The influences of electronic word-of-mouth message appeal and message source credibility on brand attitude

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Abstract
Purpose – Based on message source theory, the purpose of this paper is to use positive electronic word-of-mouth (eWOM) settings to examine the influence of message source credibility on brand attitude (brand trust, brand affection, and purchase intention). The current study also uses the elaboration likelihood model to examine the moderating effect of product involvement on the relationships between message appeals (rational vs emotional) and brand attitude, as well as between message source credibility and brand attitude.

Design/methodology/approach – Data were collected via internet questionnaires. Based on the internet investigation and pretest, this study chose the stimuli for research products, virtual brands, eWOM, and message source credibility. Via a 2 (notebooks vs shampoo) * 2 (appeal: rational vs emotional) experimental design, 211 effective samples were collected to verify the hypotheses of this study.

Findings – The results, for both notebooks and shampoo, are: the positive eWOM message with higher message source credibility indicates a better brand attitude than the eWOM message with lower message source credibility, and this effect is not moderated by the degree of product involvement, indicating its robustness. Second, with a high degree of product involvement, the rational appeal indicates a better brand attitude than the emotional appeal; no significant difference is found when product involvement drops to a low level.

Originality/value – Previous research investigating the moderating effect of involvement on the effects of message-appeal types and the message source credibility of eWOM is rare. The main contribution of this study is to fill this gap.

Keywords Electronic word-of-mouth (eWOM), Message appeal, Message source credibility, Product involvement, Brand attitude, Brand trust, Brands, Internet

Paper type Research paper

1. Introduction
Electronic word-of-mouth (eWOM) refers to the knowledge exchange consumers carry out online. This exchange has a direct relationship on customer loyalty, which in turn affects overall value of the company. Therefore, the effect of eWOM on consumers is gradually receiving increased attention (Gruen et al., 2006; Hennig-Thurau et al., 2004). eWOM differs from commercial advertisements because it is a non-commercial message created by consumers. This message provides direct experiences of consumers and affects the purchasing decisions of other consumers (Godes and Mayzlin, 2004; Park et al., 2007).
Research related to WOM mainly focuses on the effect of WOM on future sales (Godes and Mayzlin, 2004), the motivations of consumers to disseminate WOM (Hennig-Thurau et al., 2004), factors that influence consumers to use WOM communication (Duhan et al., 1997), and comparing WOM influences with other market information (Bickart and Schindler, 2001). The other research stream of WOM investigates influential factors related to its persuasion effects (product attitude and purchase intention), including message direction (favorable or unfavorable) (Arndt, 1967; Burzynski and Bayer, 1997; Mizerski, 1982; Park and Lee, 2009), message source accessibility (Herr et al., 1991), and message source similarity (Feick and Higie, 1992). Consumers generally believe that WOM credibility is higher than commercial advertisement. Hence, the effect of WOM is typically higher than advertisements (Herr et al., 1991). However, eWOM is unlike WOM. The recommendation message typically comes from anonymous individuals in a text-based format. Therefore, it is difficult for online consumers to use source similarity, i.e. whether or not the recommender is on the same side, to determine the credibility of the message (Chatterjee, 2001). Yet, message source credibility has a huge effect on whether or not the consumer believes the message. Few researches have investigated whether or not eWOM message source credibility influences persuasion effect. Various types of message appeals (rational or emotional) may affect the persuasive effects to the message receivers (Kotler and Keller, 2008). To establish an effective marketing strategy, marketers need to understand that message source credibility and the type of message appeal influence the effect of eWOM (Park and Lee, 2009).

Laurent and Kapferer (1985) pointed out that involvement consists of four dimensions: hedonic value, symbol value, interest, and perceived risk. Rossiter et al. (1991) defined involvement purely in terms of purchase risk perceived by the consumer; a low-risk purchase was categorized as low involvement and a risky purchase as high involvement. When consumers evaluate the product attribute, they are involved in the product and feel disturbed about the uncertainty of purchasing the product, which means they now have perceived risk (Chaudhuri, 2000). Zaichkowsky (1985), Roberson (1976) and Brooker (1981) separately pointed out that consumers with a high degree of product involvement actively look for information related to the product and evaluate all the alternatives, whereas consumers with a low degree of product involvement do not. Therefore, when degrees of product involvement differ, perceived risk for purchasing a product differs (Zaichkowsky, 1985). In sum, product involvement refers to the importance of the product to an individual, which affects purchasing behavior. Collecting product information reduces perceived risk. Consumers with a high degree of involvement have high perceived risk and consumers with a low degree of involvement have low perceived risk.

Wangenheim and Bayon (2004) indicated that when consumers perceive high social or psychological risk of a purchase, they would search for credible information that is more diagnostic or referential, such as WOM information, from a source they believe to be reliable. This is particularly true in Taiwan, where independent consumer organizations are rarely useful sources of reference. Consumers search for credible eWOM information from popular web sites and WOM from other reference groups. Consumer perceived risk of products has significant moderating effects on the outcome of WOM (Wangenheim and Bayon, 2004). Under a high degree of perceived risk, consumers invest significant efforts to make a purchasing decision and are easily
affected by WOM; consequently, the effect of WOM on purchasing decision is larger than the situation with a low degree of risk (Still et al., 1984). Hence, the interaction between perceived risk and message source credibility affects the influence of eWOM/WOM. As the level of perceived risk relates to the degree of involvement, the interaction between product involvement and message source credibility also affects the influence of eWOM/WOM. However, there are few related studies in the literature.

According to the social judgment theory (SJT), involvement moderates the effects on consumer attitude (Sherif and Hovland, 1961; Wang and Lee, 2005). The elaboration likelihood model (ELM) points out that the information-processing route of consumers is related to the degree of involvement. Consumers with a high degree of involvement tend to process information through a central route, whereas consumers with a low degree of involvement tend to process information through a peripheral route. Consumers of central route information processing are likely to think rationally and consumers of peripheral route information processing tend to judge by emotions (Petty and Cacioppo, 1981). The cognitive fit theory asserts that when the message type and consumer information-processing strategy are consistent, the consumer has a cognitive fit and a better attitude towards the tagged object (Vessey and Galletts, 1991).

