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The Effects Of Direction Of Electronic Word-Of-Mouth And Tie Strength On Purchase Decisions: Self-Construal As The Moderator

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Abstract

Electronic Word-of-Mouth (eWOM) has become an important communication method and has received considerable interest. This study examined how direction of eWOM (positive vs. negative) and tie strength influence consumers' online purchase decision making and how the relationships are moderated by self-construal of online consumers. The empirical results showed that the effects of eWOM direction on intention to click, attitude toward the product ad, product attitude, and purchase intention were stronger for consumers with interdependent self-construal than for those with independent self-construal. Besides, the results also showed that the effects of tie strength between reviewer and consumer on intention to click, attitude toward the product ad, product attitude and purchase intention were stronger for interdependent consumers than for independent consumers when receiving eWOM from their strong ties; whereas, the effects were stronger for independent consumers than for interdependent consumers when receiving eWOM from their weak ties. The findings of this study offer insights for advertiser to develop effective online marketing strategy on social networking sites.

Keywords: eWOM, Self-construal, Tie Strength, Online Marketing Strategy

1 INTRODUCTION

Social media is a group of internet-based applications that allows the creation and exchange of user generated content (Kaplan & Haenlein 2010). The emergence of social media has created a bidirectional many-to-many communication channel among consumers, who could receive product information from their friends via functions such as liking or commenting products on Facebook, rather than receiving product information from their friends in a face-to-face/one-to-one context as in traditional Word-of-Mouth. The dissemination of product information on social media could be deemed as a form of electronic Word-of-Mouth (eWOM). eWOM is defined by Litvin, Goldsmith and Pan (2008) as informal communications between consumers through Internet-based technology related to the usage or characteristics of goods, services, or their sellers. eWOM is different from traditional WOM in multiple aspects. Notably, eWOM volume and reach are substantially enhanced and is archived indefinitely. Moreover, the rise of social networking sites (SNS) has made it possible for consumers to receive eWOM from friends of varying degrees of closeness. Because of its availability, eWOM has become an important source of product information and review for consumers.

Social networking sites enable consumers to receive product reviews and opinions held by members of their social networks. Therefore, social factors should play an important role in the effects of eWOM. In particular, the degree to which the consumer want to be influenced varies. Some people prefer to rely on their own judgment whereas others tend to accept friends' opinions if they value fitting into the group. The degree to which the consumer want to be influenced reflects the concept of self-construal. Proposed by Markus and Kitayama (1991), self-construal refers to how individuals define and make meaning of the self, and the degree to which they see the self as separate from or connected with others. Markus and Kitayama identified two kinds of self-construals, independent (IndSC) and interdependent (InterSC). Individuals with IndSC tend to care more about maintaining one's uniqueness, while individuals with InterSC tend to pay greater attention to the matter of fitting into the group and conforming to the social norm (Cross & Madson 1997). Therefore, consumers' difference in self-construal may affect how much they are influenced by eWOM from members of their social networks. Thus, consumers' self-construal may play an important role in the effects of eWOM from members in their social networks, including product attitude and purchase decisions.

The other social factor that will be studied in this research is tie strength between the sender and the receiver of eWOM. Social networks differ in terms of the degree of people's closeness to their friends, which is referred to as tie strength (Granovetter 1973). Past studies have shown that people trust others who are their strong ties more than their weak ties (Gilbert & Karahalios 2009) due to the fact that strong ties are more similar to oneself in knowledge and beliefs than weak ties (Granovetter 1973, 1983). Researchers further indicated that WOM received from strong ties are more influential than that of weak ties in decision-making (Brown and Reingen 1987; Koo 2016). In fact, recent study has shown that, on social networking sites, users also trust their strong ties more than their weak ties (Wu et al. 2014). However, it remains unclear whether such effect is consistent for users with different self-construals and hence merit further investigation.

Similar to tie strength, direction of eWOM (positive vs. negative) has also been shown to be strongly associated with consumer purchase behavior (Godes & Mayzlin 2004; Cheung & Thadani 2012). Nonetheless, it remains unclear whether consumers of different self-construal may react to friends' positive or negative eWOM differently which could affect their purchase decisions. Thus, the purpose of this research is to examine the role of self-construal and how it affect the relationship between direction of eWOM and tie strength, and consumer purchase behavior in the context of social networking site. Specifically, research questions to be addressed are as follows: First, how does different direction of eWOM influence consumers' online purchase behavior? Second, how does the tie strength of message source affect consumers' online purchase behavior? Finally, whether the effects of tie strength and direction of eWOM are the same for people of different self-construal?

