion platforms.

## **HYPOTHESES**

### **Perceived Risk of Service**

Perceived risk appears consistently in research pertaining to service industries, and seeking WOM information is common among consumers purchasing risky or intangible products (File et al., 1994). Many consumers perceive risks when they buy new products, and obtaining WOM information can lessen their uncomfortable feeling or reduce the risks. The intangible and heterogeneous nature of services increases perceived risks and makes consumers more likely to seek WOM information. Prior research also suggests that consumers of service industries tend to solicit information from family members or friends rather than from commercial sources (Buttle, 1998; Murray, 1991).

Brown and Reingen (1987) propose that consumers' confidence in their ability to make a good judgment decreases with increasing task difficulty, so they seek assistance from those whom they trust. Harrison-Walker (2001) notes that when it is difficult to assess a product or service, consumers depend on WOM information. That is, people usually pay more attention to messages with high risks than messages with low risks, such that messages about high-risk services are more likely to be noticed and transmitted to others. Transmitting messages about high perceived risk services can help other people reduce their decision risks. In addition, when consumers find negative information about a service with high perceived risk, they will increase their efforts to find related information and avoid patronizing the service. Consequently,

H1: Compared with low perceived risk services, high perceived risk services induce higher (a) transmission intentions and (b) boycott intentions.

### **Message Type**

Duhan, Johnson, Wilcox, and Harrell (1997) classify the message content of WOM communications into affective and instrumental cues. Affective cues relate to the product's appearance or aesthetics, whereas instrumental cues refer to its technical or performance aspects (Crane & Lynch 1988; Glassman & Glassman 1981; Lovdal & Pearson 1989). This conceptualization of product cues is generalizable across both goods and services categories.

We apply this concept and classify message content as either affective or instrumental. Affective messages are based on subjective criteria established by the purchaser, such as aesthetics, whereas instrumental messages are based on product

characteristics that are independent of the purchaser, more objective, and related to the product's function. In turn, objective instrumental messages are more diagnostic and useful to consumers in their decision-making processes. Consumers tend to believe instrumental messages on the Internet; because we study negative transmitted messages, we posit that consumers will have higher boycott intentions after reading an instrumental message. In addition, because instrumental messages are more likely to be perceived as true, we believe they will be considered important and diagnostic for a decision. Therefore, consumers will believe it helpful to share instrumental messages both via the Internet and among others. Consequently,

- H2: Among negative messages on the Internet, instrumental messages create higher (a) opinion acceptance, (b) transmission intentions, and (c) boycott intentions than affective messages.

### **Reading Motives**

The Internet can fulfill multiple information, entertainment, and interpersonal communication goals (Kraut, Mukhopadhyay, Szczypula, Kiesler, & Scherlis, 1999). Similarly, Wolfradt and Doll (2001) classify reading motives into information, interpersonal communication, and entertainment. Hennig-Thurau and Walsh (2003) designate motives for reading customer articulations on virtual opinion platforms into five types: (1) obtaining buying information, (2) social orientation through information, (3) community membership, (4) remuneration, and (5) learning to consume a product. We use factor analysis to retest these five motives and summarize them as informational and interpersonal motives. According to the literature, if consumers are driven by informational motives to read messages, they use opinion platforms to search for information that enables them to solve their personal problems. However, if consumers are driven by interpersonal motives, they emphasize interactions with social members and the sense of belonging and therefore are more likely to share information with others and act in accordance with the group. Thus, we propose:

- H3: Consumers driven by interpersonal motives have higher (a) transmission intentions regarding negative messages and (b) boycott intentions toward services than do consumers driven by informational motives.

### **Interaction Effect Between Message Types and Reading Motives**

Consumers with interpersonal motives like to build and maintain relationships with

others or achieve status and power in the virtual community. Therefore, they may be more likely to receive and share information with others and emphasize a sense of belonging to the community, which may result in higher opinion acceptance, transmission intentions, and boycott intentions toward negative, instrumental messages. In contrast, the main goal of consumers with informational motives is to seek useful information; therefore, they may not have different responses to the two types of messages.