Therefore, the level of consumer involvement moderates the influence of message-appeal types (rational or emotional) on the effects of WOM. Although the moderating role of product involvement is very important to understand the in-depth effect of eWOM message-appeal type on brand attitude, previous studies have not adequately addressed this interaction effect.

Based on the preceding discussion, this work assumes that individual degree of involvement affects the decision-making process and that the persuasive effects of the eWOM message-appeal type and message source credibility vary with individual degree of involvement. Previous studies investigating the moderating effect of involvement on the persuasive effects of the eWOM message-appeal type and message source credibility are rare. The main contribution of this study is to fill in this gap. This research employed product involvement as the moderator to test whether degree of involvement influences the effect of message-appeal types and message source credibility of eWOM on consumer brand attitude.

The theory of country-of-origin effect (Chao, 1993, 2001; Lampert and Jaffe, 1996; Veale and Quester, 2009) predicts that Asian-branded products in emerging countries might be unattractive to Western consumers. eWOM could be a great marketing tool for those product manufacturers to extend their business to developed countries in other Asian or Western countries, due to a well-established web infrastructure in these countries, which plays an important role in communicating consumption experiences between consumers. The findings of this study contribute to the practitioners of Asian-based manufacturers to increase their sales to other Asian countries or developed countries by adequately utilizing eWOM and the degree of consumer product involvement.

2. Literature review and hypotheses

2.1 Electronic word-of-mouth

WOM is oral person-to-person communication between a receiver and a sender, which involves a product, service, or brand. To the receiver, this messenger does not have strong commercial intent (Anderson, 1998; Harrison-Walker, 2001), which is why
consumers believe the credibility of WOM is higher than commercial advertisements (Herr et al., 1991). WOM is a widely accepted non-commercial information source that has a huge effect on consumer suggestion formation and purchasing decisions (Richins, 1983). This type of interpersonal communication affects marketer decisions (Hennig-Thurau et al., 2004). Any positive or negative statement effectively made to a multitude of people and institutions via the internet becomes the so-called eWOM or online WOM (Hennig-Thurau et al., 2004).

Besides, from the viewpoint of message senders, consumers who gather information from online discussions also show greater interest in the product topic than do those consumers who acquire information from the marketer-generated sources (Bickart and Schindler, 2001). It seems that eWOM may have much more influence on a consumer’s brand’s attitude and judgment than any other source of influence (Godes and Mayzlin, 2004). Thus, throughout the eWOM activity, consumers can obtain high levels of market transparency. In addition, they can take on a more active role in the value chain and influence products and prices according to individual preferences (Park and Kim, 2008) and the motivation for the consumers to use eWOM is increased.

2.2 Message appeal

Many studies have claimed that advertising message strategies can be classified as either informational or transformational (Golan and Zaidner, 2008; Laskey et al., 1989; Wells, 1980). The former refers to ads that appeal to the cognition or logic of consumers, whereas the latter refers to ads that appeal to the emotions or senses (Puto and Wells, 1984). Foote, Cone & Belding Communications Inc. explored and developed the so-called FCB grid. This grid classifies products in terms of high/low involvement and think/feel motivations – to create four types of goods/services, each having a different hierarchy of effects and a different advertising approach (Mortimer, 2002; Ratchford, 1987; Vaughn, 1986). Rossiter et al. (1991) argued that emotions could be positive or negative, and replaced labels of think and feel in the FCB grid with informational and transformational motivations. Taylor (1999) proposed the six-segment message strategy wheel, which divides advertising strategies into two communication views of Carey (1975): transmission and ritual. This division is similar to the informational and transformational dichotomy (Hwang et al., 2003). The transmission view is composed of three segments: ration, acute need, and routine, whereas the ritual view is composed of the ego, social, and sensory segments.

Kotler and Keller (2008) pointed out that message senders must think over the type of message they want to send to target receivers to obtain the expected response and defined that advertisement appeal should show some type of benefit, encouragement, agreement, or reason and why consumers should pay attention to or purchase the product. They classified message appeal into two categories:

(1) rational appeal – using consumer benefit as the appeal to present product attribute; and

(2) emotional appeal – appeal that can elicit consumer positive or negative emotions to arouse purchase willingness.

As for the eWOM message appeal, Voss et al. (2003) suggested eWOM as a way for consumers to share and discuss product and brand application experience. The consumption experience consumers share on the internet consists of hedonic
and utilitarian elements. Hedonic eWOM refers to the pleasant, gratified product experience consumers receive; utilitarian eWOM refers to product functionality and effectiveness. Park and Lee (2008) classified internet reviews into attribute-value reviews and simple-recommendation reviews. Attribute-value reviews contain product-relevant attribute/benefit information. These reviews are rational, objective, and concrete, based on facts about a product. Simple-recommendation reviews consist of emotional and subjective recommendations. These reviews present subjective feelings, interjection, and non-relative information, therefore they are emotional and abstract based on consumer feelings about a product.

Many studies have applied rational and emotional appeal to categorize advertisement appeal (Hotchkiss, 1949; Kotler and Keller, 2008; Simon, 1971), and empirically verify the validity of such categorization (Bang et al., 2005; Chen et al., 2005; Hetsroni, 2000). This type of classification is also similar to the informational/think/transmission and transformational/feel/ritual dichotomy. Although the categorization by Voss et al. (2003) and Park and Lee (2008) target eWOM appeals, they lack the opinion and application of follow-up researchers. The definitions of these two appeals for categorizing are similar to the definition established by Kotler and Keller (2008). Hence, according to basic message appeal categorization by Kotler and Keller, this research used rational and emotional appeal categorization for the eWOM message. The purpose was twofold. One was to test whether basic message appeal categorization can be applied in an eWOM setting, and the other was to strengthen measurement validity, because this type of appeal categorization has been used by many studies.

2.3 Message source credibility
Message source credibility refers to how much the message receiver believes in the sender. It is an attitude towards the message source (Gunther, 1992) that affects the receiver level of belief about what the source claims (West, 1994). This credibility is also an important factor affecting persuasion effectiveness (Hovland and Weiss, 1951). If the source has credibility, consumers will believe the message. Thus, credibility is how much the message reflects reality after the consumer’s evaluation (Ling and Liu, 2008).