Through this study, we aim to better understand how consumers' difference in self-construal may influence how they perceive eWOM from members of their social networks and how it affect their

online purchase decisions. Using our findings, companies may design more effective online advertising mechanisms which involve customized marketing strategy according to consumer's self-construal. The remainder of this paper is organized as follows: Section 2 presents the literature review, Section 3 gives the research methodology, Section 4 demonstrates the empirical results, and Section 5 offers the discussion and conclusion, theoretical and managerial implications, and limitations and future research.

2 LITERATURE REVIEW

2.1 eWOM Effects

As the Internet become an important vehicle for WOM communication, eWOM has brought major changes to consumer-to-consumer communication. Traditionally, WOM communication is often oral, informal and limited by temporal or physical space (Stern 1994). On the contrary, eWOM differs from WOM in the following ways: First, eWOM harnesses the unlimited reach of the Internet for individuals to share opinions on a one-to-world platform (Litvin et al. 2008). By enabling consumers to retrieve mass electronic word-of-mouth information from others in a low cost and timely manner, eWOM is more diffusible than traditional WOM. Second, eWOM can come from diverse sources including acquaintances and total strangers (Ratchford et al. 2001; Lim & Van Der Heide 2015); whereas, traditional WOM mainly comes from family and friends. This variance in closeness of the eWOM sources further increases the scope of eWOM that consumers may receive. Finally, eWOM is highly accessible because most text-based information on the Internet are archived for an indefinite long period of time (Cheung & Thadani 2012). Thus, consumers can easily retrieve a large number of both positive and negative eWOM information concerning a particular product. The importance of eWOM and the influence of its characteristics on consumers' online purchase behavior has resulted in a substantial research stream.

Research has shown that consumer-created eWOM information can significantly increase people's intention to visit a webpage (Zhang et al. 2010). The intention to click was driven by people's desire to get the complete product information. Cho (2003) defined a similar concept, clicking banners, as a voluntary action to see more detailed advertisement by requesting more information. Intention to click refers to the action of clicking on a web advertisement, which transports surfers to the advertiser's target website (Ducoffe 1996; Briggs & Hollis 1997). Therefore, we defined intention to click as people's motivation to acquire more detail information about the product through clicking on the advertisement and it was one of the basic effects that would be examined. WOM has also been shown to influence consumers' attitude toward the advertisement and the product. Past research suggested that consumers would consider information created by fellow consumers as more credible than seller-created (Dellarocas 2003; Flanagin et al. 2014). Moreover, Doh and Hwang (2009) also indicated that eWOM significantly influence product attitude. Lastly, eWOM was demonstrated to influence consumer product judgement and have a causal impact on consumer purchase behavior (Lee & Youn 2009; Chevalier & Mayzlin 2006). Thus, intention to click, attitude toward the product ad, product attitude, and purchase intention are included as our dependent variables.

In particular, content of eWOM and source of eWOM has been widely studied. Specifically direction of eWOM (positive vs. negative) has been shown to have significant impact on consumers. Previous research suggested that positive eWOM information would increase consumer's purchase decisions; whereas, negative eWOM information would decrease consumer's purchase decisions. Moreover, the eWOM influence appears to be asymmetrical in that negative reviews have a stronger influence on the product attitude and product sales of potential buyers than positive reviews (Lee et al. 2008; Cui et al. 2012). Furthermore, source of eWOM is relevant to its influence. The intensity of a social tie (strong vs. weak) between consumers can significantly influence how eWOM is perceived. In fact, past study indicated that eWOM received from strong ties are more influential than that of weak ties in decision-making (Koo 2016). Thus, direction of eWOM and tie strength are two factors to be examined in this research.

Many of the early eWOM researches were conducted on online discussion forums and blogs where

online interactions were mostly between total strangers (Bickart & Schindler 2001; Riegner 2007; Huang & Chen 2006). However, the emergence of SNS allowed online exchange of product information among friends within social network. Users can see reviews from their friends, and users' actions (e.g. like, comment, share) are also viewed by their friends. As individuals' relationship with the source become salient, how they see the self in relation to others may affect their attitude toward the reviews, information processing, and ultimately purchase decision. That is to say, individuals' difference in self-construal may influence online reviews' effect on their purchase behavior. Hence, the effect of self-construal in influencing the relationship between eWOM and online purchase behavior still calls for further research.