H4: The interaction between message type and reading motive affects (a) opinion acceptance, (b) transmission intentions, and (c) boycott intentions. Specifically, compared with consumers driven by informational motives, consumers driven by interpersonal motives are more sensitive to different message types.

## RESEARCH METHOD

### Design

This study uses a 2 (perceived risk: high vs. low)  $\times$  2 (message type: affective vs. instrumental)  $\times$  2 (consumer reading motives: informational vs. interpersonal) between-subjects experimental design. A veterinary hospital represents the high perceived risk service, and a pet supplies store is the low perceived risk service.

We manipulate the message content using scenarios focused on affective or instrumental cues. Affective messages are based on subjective criteria that reflect the purchaser's preference. For example, the purchaser complains about the doctor's ugly appearance, bad attitudes, or smells in the veterinary hospital. The description thus focuses on personal judgments and uses emotional phrases. In contrast, the instrumental messages employ objective criteria and are related to the product's function (Duhan et al., 1997). For instance, a complaint alleges the poor ability of the doctors/staff at the hospital/supply store. Some functional characteristics, such as cleanness or service efficiency, also appear as instrumental cues.

We classify consumer reading motives as informational or interpersonal, according to a factor analysis from a pretest. To induce these two motives, we select Yahoo Knowledge Plus as the platform for consumers driven by informational motives and a class board on a BBS as the platform for consumers driven by interpersonal motives.

## Measures

We measure all dependent variables with seven-point Likert scales, where 1 represents strongly disagree and 7 represents strongly agree. Opinion acceptance reflects the degree of belief in and approval of the message content after subjects finished reading the messages; we measure it with six items: reliable, convinced, implausible (reverse coding), exaggerated (reverse coding), acceptable, and influential (Gershoff, Mukherjee, and Mukhopadhyay, 2003).

For transmission intentions, we adapt Hennig-Thurau and Walsh's (2003) approach and develop three items: (1) "I will tell my friends about it," (2) "I will speak to my colleagues and acquaintances," and (3) "I would forward the message to my friends."

We define boycott intentions as the subject's intention to avoid patronizing the service and measure it with three items: (1) "I will not consider patronizing this veterinary hospital/pet supplies store," (2) "If such an opportunity arises, I will go to this veterinary hospital/pet supplies store" (reverse coding), and (3) "I think it is not clever to patronize this veterinary hospital/pet supplies store."

We also measure two covariates: disposition to trust and pet attitude. For the former, we adopt 9 Likert-type, seven-point items from Gefen (2000) and Lee and Turban (2001), such as (1) "I generally trust other people," (2) "I tend to count upon other people," and (3) "I generally have faith in humanity." For attitudes toward pets, we borrow from Templer, Salter, Dickey, Baldwin, and Veleber (1981) and use 11 Likert-type, seven-point items, including (1) "I really like seeing pets enjoying their food," (2) "I would like a pet in my home," and (3) "I love pets."

## Process

First, subjects reviewed a scenario about reading negative messages about a veterinary hospital/pet supplies store on the Yahoo Knowledge Plus forum/class board on BBS. The messages focus on either instrumental or affective cues. After reading the scenario, subjects completed questions about their opinion acceptance, boycott intentions, and transmission intentions toward the messages. Finally, they answered several manipulation checks items, covariate variables, and demographic questions.

## RESULTS

Two hundred fifty-six undergraduate students participated in the experiment. All subjects were randomly distributed in eight cells. After we eliminate invalid



questionnaires, our valid sample includes 238 respondents, of whom 60% are female.

We measure the internal consistency of the questionnaire using Cronbach's  $\alpha$  and find that they exceed .80 (opinion acceptance = .87, boycott intention = .87, transmission intention = .90), which suggests the good reliability of the measures.