Message source credibility is a high-order construct consisting of three sub-dimensions, trustworthiness, expertness, and attractiveness. Trustworthiness refers to the degree of confidence and acceptance receivers have towards the message sender. Expertness refers to professional knowledge the sender has about the product. Attractiveness refers to when the sender attracts receivers to consume products or services (Ohanian, 1990).

2.4 Involvement
Involvement is the level of relevance an individual has towards an event or object based on the individual, value, and interest, which is the level of attention a consumer has for a product or the level of motive and interest a product triggers (Batra and Ray, 1983; Goldsmith and Emmert, 1991; Zaichkowsky, 1985).

Involvement can be categorized into three types based on targets:

(1) product involvement – consumer concern or reactions towards products or brands;
advertisement involvement – consumer concern towards the advertisement message or consumer psychological state when encountering an advertisement; and

purchase decision involvement – consumer concern towards a certain purchasing activity or purchasing decision (Zaichkowsky, 1985).

In this research, involvement refers to product involvement.

2.5 Brand attitude

Attitude is an overall persistent evaluation towards people, things, or goods (Engel et al., 2006); it is a consistent positive or negative reaction towards certain things through learning (Hawkins et al., 2007; Schiffman and Kanuk, 2006), which includes favorable or unfavorable evaluation, emotional feeling, and behavioral tendency (Kotler and Keller, 2008). Brand attitude is the continuous preference or loathing tendency of the consumer towards a certain brand (Fishbein and Ajzen, 1980) and the overall evaluation the consumer has towards the brand. The evaluation base is the prominent benefit or image of the brand. The consumer judges whether the prominent benefit or image is beneficial and then forms an overall brand attitude (Wilkie, 1986), which is the comprehensive evaluation result of the consumer attitude towards the brand attribute (MacKenzie and Spreng, 1992). A positive individual attitude towards a brand may increase the chance of using the brand (Kotler and Keller, 2008).

Several previous studies have suggested three components of attitudes:

(1) cognitive component – the knowledge or cognition of the product formed after integrating direct experience or information obtained;

(2) affective component – the emotion or affective reaction of the consumer towards a product or brand, representing the direct or overall evaluation of the consumer towards the product; and

(3) conation component – the possibility or tendency of an individual act or behave with regard to the product (Assael, 2004; Guiltinan et al., 1997; Lutz et al., 1986; Rosenberg and Hanland, 1960).

Some studies have treated only cognitive/utilitarian and affective/hedonic components as perceptual attitude factors (Syvia and Chan-Olmsted, 2005; MacKenzie and Spreng, 1992; Muray and Vogel, 1997; Voss et al., 2003), while few studies have treated product/brand attitude as one dimension, i.e. affective component (Osgood et al., 1957). Because belief, affection, and intentions are components in most accepted hierarchical conceptualizations of the communication process (Engel et al., 2006; McGuire, 1976), this study adopted the theory of the three components of attitude. This research interpreted cognition as brand trust (Delgado-Ballester, 2004), affection as brand affection (Vakratsas and Ambler, 1999; Howard and Gengler, 2001), and conation as purchase intention (Bennett and Rundle-Thiele, 2000).

2.6 Message source credibility and brand attitude

The message source theory asserts that when source credibility is high, the receiver will be highly persuaded by the message, and when source credibility is low, the receiver will have doubts about the message (Eagly and Chaiken, 1993; Zhang and Buda, 1999). Ling and Liu (2008) suggested that consumers not only rely on the celebrity credibility...
to interpret the message, but also form their own attitude towards the advertisement and brand. When a celebrity possesses high source credibility, consumer attitude towards, and comprehension of, the advertisement and brand will be positive. Because eWOM sender plays the role of celebrity, the source credibility of eWOM will have similar effect on attitude towards the brand.

Positive WOM attracts new customers (Reichheld and Sasser, 1990). Consumers may base their judgments of trustworthiness and relevance of the recommendation upon the perceived similarity of peer attitudes and preference, as well as the feelings of rapport they share with the peer recommender (Bickart and Schindler, 2001; Kiecker and Cowles, 2001). This is similar to the way eWOM works. When eWOM about a product is positive, consumers are likely to consider the product desirable in conformity to the eWOM (Park and Lee, 2008). However, source credibility of the message influences this positive effect. Kiecker and Cowles (2001) recommended that if consumers perceived high attraction or expertness towards the eWOM source, the message would have higher persuasiveness and credibility to them. Based on the preceding discussion, the following hypotheses are advanced:

**H1.** For positive eWOM, consumer brand attitude of high message source credibility would be better than that of low message source credibility.

**H1-1.** For positive eWOM, consumer brand trust of high message source credibility would be better than that of low message source credibility.

**H1-2.** For positive eWOM, consumer brand affection of high message source credibility would be better than that of low message source credibility.

**H1-3.** For positive eWOM, consumer purchase intention of high message source credibility would be better than that of low message source credibility.

2.7 Moderating effects of involvement

Based on the concept of SJT, individual current attitude serves as the reference framework to categorize received information based on this framework (Sherif and Hovland, 1961). Individual attitude can be classified according to rejection and acceptance. Moreover, individual degree of involvement is a significant influential factor in the large difference among individual attitudes (Wang and Lee, 2005). Thus, involvement has an interference effect on consumer attitude. The ELM points out two routes that affect consumer attitude formation and alteration:

1. the central route – consumers decide whether to accept the message after rationally thinking through the message that is trying to persuade them; and

2. the peripheral route – altered consumer attitude is speculated based on extrinsic product cues (Petty and Cacioppo, 1981).