However, the influence of eWOM depends on the degree to which the readers can be or want to be influenced. Some people prefer to rely on their own judgment whereas some people tend to listen to others. This is characterized by individual's difference in self-construal. Individuals with IndSC prefer to make independent judgement based on internal traits whereas individuals with InterSC tend to conform to the majority's belief. Thus, the present study aims to further examine the role of self-construal as a moderator in the effects of direction of eWOM and tie strength of eWOM on consumers' intention to click, attitude toward the ad, product attitude and purchase intention.

2.2 Self-construal

In their seminal work (1991), Markus and Kitayama created the term self-construal in describing the ways that westerners and easterners define and make meaning of the self. Two types of self-construal were identified: independent self-construal and interdependent self-construal. People with an independent self-construal tend to define the self as fundamentally individual and separate from others. They value demonstrating their uniqueness and use internal traits that are stable across situations (e.g. intelligent, outgoing, and shy) to define oneself (Cross et al. 2010). Their principal goal is to stand out from the group and consider being "the same person" across situations as signs of maturity (Markus & Kitayama 1991). On the contrary, people with interdependent self-construal tend to define the self by relationships with others. They value fitting into the group and reference to important relationships or group memberships to define oneself. Besides, they also consider changing one's behavior to answer to the demands of varying situations and controlling emotional expression to sustain group harmony as signs of maturity (Cross, et al. 2010).

It was also found that self-construal can coexist in an individual and various priming techniques can temporarily increase its accessibility in memory (Gardner et al. 1999; Lalwani & Shavitt 2009). Trafimow et al. (1991) found that when an individual is primed with an interdependent themed story, the individual is less likely to access independent self-construal on a second task than those primed with independent themed story. Several other research also confirmed that the accessibility of self-construal in memory can be temporarily influenced by priming techniques (Ybarra & Trafimow 1998; Aaker & Lee 2001; Utz 2004). That is to say, individuals may possess both independent and interdependent aspects of self. But the relative strength of independent vs. interdependent self-construal may vary across ethnocultural background (Singelis 1994; Triandis 1989). Markus and Kitayama (1991) suggested that independent self-construal is more salient in Western countries; whereas, interdependent self-construal is more salient in non-Western countries. Nonetheless, chronic differences in the strength of self-construals can still exist in one country. For example, white Americans tend to be more independent and less interdependent than Hispanic Americans (Triandis 1989).

Past research has shown the importance of self-construal in influencing individual's information processing, motivation, and social behavior (Markus & Kitayama 1991; Kanagawa et al. 2001; Agrawal & Maheswaran 2005; Zhang & Shrum 2009). As noted above, individuals' differences in self-construal could dictate whether they prefer to separate/connect with social context, value internal features (e.g. abilities, traits) or external features (e.g. relationships, statuses), and be unique or fit in to the social group. As social networking sites such as Facebook allows individuals to interact with people in their social network, individuals' difference in self-construal may affect how much they can be influenced by their Facebook friends, and ultimately affect their information processing and online

behavior. In this study, we would explore the effects of eWOM from three different aspects: the characteristic of message (positive/negative), the characteristic of sender/receiver relationship (strong tie vs. weak tie), and the characteristic of the receiver (interdependent vs. independent).

2.3 Tie Strength

WOM communication is carried within social relationship of varying closeness, which is represented by the construct of tie strength (Money et al. 1998). As eWOM communication started to take place on SNS, tie strength has become increasingly relevant in the online context. Mark Granovetter (1973) defined tie strength as “A (probably linear) combination of the amount of time, the emotional intensity, the intimacy (mutual confiding), and the reciprocal services which characterize the tie.” Tie strength ranged from weak to strong in a continuous manner, and past studies defined tie strength by several variables such as the frequency of contacts, duration of the tie, and importance attached to the relation (Homans 1950, 1961; Granovetter 1973). That is to say, the more frequent, durable, and important the social tie, the stronger it is (Weimann 1983). Thus, close friends and relatives are assumed to be strong ties, while neighbors, co-workers, acquaintances or friends of friends are treated as weak ties (Marsden & Campbell 1984; Gilbert & Karahalios 2009).