### **Manipulation Checks**

We use a seven-point item to check our manipulation of perceived risk: "According to subjective evaluation of a perceived loss after a wrong choice, a veterinary hospital/a pet supplies store is a low (1) to high (7) risk service." As we expected, the perceived risk for the veterinary hospital is greater than that of the pet supplies store ( $M = 5.07$  vs.  $4.20$ ,  $t(236) = 4.67$ ,  $p < .00$ ).

In addition, we measure two Likert-type, seven-point items to verify the manipulation of message types. Subjects who received affective messages indicated that the author of the message relied more on his or her subjective feelings than did subjects who received instrumental messages ( $M = 6.36$  vs.  $4.92$ ,  $t(236) = 7.95$ ,  $p < .00$ ), and subjects who received instrumental messages thought the author relied more on the substance of the service than did subjects who received affective messages ( $M = 5.23$  vs.  $3.18$ ,  $t(236) = 8.44$ ,  $p < .00$ ).

Furthermore, we adapt items from Hennig-Thurau and Walsh (2003) and Wolfradt and Doll (2001) and use nine Likert-type, seven-point items to check subjects' motives for reading messages on Yahoo Knowledge Plus or the class board on BBS. Six items focus on informational motives, such as (1) "I read messages on this forum because contributions by other customers help me make the right purchase decisions" and (2) "I read messages on this forum to benefit from others' experiences before buying a good or service." Three items focus on interpersonal motives, such as (1) "I read message on this forum because I really like being part of such a community" and (2) "I read message on this forum because I enjoy participating in the experiences of other community members." Subjects who read messages on Yahoo Knowledge Plus evaluated their forum as providing more information than did subjects who read messages on the class board on BBS ( $M = 5.17$  vs.  $4.44$ ,  $t(236) = 6.06$ ,  $p < .00$ ), and subjects who read messages on the class board on BBS evaluated the forum as more interpersonally motivated than those who read messages on Yahoo Knowledge Plus ( $M = 4.87$  vs.  $4.01$ ,  $t(236) = 5.64$ ,  $p < .00$ ). Therefore, our manipulations in this study are all successful.



## Hypotheses Testing

We tested our hypotheses using MANCOVA, with perceived risk, message content, and reading motive as the three independent variables and disposition to trust and pet attitude as two covariates.

We first examine the effects of perceived risk. The experimental results suggest that consumers who read messages with high perceived risk have higher boycott intentions ( $M = 4.54$  vs.  $4.26$ ,  $F(1, 228) = 3.46$ ,  $p = .06$ ) than those who read messages with low perceived risk, which suggests H1b is marginally significant. However, perceived risk does not have a significant effect on transmission intentions ( $M = 3.71$  vs.  $3.77$ ,  $F(1, 228) = 0.09$ ,  $p = .76$ ), so H1a is not supported.

The experimental results also demonstrate that consumers who read instrumental messages have higher opinion acceptances ( $M = 4.90$  vs.  $3.12$ ,  $F(1, 228) = 195.77$ ,  $p < .00$ ), transmission intentions ( $M = 4.54$  vs.  $2.94$ ,  $F(1, 228) = 61.30$ ,  $p < .00$ ), and boycott intentions ( $M = 5.66$  vs.  $3.14$ ,  $F(1, 228) = 288.61$ ,  $p < .00$ ) than those who read affective messages. These results are consistent with H2a–c.

In addition, our findings show that consumers who are driven by interpersonal motives have higher transmission ( $M = 3.93$  vs.  $3.55$ ,  $F(1, 228) = 3.44$ ,  $p = .07$ ) and boycott ( $M = 4.54$  vs.  $4.26$ ,  $F(1, 228) = 3.53$ ,  $p = .06$ ) intentions than those driven by informational motives. Thus, H3a–b are marginally significant.