Message appeal can be classified as rational and emotional (Kotler and Keller, 2008). Here, eWOM plays two roles:

1. informants – online consumers deliver additional user-oriented information; and

2. recommenders – online consumers provide either a positive or a negative signal of product reputation (Park et al., 2007).
The informant role is similar to rational appeal, whereas the recommender role is similar to emotional appeal. Consumers with high involvement are most likely to apply central route information processing and are more willing to elaborate on eWOM content carefully to obtain additional product information. They are also more likely to assume the informant role in eWOM, which means they are more likely to accept the rational appeal of eWOM. Consumers with low involvement are most likely to apply peripheral route information processing and do not like the process of elaborating information. They are more likely to assume the recommender role in eWOM, which means they are more likely to accept the emotional appeal of eWOM. According to the cognitive fit theory, when the information type and consumer information processing are consistent, the consumer obtains a cognitive fit and better attitude towards the object (Vessey and Galletts, 1991). Based on this discussion, the following hypotheses are advanced:

\[ H2. \] Product involvement has moderating effects on the relationship between positive eWOM message appeal and brand attitude.

\[ H2-1. \] For positive eWOM, under high degree of product involvement, consumer brand attitude of rational appeal would be better than that of emotional appeal.

\[ H2-1-1. \] For positive eWOM, under high degree of product involvement, consumer brand trust of rational appeal would be better than that of emotional appeal.

\[ H2-1-2. \] For positive eWOM, under high degree of product involvement, consumer brand affection of rational appeal would be better than that of emotional appeal.

\[ H2-1-3. \] For positive eWOM, under high degree of product involvement, consumer purchase intention of rational appeal would be better than that of emotional appeal.

\[ H2-2. \] For positive eWOM, under low degree of product involvement, consumer brand attitude of emotional appeal would be better than that of rational appeal.

\[ H2-2-1. \] For positive eWOM, under low degree of product involvement, consumer brand trust of emotional appeal would be better than that of rational appeal.

\[ H2-2-2. \] For positive eWOM, under low degree of product involvement, consumer brand affection of emotional appeal would be better than that of rational appeal.

\[ H2-2-3. \] For positive eWOM, under low degree of product involvement, consumer purchase intention of emotional appeal would be better than that of rational appeal.

Likewise, when consumers have low involvement in the product of online consumer reviews, they would apply peripheral route information processing and pay more attention to non-product-related cues (Park and Lee, 2008). They would not elaborate on the functional attribute of the product and evaluate credibility of the source. On the contrary, when consumers possess a high degree of involvement, they would
apply central route information processing and elaborate the reviews of product-related information and source credibility. High-involvement subjects would have more motivation and higher ability to process the product information than low-involvement subjects adopting the peripheral route (Chien et al., 2007; Petty and Cacioppo, 1981). Thus, the positive effect of message source credibility on brand attitude would be higher for consumers in a high degree of product involvement than for those with a low degree of product involvement. Based on the preceding discussion, the following hypotheses are advanced:

**H3.** The positive effect of eWOM message source credibility on brand attitude would enhance as the degree of product involvement increases.

**H3-1.** The positive effect of eWOM message source credibility on brand trust would enhance as the degree of product involvement increases.

**H3-2.** The positive effect of eWOM message source credibility on brand affection would enhance as the degree of product involvement increases.

**H3-3.** The positive effect of eWOM message source credibility on purchase intention would enhance as the degree of product involvement increases.

### 3. Method

#### 3.1 Measurement

**3.1.1 Message appeal.** This study classified message appeals into rational appeal and emotional appeal. The text and images in a rational appeal message may emphasize product value, function, and benefit, whereas the text and images in an emotional appeal message may create a type of atmosphere and meaning to try to impress the consumer (Kotler and Keller, 2008). This study used two questions to measure rational and emotional cognitions of respondents in terms of eWOM message appeal. The first question (the message mainly describes the product function, benefit, and value) asked how much the subject agrees that the message is a rational appeal. The second question (the message mainly spreads a certain atmosphere, emotion, and feeling) asked how much the subject agrees that the message is an emotional appeal. Reverse scoring was applied to emotional appeal questions. For example, a score of 7 was reversely processed into 1; a score of 6 was reversely processed into 2, and so on. Finally, the scores of these two questions were added up. A high score means the subject thinks the advertisement message appeal was rational, whereas a low score means the subject thinks the appeal was emotional. These two questions were measured on a Likert seven-point scale anchored by “1 = strongly disagree” and “7 = strongly agree.”

**3.1.2 Message source credibility.** Message source credibility refers to how much the message receiver believes in the message spread by the source (Gunther, 1992). The measurement was based on the three sub-dimensional source credibility scale developed by Ohanian (1990). This research focused on measuring the source credibility of eWOM. Because the message sender who sent out eWOM cannot be contacted directly, the attraction sub-dimension could not be measured. Therefore, this research only used the other two sub-dimensions, expertness and trustworthiness, to measure message source credibility. Each sub-dimension includes five seven-point semantic differential scales (the Appendix). The average was used as the standard to mark high and low credibility.
3.1.3 Product involvement. Involvement is defined as “the level of relevance an individual has towards an object based on individual demand, value, and interest, which is the level of attention a consumer has for a product (Zaichkowsky, 1985).” The personal involvement inventory scale developed by Zaichkowsky (1994) was adopted for measurement, which includes ten seven-point semantic differential scales for measurement. The average was used as the standard to mark high and low involvement.

3.1.4 Brand attitude. Many researches claim three components for attitude: cognition, affection, and conation (Guiltinan et al., 1997; Rosenberg and Hanland, 1960; Schiffman and Kanuk, 2006). This research used brand trust, brand affect, and purchase intention to represent cognition, affection, and conation, respectively. Brand trust refers to the confidence of consumers that when they take a risk of brand choice, they are certain that the reliability and performance of the brand will meet their expectations (Delgado-Ballester, 2004). Brand affect refers to when the brand is able to trigger consumer positive affection, which in turn causes the consumer to use the brand (Chaudhuri and Holbrook, 2002). Purchase intention is the possibility and probability that the consumer is willing to purchase a certain product (Dodds et al., 1991). The measurement scales of these three dimensions were adopted from these researches, respectively, and all items were measured on a Likert seven-point scale anchored by “1 = strongly disagree” and “7 = strongly agree.”

3.2 Research design
This research selected notebooks and shampoo as the research products to represent electronics goods and fast-moving consumer goods (FMCG), respectively. The reason for this choice was that these two products represent shopping and convenience goods (Kotler and Keller, 2008), by which this study could demonstrate external validity, and that the eWOM message of these two product categories often includes both rational and emotional appeals. Virtual brands for these two products were designed as the stimuli to avoid the effect of brand image.