Strong ties are the people who one trust and their social circles tightly overlap with each other (Gilbert & Karahalios 2009). They are similar in many respects and are more likely to know the same things (Granovetter 1973, 1983; Reagans 2011). On the other hand, weak ties serve as information bridges across cliques of strong ties and can offer people access to resources and creativity that are not found in their strong-tie relationships (Constant et al. 1996; Perry-Smith 2006). Weak ties are superior in number to strong ties, and provide diverse opinions (Friedkin 1982; Perry-Smith & Shalley 2003). Whereas, strong ties provide information that are perceived as more credible than that of weak ties (Rogers 1983; Van Hove & Lievens 2007).

Because an individual is more likely to have similar value and interest with strong ties, eWOM received from strong ties would be deemed more trustworthy by an individual. In fact, past studies indicated that the WOM information received from strong ties were more influential to individual's decision making than from weak ties (Brown and Reingen 1987; Koo 2016). Moreover, empirical studies have shown that tie strength is positively related to SNS user's intention to click, attitude toward the ad, and purchase intention (Ketelaar et al. 2015; Koo 2016; Wang & Chang 2005). Specifically, the eWOM provided by strong tie has a stronger influence on SNS users' intention to click, attitude toward the ad, and purchase intention than weak tie.

2.4 Self-construal as a Moderator on the Effects of eWOM

As discussed in the previous text, direction of eWOM and tie strength have been shown to influence consumer's intention to click, attitude toward the ad, product attitude, and purchase intention. However, people with different types of self-construal can be influenced by the opinions of their friends to different degrees. Thus, the effect of positive/negative eWOM of strong/weak ties could be different for independent and interdependent individuals. Therefore, we propose that the effects of eWOM directions and tie strength would be moderated by consumer's self-construal. InterSC individuals see themselves as part of a social group and tend to behave according to the social norm followed by others in the group to feel a sense of belonging (Markus & Kitayama 1991). On the contrary, IndSC individuals value being different from others and are more likely to rely on their own abilities and judgement (Brewer & Gardner 1996). Thus, it can be inferred that InterSC individuals would care about reviews from friends on the website more than IndSC individuals. If there is an advertisement with a positive review, it would have a more positive impact on InterSC people than on independent ones. On the other hands, if there is an advertisement with a negative review, it would have a more negative impact on InterSC individuals than on independent ones. Based on the above inference, we propose the following hypothesis:

H1: *Self-construal moderates the relationships between direction of eWOM and user's intention to click (H1a), attitude toward the ad (H1b), product attitude (H1c) and purchase intention (H1d). Specifically, the effects of eWOM direction on intention to click, attitude toward the ad, product*

attitude and purchase intention were stronger for interdependent individuals than for independent individuals.

Extant study has shown that InterSC individuals value the opinion of close others while IndSC individuals seek to maintain their uniqueness (Cross et al. 2010). Thus, InterSC individuals are more likely to view eWOM from their strong ties more strongly than IndSC individuals. On the other hand, IndSC individuals seek to be unique from their in-groups (Markus & Kitayama 1991). As weak ties act as information bridges across cliques of strong ties and offer people access to information that are not found in their in-groups (Constant et al. 1996), IndSC could use the information to make judgement and still maintain their uniqueness from their in-groups. Therefore, IndSC individuals would view eWOM from their weak ties more strongly than InterSC individuals. Thus, we propose the following hypothesis:

H2: *Self-construal moderates the relationships between sender’s tie strength and receiver’s intention to click (H2a), attitude toward the ad (H2b), product attitude (H2c) and purchase intention (H2d). Specifically, the effects of tie strength on intention to click, attitude toward the ad, product attitude and purchase intention were stronger for interdependent individuals than for independent individuals with strong tie; whereas, the effects were stronger for independent individuals than for interdependent individuals with weak tie.*