Our experimental results also indicate significant interaction effects between message content and reading motives on opinion acceptance ( $F(1, 228) = 4.03$ ,  $p = .05$ ) and transmission intentions ( $F(1, 228) = 5.30$ ,  $p = .02$ ) and a marginally significant effect on boycott intentions ( $F(1, 228) = 3.17$ ,  $p = .08$ ). Thus, H4a–b are supported; H4c is marginally supported. Specifically, instrumental messages are more influential than affective messages, but the difference is greater for consumers who are driven by interpersonal motives. We find no significant interaction effect among the other variables.

To control for the potential impact of disposition to trust and pet attitude, we add these variables as covariates and find that disposition to trust has a positive impact only on opinion acceptance ( $F(1, 228) = 4.72$ ,  $p = .03$ ). Pet attitude has no significant effect on any dependent measure, suggesting that its influence can be ignored.

## GENERAL DISCUSSION

We demonstrate the effects of perceived risk, message content, and consumers'

motives on eWOM communication. In this section, we summarize the research results and discuss various academic and managerial implications.

### **Contributions**

The Internet plays a key role in consumers' daily life. People can fulfill their information, interpersonal communication, and entertainment needs with it, and as the Internet has grown, messages spread ever more widely and quickly. People can also seek and contribute information to virtual opinion platforms. Thus, more researchers are considering the issues of eWOM, and in this tradition, we focus on the effects of perceived risks, message contents, and consumer motives on eWOM communication behaviors in the context of a virtual opinion platform.

Our study makes several contributions. First, in contrast with previous research that focuses only on message receivers or transmitters, we discuss both roles simultaneously and consider both message acceptance and transmission intentions to gain a better understanding of eWOM behaviors. Second, most previous studies examine the influence of positive or negative messages, whereas we include additional factors and find that message types, such as instrumental or affective, and the perceived risk of services also have important influences on WOM communication behaviors. Third, this study examines consumer motives to accept and transmit WOM information.

### **Managerial Implications**

The Internet makes consumers more powerful, because they can transmit and receive organization-related messages instantly, regardless of the limits of geography. Firms should not ignore this powerful influence and make good use of it; this study provides several suggestions for doing so.

First, consumers may have higher boycott intentions toward high perceived risk services after they read negative messages. Therefore, high perceived risk firms must carefully monitor negative messages on the Internet to avoid the spread of rumors. Second, message type can influence WOM communication intentions. Specifically, instrumental messages are more objective and diagnostic than are affective messages and thus lead to greater opinion acceptance and higher WOM communication intentions. Therefore, firms should take advantage of the influence of instrumental messages by creating and diffusing positive messages with an instrumental perspective. Third, consumers driven by interpersonal motives have higher electronic or interpersonal WOM

communication intentions and want to share their feelings with others by transmitting messages. Thus, firms should communicate the benefits of their services, provide new information, or release positive news through people who read messages on interpersonal-motivated forums.

### **Directions for Further Research**

The main purpose of this study is to examine eWOM communication. Although the subjects in this study are all students, they constitute a significant user group and therefore can represent people who use Internet. However, additional research should collect data from all age groups to provide a deeper understanding of eWOM communication.

The present study uses the pet industry as a context. To determine if different results emerge from different industries, further research should explore eWOM communication in different industries and backgrounds. Furthermore, we use Yahoo Knowledge Plus and class board on BBS as virtual opinion platforms because they represent different reading motives. However, the nature and popularity of these two platforms also are quite different. Therefore, researchers might explore the effect of platform types or popularity. In addition, transmitters diffuse messages in various ways, including e-mail, newsgroups, chat rooms, and so forth, so additional research should extend our results to other Web contexts. Moreover, the importance weights of complaint messages and attribute centrality (i.e., central vs. peripheral) may affect the WOM process and should be considered in the future.

Finally, the results of this study show a significant interaction effect between message contents and reading motives. Researchers therefore should investigate whether a similarly significant interaction effect exists between reading motives and other variables, such as consumer involvement or other consumer traits.

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