A pretest was conducted to find out the eWOM of rational and emotional appeals. The pretest participants were students from a university in Northern Taiwan. The total effective sample was 60, which included four versions of questionnaires for the main study based on two product categories (notebooks and shampoo) and two eWOM message appeals (rational and emotional). Online questionnaires were used as the data collection tool and convenience sampling was employed through forwarding e-mails. The process of data collection was set up such that after respondents received the e-mail, they randomly selected one of the four online questionnaire links. After linking to the selected questionnaire, participants answered the questionnaire. The answering sequence was:

- the degree of involvement regarding the research products;
- reading the product information and the eWOM; and
- answering other questions.

After completing the questionnaire, the participant was asked to forward this e-mail to other people with the expectation to obtain more samples.
4. Results
4.1 Basic data analysis

4.1.1 Pretest results. A total of 60 effective pretest samples were collected, 30 notebooks and 30 shampoos. To ensure that the eWOM messages of the questionnaire were correctly identified as rational and emotional appeals by respondents, six types of eWOM messages based on the result of an online field survey were designed for the pretest of each of these two products. Table I shows the results. For “DN-Portable” notebooks, the mean of eWOM (6) was the highest and was chosen as a rational appeal; the mean of eWOM (2) was the lowest and was chosen as the emotional appeal. For “Hi-Young” shampoo, the mean of eWOM (4) was the highest and was chosen as the rational appeal; the mean of eWOM (3) was the lowest and was chosen as the emotional appeal. Table II shows the chosen messages of the eWOM.

In terms of message source credibility, the current eWOM on the web was used as a reference. Finally, the maintenance staff of “DN-Portable” notebooks and the production staff of “Hi-Young” shampoo were chosen as the eWOM provider, for respondents to evaluate message source credibility. The means were 4.92 and 4.64, respectively.

4.1.2 Sample. A total of 211 effective samples were collected from the main study, including 102 notebooks and 109 shampoos. The sample contained a higher proportion of males (75.4 percent) than females (24.6 percent). A large percentage of younger consumers, aged 21-30 years, were also included in the samples (73.5 percent). Although the sample was skewed towards men and younger consumers, this is common in internet survey samples.

4.1.3 Manipulation checks. Manipulation checks were examined for testing whether subject recognition of rational and emotional level for the eWOM message on the main experiment conforms to the pretest or not. The results revealed that for notebooks, rational appeal received a higher score (M = 7.79) than emotional appeal (M = 5.94); and for shampoo, rational appeal obtained a higher score (M = 8.26) than emotional appeal (M = 6.29). T-tests revealed significances in mean message appeals (t (100) = 4.462, p = 0.000 for notebooks; and t (107) = 5.977, p = 0.000 for shampoo). Therefore, the present experiment adequately manipulated the message appeal of eWOM. The positive level of eWOM was also examined. The finding revealed it was significantly greater than 4 (M = 4.9515) in the seven-point scale at the p < 0.001 level (t (210) = 11.262, p = 0.000).

<table>
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<th>Message of eWOM</th>
<th>Means</th>
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<td></td>
<td>6</td>
<td>9.47</td>
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<tr>
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Table I. Evaluation results of eWOM message appeal
4.1.4 Validation of key constructs. The reliability of key constructs was examined using conventional methods since established scales were used in the present research. The Cronbach’s $\alpha$ of each construct exceeded the suggested cut-off value of 0.70 (Nunnally, 1978) (the Appendix). The results of the exploratory factor analysis revealed that the factor loadings of each construct were between 0.501 and 0.960, exceeding the suggested cut-off value of 0.5.

4.1.5 Sample checks. Convenience sampling via the internet was used for data collection. Manipulation checks confirmed that respondents did not demonstrate significant differences on the main variables of interest (including product involvement, rational and emotional message appeals, positive WOM level, message source credibility, and brand attitude) based on their demographic and behavioral data (including gender, age, education, occupation, monthly income, daily number of hours spent using the internet, and the degree of searching eWOM of products). Among the 84 ANOVA tests (two products*seven demographic variables*six main variables), the results revealed that only six tests showed significant differences on the main variables at the $p < 0.05$ level.

Gender might have moderating effects on brand attitude or affect the degree of involvement, which could interfere with the effect of the eWOM message. Therefore, ANOVA including interaction effects (gender*message appeal and gender*source credibility) was run for each product. The results showed no significant moderating effects on brand attitude by gender. The $t$-test also revealed no effects of gender on the degree of involvement for each product.

<table>
<thead>
<tr>
<th>Products</th>
<th>Message appeal</th>
<th>Message of eWOM</th>
</tr>
</thead>
<tbody>
<tr>
<td>“DN-Portable” notebooks</td>
<td>Rational</td>
<td>DN-Portable has the best specifications. It has a 13 in. screen, newest processor, and independent video card. Specifications of a notebook like this are similar to a PC. After using it, I think the sound quality of the speakers is great. It is good for listening to music or watching movies. The cooling design is also great. The notebook does not overheat easily. It is a brand worth purchasing</td>
</tr>
<tr>
<td></td>
<td>Emotional</td>
<td>When I first saw a DN-Portable notebook, I was attracted to its high-quality appearance. Not only is the external appearance of DN-Portable beautiful, but the quality is Japanese style, with a choice of five colors. Shiny pink and solid black can satisfy many girls and boys. Whenever I bring my notebook to school, now people look at me as if they are jealous and ask me what brand the notebook is. I am so happy!</td>
</tr>
<tr>
<td>“Hi-Young” shampoo</td>
<td>Rational</td>
<td>My hair is oily and my scalp is sensitive, which means there are not many shampoos I can use. However, after using Hi-Young shampoo, my hair is not as oily and is soft and untangled. The prickly and itchy feeling on my scalp is gone. This shampoo also has a moisturizing effect. If your hair is like mine, I recommend that you use this shampoo</td>
</tr>
<tr>
<td></td>
<td>Emotional</td>
<td>Can you imagine? After using Hi-Young shampoo, it is like you are embraced by nature or running through the grass with a slight breeze. The once withered flowers and grass are instantly supplemented with energy. Your hair shines like the sun to allow you to show self-confidence everyday. Come and feel it yourself!</td>
</tr>
</tbody>
</table>