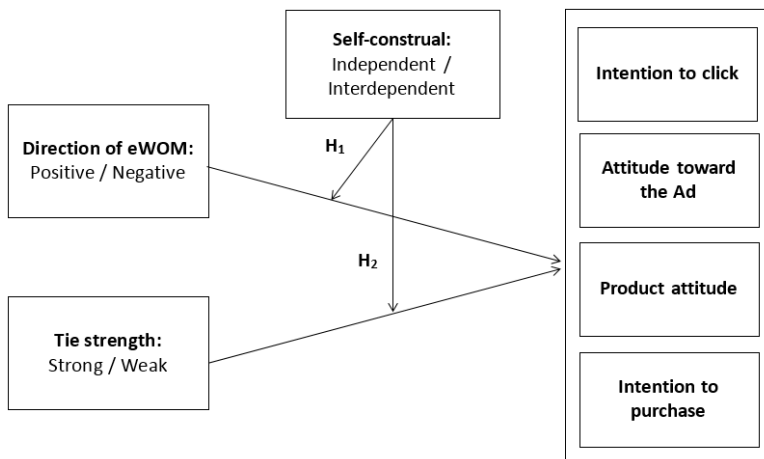


Figure 1. Conceptual Model

3 RESEARCH METHODOLOGY

As previously noted, individuals can have both types of self-construal and the accessibility can be temporarily increased by priming techniques. Thus, laboratory experiments were conducted to manipulate participants’ self-construal and to avoid other possible confounding variables. Moreover, the effects of eWOM direction and tie strength were studied in two separate experiments to mitigate carryover effect and to reduce the chances of participants suffering boredom from long experiment duration which could possibly skew the results.

3.1 Study 1: Effects of Direction of eWOM and Self-construal

3.1.1 Experimental Design

To test the proposed hypotheses, a laboratory experiment was conducted. The independent variables were self-construal (independent vs. interdependent) and direction of eWOM (positive vs. negative). Both independent variables were between-subjects variables; hence, there were in total of 4 conditions in study 1. Participants were randomly assigned to one of four conditions.

In order to manipulate the self-construal of participants, two techniques introduced by Trafimow et al. (1991) were adopted: the similar/different prime technique and the “anecdote” prime technique. In the

similar/different prime technique, participants in the IndSC condition were asked to think about what makes them different from their family members and friends; whereas, participants in the InterSC condition were asked to think about what makes them similar to their family members and friends. In the “anecdote” prime technique, participants read a story about a feudal ruler selecting a commander to lead a detachment of soldiers to aid the ruler’s overlord in a war. For participants in the IndSC condition, the story continued with the ruler choosing a talented but unrelated general to increase his personal prestige; whereas, for participants in the InterSC condition, the story continued with the ruler choosing a family member to increase the family’s prestige. Through using both prime techniques, we tried to ensure that participant’s self-construal were successfully manipulated. The direction of eWOM was presented by showing participants either a positive or negative review about a product on a webpage. The webpage was created by the experimenters based on real Facebook fan pages to maintain a natural layout. Participants were instructed to seek product information on the webpage and evaluate their intention to click, attitude toward the ad, product attitude, and purchase intention, which were the dependent variables in this study.

3.1.2 *Experimental Material*

On the experiment webpage, product information was presented in a combination of product description, product image, a hyperlink that leads to additional product information, and a review (positive or negative) by a consumer who has purchased the product. The review was adapted and constructed based on real reviews from Facebook fan pages. On average, the reviews were 41 words long (SD = 8). Notably, we created the webpage to ensure that webpage in each condition would contain the same information except the direction of eWOM to avoid possible confounding variables. Moreover, the names of the webpage were fabricated to prevent confounding effects such as website reputation inherent in actual Facebook fan pages. Please see Appendix A for the presentation of the webpage.

Products presented to the participants were selected based on the following criteria: First, the products were generally used by both genders to avoid gender differences. Second, the brand name was blurred to avoid potential brand biases. Third, although not actually shown in this study, the price of the products had to be generally affordable to the younger generations, which constitute a considerable portion of online users (Close & Kukar-Kinney 2010). Finally, the products had to be easily found and actually sold online. As a result, shampoo and running shoes were selected.

To ensure successful manipulation, scales for manipulation check were implemented. To measure the result of self-construal manipulation, participants were asked the extent to which finishing the two tasks make them think (i) about themselves, and (ii) about others (e.g., friends, family). Answers were collected on Likert scales ranging from 1 (not at all) to 7 (a lot) (Duclos & Barasch 2014). The manipulation would be deemed successful if participants in interdependent self-construal condition reported having in mind friends or family more than their counterparts in independent self-construal condition, and vice versa.

To measure the dependent variables, scales from past literature were used. To measure intention to click, we asked participants to report their intention to click on the hyperlink that leads to additional product information, with response ranging from 1 “very unlikely” to 7 “very likely” (Cho 1999). As for attitude toward the ad, we adopted a 3-item 7-point semantic differential scale developed by McQuarrie and Mick (1999). The scale was anchored by “liked/disliked,” “unpleasant/pleasant,” and “enjoyed/did not enjoy.” Another 3-item 7-point semantic differential scale developed by Sicilia et al. (2005) was used to measure product attitude, anchored by “attractive/unattractive,” “I like it/I do not like it,” “it is good/it is bad.” Purchase intention was measured by a single item asking “How likely is it that you would consider buying this product if you had enough money?” followed by a 7-point scale ranging from “very unlikely” to “very likely” (Sundar & Kim 2005). Finally, participants answered questions about their demographic information, including gender, age, income, occupation, and education.

3.1.3 *Participants*

Participants were recruited through PTT Bulletin Board System, the largest bulletin board system in Taiwan, which are widely used by college students. Originally, 152 people participated in study 1. Please note that we deleted participants who received InterSC prime reporting more likely to have themselves than to have friends or family in mind and participants who received IndSC prime reporting more likely to have friends or family than to have themselves in mind. In total, 6, 4, 11, and 5 participants were deleted from Positive review x InterSC, Positive review x IndSC, Negative review x InterSC, and Negative review x IndSC condition, respectively. In the end, there were 126 valid subjects (83% of the original sample). Among the participants, 39% (49/126) were male and 61% (77/126) were female; 85% (107/126) were students and 15% (19/126) were non-student; 89% (112/126) were between 20 to 29-year old and 11% (14/126) were 19-year old or below or 30-year old or above. Participants were asked to fill out a written consent form upon arrival and were informed of the experiment procedure. Participants who finished the experiment received NT\$150 (Equivalent to US\$4.5) as the incentive in the end of the experiment. Each participant spent 25 minutes, on average, to complete the entire experiment.

3.1.4 *Experimental Procedure*

The experiment took place in our behavioral science lab and each participant was assigned a computer to complete the tasks by oneself. Participants were first invited to read and sign the consent form and were randomly assigned to one of the four conditions. First, participants were instructed to read a story about a Sumer feudal ruler selecting a commander to lead an army aiding the ruler's overlord in a war. Depending on the participants' priming condition (IndSC or InterSC), the story would continue with the feudal ruler selecting either a talented general based on individualistic concern (The feudal ruler's personal prestige would increase if the talented general excels at war) or a member of his family based on collectivistic concern (The feudal ruler's family prestige would increase if a family member excels at war). Participants were then asked to make a judgement about the main character and complete the similar/different prime that was congruent with their assigned self-construal condition. After receiving self-construal priming, participants were presented two product advertisements: shampoo and running shoes, accompanied by either a positive or a negative comment depending on participants' assigned conditions. After they viewed each product, participants were asked to report their intention to click, attitude toward the ad, product attitude and purchase intention. Finally, participants completed the demographic questionnaire.

3.2 Study 2: Effects of Tie Strength and Self-construal

3.2.1 *Experimental Design*

The experimental design of study 2 was exactly the same as study 1 except that the independent variables were self-construal (independent vs. interdependent) and tie strength of Facebook friend (strong tie vs. weak tie). Participants received the same manipulation for self-construal, but got recommendation from friends of different tie strength instead of positive or negative reviews.

To manipulate participants' tie strength of Facebook friend, we directly used the friends listed on participants' Facebook. We found that friend list on Facebook is sorted by contact frequency. The Facebook friends with more interactions with the user (strong tie) usually appear in the front of his/her friend list. Therefore, participants assigned to the strong tie conditions were instructed to report the name of the friend that appeared first on friend list and participants assigned to the weak tie condition were instructed to write down the name of the friend that appeared last. The friend's name would later be used to indicate his/her attitude toward the advertisement of shampoo and running shoes.