Table II. Chosen eWOM for pretest
4.2 Hypotheses test

4.2.1 The effect of message source credibility. The means of the message source credibility were used to divide the samples of notebooks and shampoo into high and low message source credibility. Brand attitude and its three sub-dimensions were used as the dependent variables to carry out one-factor MANOVA. The results (Table III) revealed that for notebooks, $H^2 = 0.309$, $p = 0.000$ (high credibility $n = 57$, low credibility $n = 45$); and for shampoo, $H^2 = 0.483$, $p = 0.000$ (high credibility $n = 70$, low credibility $n = 39$). The values were all significant. Table IV shows that the differences on dependent variables between high and low source credibility for notebooks and shampoo were all positive and significant at the $p < 0.001$ level. This indicates that consumers who perceive high-eWOM message source credibility would have higher brand attitude along with its three sub-dimensions (brand trust, brand affection, and purchase intention) than consumers who perceive low message source credibility, thus supporting $H_1$, $H_1-1$, $H_1-2$, and $H_1-3$.

4.2.2 The moderating effect of involvement. The notebooks and shampoo samples were divided into high- and low-involvement groups based on the means (notebooks, $M = 4.88$, $n = 54$ and 48 for high/low involvement; shampoo, $M = 4.42$, $n = 53$ and 56 for high/low involvement). Next, two-factor MANOVA was conducted to examine the moderating effect of involvement on the relationship between message appeal and brand attitude, and the result was shown in Table V. For notebooks, the interaction term showed that $H^2 = 0.102$, $F(4, 95) = 2.433$ and was significant at the $p < 0.05$ level; for shampoo, the interaction term showed that $H^2 = 0.125$, $F(4, 102) = 3.289$ and was significant at the $p < 0.05$ level. The contrast comparison results (Tables VI and VII) revealed that for the high-involvement sub-sample of notebooks and shampoo, brand attitude, brand trust, brand affection, and purchase intention of rational appeal were all better than those of emotional appeal and were significant at the $p < 0.05$ level, thus supporting $H_2-1$, $H_2-1-1$, $H_2-1-2$, and $H_2-1-3$. However, for the low-involvement sub-sample of these two products, brand attitude, brand trust, brand affection, and purchase intention of rational appeal were still better than those of emotional appeal, although the differences were small and insignificant. Therefore, $H_2-2$, $H_2-2-1$, $H_2-2-2$, and $H_2-2-3$ were not supported. This may be because eWOM is often presented as text, with few images or videos, which makes emotional appeal difficult to present and reduce the effect of emotional appeal (Park and Lee, 2009). However, when compared to high involvement, the differences in brand attitude and its sub-dimensions for emotional and rational appeals decrease. This implies that when product involvement is low, the eWOM of rational appeal may not be better than emotional appeal to enhance consumer brand attitude. Based on this discussion of both notebooks and shampoo, hypothesis $H_2$ was supported.

Another two-factor MANOVA test was conducted to examine the moderating effect of involvement on the relationship between message source credibility and brand

<table>
<thead>
<tr>
<th>Products</th>
<th>Hotelling's trace value</th>
<th>$F$</th>
<th>(df1, df2)</th>
<th>$P$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Notebooks</td>
<td>0.309</td>
<td>7.579</td>
<td>(4, 097)</td>
<td>0.000*</td>
</tr>
<tr>
<td>Shampoo</td>
<td>0.483</td>
<td>12.914</td>
<td>(4, 104)</td>
<td>0.000*</td>
</tr>
</tbody>
</table>

*Significant at: $^* p < 0.001$
<table>
<thead>
<tr>
<th>Notebooks</th>
<th>Brand attitude</th>
<th>Brand trust</th>
<th>Brand affection</th>
<th>Purchase intention</th>
</tr>
</thead>
<tbody>
<tr>
<td>High vs low credibility</td>
<td>0.711 (4.155 – 3.444)</td>
<td>0.735 (3.995 – 3.260)</td>
<td>0.654 (4.088 – 3.434)</td>
<td>0.705 (4.453 – 3.748)</td>
</tr>
<tr>
<td>SE</td>
<td>0.142</td>
<td>0.135</td>
<td>0.173</td>
<td>0.204</td>
</tr>
<tr>
<td>F</td>
<td>24.972</td>
<td>29.520</td>
<td>14.341</td>
<td>11.941</td>
</tr>
<tr>
<td>(df1, df2)</td>
<td>(1, 100)</td>
<td>(1, 100)</td>
<td>(1, 100)</td>
<td>(1, 100)</td>
</tr>
<tr>
<td>P</td>
<td>0.000**</td>
<td>0.000**</td>
<td>0.000**</td>
<td>0.001**</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Shampoo</th>
<th>Brand attitude</th>
<th>Brand trust</th>
<th>Brand affection</th>
<th>Purchase intention</th>
</tr>
</thead>
<tbody>
<tr>
<td>High vs low credibility</td>
<td>1.046 (4.166 – 3.120)</td>
<td>0.969 (3.995 – 3.026)</td>
<td>1.072 (4.119 – 3.047)</td>
<td>1.154 (4.469 – 3.314)</td>
</tr>
<tr>
<td>SE</td>
<td>0.154</td>
<td>0.160</td>
<td>0.154</td>
<td>0.220</td>
</tr>
<tr>
<td>F</td>
<td>46.129</td>
<td>36.726</td>
<td>48.498</td>
<td>27.654</td>
</tr>
<tr>
<td>(df1, df2)</td>
<td>(1, 107)</td>
<td>(1, 107)</td>
<td>(1, 107)</td>
<td>(1, 107)</td>
</tr>
<tr>
<td>P</td>
<td>0.000**</td>
<td>0.000**</td>
<td>0.000**</td>
<td>0.000**</td>
</tr>
</tbody>
</table>

**Note:** Significant at: *p < 0.01, **p < 0.001
attitude and its three sub-dimensions. The results revealed that for both notebooks and shampoo, the interaction terms were not significant at the $p < 0.05$ level (notebooks $p = 0.053$, shampoo $p = 0.279$). The ANOVA results also revealed the same pattern for each dependent variable. Therefore, $H_3, H_3-1, H_3-2,$ and $H_3-3$ were all not supported. This implies that the positive effect of eWOM message source credibility on brand attitude and its sub-dimensions (brand trust, brand affection, and purchase intention) is naturally robust and is not affected by the degree of product involvement.

5. Conclusion and discussions

5.1 Theoretical implications

The results indicate a direct and positive relationship between message source credibility and brand trust, brand affection, purchase intention, and brand attitude, and support $H_{1-1}, H_{1-2}, H_{1-3}, H_{1},$ and past research. In particular, high credibility towards the eWOM message source increases perceived quality, decreases perceived risk (Erdem and Swait, 1998), induces high persuasiveness (Eagly and Chaiken, 1993), and improves brand attitude. $H_3$ predicted enhanced positive effect of eWOM message source credibility on brand attitude with an increased degree of involvement. However, the results of this study revealed that the positive effect of eWOM message source credibility on brand trust, brand affection, purchase intention, and overall brand attitude are not affected by the degree of product involvement, which means these relationships are naturally robust. This also indicates the importance of message source credibility on the effect of eWOM on brand attitude.

$H_2$ predicted that product involvement would moderate the relationship between eWOM message appeal and brand attitude. This effect was supported by the result of MANOVA (Table V) and has not been addressed in previous research; hence, this finding is a valuable contribution to eWOM and branding research streams. Based on the SJT (Sherif and Hovland, 1961) and the ELM (Petty and Cacioppo, 1981), we argue that consumers with high product involvement prefer to apply the central route rather than the peripheral route to elaborate eWOM content. They are more likely to assume the informant role rather than the recommender role in the context of eWOM (Park et al., 2007) and to accept eWOM of rational appeal rather than emotional appeal. According to the cognitive fit theory (Vessey and Galletts, 1991), this would result in enhanced consumer attitude towards the object. The results support these theories and indicate that consumers with a high degree of product involvement have better brand trust, brand affection, purchase intention, and overall brand attitude towards eWOM of rational appeal than towards emotional appeal. However, under low product

<table>
<thead>
<tr>
<th>Products</th>
<th>Factors</th>
<th>Hotelling’s trace value</th>
<th>$F$</th>
<th>(df1, df2)</th>
<th>$P$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Notebooks</td>
<td>Product involvement</td>
<td>0.036</td>
<td>0.846</td>
<td>(4, 95)</td>
<td>0.500</td>
</tr>
<tr>
<td></td>
<td>Message appeal</td>
<td>0.122</td>
<td>2.901</td>
<td>(4, 95)</td>
<td>0.026*</td>
</tr>
<tr>
<td></td>
<td>Product involvement*message appeal</td>
<td>0.102</td>
<td>2.433</td>
<td>(4, 95)</td>
<td>0.053</td>
</tr>
<tr>
<td>Shampoo</td>
<td>Product involvement</td>
<td>0.030</td>
<td>0.786</td>
<td>(4, 102)</td>
<td>0.537</td>
</tr>
<tr>
<td></td>
<td>Message appeal</td>
<td>0.085</td>
<td>2.236</td>
<td>(4, 102)</td>
<td>0.070</td>
</tr>
<tr>
<td></td>
<td>Product involvement*message appeal</td>
<td>0.125</td>
<td>3.289</td>
<td>(4, 102)</td>
<td>0.014*</td>
</tr>
</tbody>
</table>

Table V. MANOVA results of product involvement and message appeal towards brand attitude

Note: Significant at: $^*p < 0.05$
<table>
<thead>
<tr>
<th>Appeals</th>
<th>Base of contrast involvement</th>
<th>Contrast</th>
<th>Dependent variables</th>
<th>Purchase intention</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Brand attitude</td>
<td>Brand trust</td>
<td>Brand affection</td>
</tr>
<tr>
<td>Rational vs emotional</td>
<td>High</td>
<td>Differences (Rational − emotional)</td>
<td>0.515 (4.078 − 3.563)</td>
<td>0.441 (3.967 − 3.526)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>SE 0.210</td>
<td>0.209</td>
<td>0.264</td>
</tr>
<tr>
<td></td>
<td></td>
<td>( F ) 5.985</td>
<td>4.431</td>
<td>4.657</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(df1, df2) (1, 52)</td>
<td>(1, 52)</td>
<td>(1, 52)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>( P ) 0.018 *</td>
<td>0.041 *</td>
<td>0.036 *</td>
</tr>
<tr>
<td></td>
<td>Low</td>
<td>Differences (Rational − emotional)</td>
<td>0.161 (3.931 − 3.770)</td>
<td>0.443</td>
</tr>
<tr>
<td></td>
<td></td>
<td>SE 0.255</td>
<td>0.257</td>
<td>0.303</td>
</tr>
<tr>
<td></td>
<td></td>
<td>( F ) 0.400</td>
<td>2.979</td>
<td>0.763</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(df1, df2) (1, 46)</td>
<td>(1, 46)</td>
<td>(1, 46)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>( P ) 0.530</td>
<td>0.090</td>
<td>0.386</td>
</tr>
</tbody>
</table>

**Note:** Significant at: *\( p < 0.05 \)
<table>
<thead>
<tr>
<th>Base of contrast involvement</th>
<th>Appeal</th>
<th>Dependent variables</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Contrast</td>
<td>Brand attitude</td>
</tr>
<tr>
<td>High</td>
<td>Rational vs emotional</td>
<td>0.738</td>
</tr>
<tr>
<td></td>
<td>SE</td>
<td>0.235</td>
</tr>
<tr>
<td></td>
<td>F (df1, df2)</td>
<td>10.430</td>
</tr>
<tr>
<td></td>
<td>P</td>
<td>*0.002</td>
</tr>
<tr>
<td>Low</td>
<td>Rational vs emotional</td>
<td>0.254</td>
</tr>
<tr>
<td></td>
<td>SE</td>
<td>0.248</td>
</tr>
<tr>
<td></td>
<td>F (df1, df2)</td>
<td>1.055</td>
</tr>
<tr>
<td></td>
<td>P</td>
<td>0.309</td>
</tr>
</tbody>
</table>

Notes: Significant at: *p < 0.05, **p < 0.01, ***p < 0.001

Table VII. Contrast results of brand attitude based on involvement and message appeal (shampoo)
involvement, the differences are insignificant. Whether the appeal is emotional or rational, the effect on brand trust, brand affection, purchase intention, and overall brand attitude does not significantly differ. Even so, the verification process verified that under a low degree of product involvement, although rational appeal still outperforms emotional appeal on brand attitude and its sub-dimensions, the differences diminish and are insignificant. This shows that when product involvement is low, although emotional appeal has persuasive effect, it cannot exceed the effect made by rational appeal.

5.2 Marketing implications
The present research indicates that irrespective of the degree of involvement, message source credibility is an important factor influencing formation of brand attitude, brand trust, brand affection, and purchase intention of eWOM, whether or not the products are electronics goods such as notebooks or FMCG such as shampoo. Obtaining a positive eWOM effect includes increasing professionalism and reliability of the message source. Professionalism emphasizes the experience and knowledge of the message provider; reliability perceives the message provider as reliable, honest, trustworthy, and sincere to enhance credibility in the minds of consumers.

The present research provides guideline for selecting an effective message appeal for eWOM. Based on present study findings, rational appeal, rather than emotional appeal, should be adopted to enhance overall brand attitude and its sub-dimensions of positive eWOM under a high degree of product involvement, whether or not the products are electronics goods such as notebooks or convenience goods such as shampoo. The present research also indicates that under a low degree of involvement, brand attitudes of the eWOM using emotional and rational appeal do not significantly differ, whether or not the products are notebooks or shampoo. Thus, either appeal can be utilized to promote the brand disseminated in the eWOM.

Based on the findings of this study, Asian-branded manufacturers can promote their products to global markets by utilizing eWOM, to influence or arrange the source credibility and appeal type of the message. For example, marketing practitioners of FMCG such as shampoo, or electronics goods such as notebooks, can build a web site in host countries of target markets for consumers to share consumption experiences and for potential customers to increase knowledge about the company via eWOM and to try products.

5.3 Limitations
One limitation of this research relates to generalisability of the findings. This research only examined positive eWOM effect. However, previous research argues that the effect of negative eWOM cannot be ignored (Hennig-Thurau and Walsh, 2003; Smith and Vogt, 1995). Therefore, examining only positive eWOM effect may not be sufficient. In terms of message source credibility, this research only supplied respondents with provider occupation as a judgment reference. Other factors may affect eWOM message source credibility. The occupation of a message sender as a proxy also limits measurement of the expertness dimension of message source credibility, although this seems unavoidable in an eWOM setting. This research selected notebooks as electronics goods and shampoo as FMCG for the research products. Although considering differences for various types of products, the results can only be confidently applied to these products. This research used an online questionnaire as the data collection tool.
More frequent use of the internet by males caused a higher proportion of male samples. There were also many younger samples. Although this is common in internet surveys, the findings may not project to other samples such as mail interception. Finally, this experiment only used one eWOM. Although it reduced interaction and complexity, it did not meet realistic eWOM settings and might therefore affect external validity of the research.

5.4 Future research directions
This study offers several directions for future research. Researches can apply this experimental model to different products or objects to increase the generalisability of the results. Because eWOM can be positive or negative (Andrea, 2006; Hennig-Thurau and Walsh, 2003), future research can look into the persuasion effects of negative or even neutral eWOM and compare the result with positive eWOM. Future research can also manipulate factors that may affect eWOM message source credibility, such as detailed information of the eWOM provider, message content, webpage design, and web site reputation to discuss the persuasion effects of eWOM message source credibility on consumers. Variables related to consumer characteristics such as cognitive risk and product knowledge, should be included to examine whether they have any effects on eWOM persuasion effects. This study selected fictive brands as the stimuli to avoid the effect of brand image. Future research could select real brands, as these reflect daily consumer behavior and could influence the effect of eWOM. Finally, for simplification, this research did not manipulate eWOM message source credibility. Future research can manipulate this variable and examine whether its interaction with message appeal affects brand attitude.

References


Further reading

Appendix. Measurements, reliability, and mean of variables
Measures used in the main study
Construct (source) (Cronbach’s α and mean: 1 = notebooks, 2 = shampoo).
Product involvement (Zaichkowsky, 1994) (α1 = 0.866, α2 = 0.751; M1 = 4.88, M2 = 4.42):
- important-unimportant;
- boring-interesting;
- relevant-irrelevant;
- exciting-unexciting;
- means nothing-mean a lot to me;
- appealing-unappealing;
- fascinating-mundane;
- worthless-valuable;
- involving-uninvolving; and
- not needed-needed.
Message source credibility (Ohanian, 1990) (α1 = 0.907, α2 = 0.896; M1 = 4.38, M2 = 3.90).
(1) Expertness:
- expert-not an expert;
- experience-inexperience;
- knowledgeable-unknowledgeable;
- qualified-unqualified; and
- skilled-unskilled.
(2) Trustworthiness:
- dependable-undeependable;
- honest-dishonest;
- reliable-unreliable;
- sincere-insincere; and
- trustworthy-untrustworthy.
Brand attitude (α1 = 0.954, α2 = 0.956; M1 = 3.83, M2 = 3.81).
(1) Brand trust (Delgado-Ballester, 2004) (α1 = 0.913, α2 = 0.921; M1 = 3.75, M2 = 3.65):
- This is a brand that meets my expectations.
- I feel confidence in this brand.
- This is a brand that will not disappoint me.
- This brand guarantees satisfaction.
- This brand would be honest and sincere in addressing my concerns.
- I could rely on this brand to solve the problem.
(2) Brand affection (Chaudhuri and Holbrook, 2002) \((\alpha_1 = 0.927, \alpha_2 = 0.888; M1 = 3.83, M2 = 3.76):\)

- I feel good if I purchase this brand.
- This brand makes me happy.
- This brand gives me pleasure.

(3) Purchase intention (Dodds et al., 1991) \((\alpha_1 = 0.934, \alpha_2 = 0.965; M1 = 3.95, M2 = 4.08):\)

- The likelihood of purchasing this brand is high.
- If I will go into buy this product, I would consider buying this brand.
- At the brand, I would consider buying the product.
- The probability that I would consider buying the brand is high.
- My willingness to buy the brand is high.

About the authors
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