3.2.2 *Experimental Material*

As in study 1, the same criteria were employed to select the products and same scales were adopted to measure the dependent variables. Moreover, the manipulation check for self-construal was also the same as in study 1. However, in study 2, an additional scale was employed to measure participants' tie strength. Eight items from 4 scales were adopted (Mesch & Talmud 2006; Pollet et al. 2011; Levin &

Cross 2004; Gilbert & Karahalios 2009). Sample questions include “How close do you feel to your friend?” and “How often do you contact with this friend in any way.”

3.2.3 Participants

Originally, 131 people participated in study 2. Similar to the practice in Study 1, invalid participants who failed with harboring the assigned self-construal were removed. Even though list position of Facebook friends can be an indicator of tie strength, it is still not a perfect indicator. Therefore, we deleted participants who were assigned in the strong tie condition but reported a low tie strength with the friend (average score below 3 on the 7-point tie strength scale). We also deleted participants, who were assigned to the weak tie condition and reported a high score of tie strength (an average score above 5 on the tie strength scale). In total, 12, 10, 11, and 10 participants deleted from Strong tie x InterSC, Strong tie x IndSC, Weak tie x Inter SC, and Weak tie x IndSC condition, respectively. In the end, there were 88 valid subjects (67%). Among the participants, 56% (49/88) were male and 44% (39/88) were female; 77% (68/88) were students and 23% (20/88) were non-student; 88% (77/88) were between 20 to 29-year old and 12% (11/88) were 19-year old or below or 30-year old or above. As in study 1, participants were recruited through PTT, instructed to fill out a written consent form, and informed of the experiment procedure. Participants from study 1 did not participate in study 2.

3.2.4 Experimental Procedure

The experimental procedure in study 2 was nearly identical to that of study 1 with some minor differences: After completed the self-construal priming, participants were instructed to log into their Facebook account to retrieve the name of the first or last person on friend list depending on their assigned condition. Participants then typed in the name of the person to the experiment webpage and indicated their closeness with the friend using the 8-item tie strength scale. Next, the friend’s name appeared above the advertisements of shampoo and running shoes, indicating that the friend “like” the product. Notably, the webpage layout was exactly the same as study 1 except that consumer reviews were replaced by friend’s “like” to focus on tie strength’s effect on the dependent variables. Please see Appendix B for the presentation of the webpage.

4 EMPIRICAL RESULTS

4.1 Manipulation Check

The manipulation of the independent variable, self-construal was validated for both experiments. In study 1, participants assigned to interdependent conditions reported having thought of friends or family in mind significantly more often than participants in independent conditions (5.58 vs. 4.16, $F(1,212) = 106.31$, $MSe = 1.001$, $p < 0.0001$). On the other hand, participants assigned to independent conditions were significantly more likely to think about themselves than participants assigned to interdependent conditions (5.64 vs. 4.48, $F(1,212) = 64.65$, $MSe = 1.110$, $p < 0.0001$). In study 2, participants assigned to interdependent conditions also reported having friends or family in mind significantly more often than participants in independent conditions (5.63 vs. 4.03, $F(1,124) = 77.11$, $MSe = 1.05$, $p < 0.0001$); whereas, participants assigned to independent conditions were significantly more likely to think about themselves than their counterparts in interdependent conditions (5.50 vs. 4.50, $F(1,124) = 25.06$, $MSe = 1.25$, $p < 0.0001$). In addition, tie strength was also checked for validity of manipulation. Participants in strong tie conditions scored significantly higher on their reported closeness with the selected Facebook friend than individuals in the weak tie conditions (5.46 vs. 2.53, $F(1,86) = 152.22$, $MSe = 1.237$, $p < 0.0001$). Analysis of the results indicated that participants’ self-construal and tie strength were successfully manipulated.

4.2 Reliability of Measurement

To estimate the reliability of the constructs, Cronbach’s α were calculated for tie strength, attitude toward the product Ad, and product attitude scales. The Cronbach’s α values were 0.964, 0.966, and 0.934, respectively, and were in the commonly acceptable range of reliability (Nunnally 1978). As for intention to click and purchase intention, no Cronbach’s α could be reported because they were each

measured by one item question. With the reliability of measurement confirmed, the results' reliability were satisfactory.

4.3 Study 1: Effects of Direction of eWOM and Self-construal

The MANOVA test was conducted to examine whether the changes in the independent variables have significant effects on the dependent variables. The results of MANOVA showed significant multivariate main effect for direction of eWOM ($F(4,241) = 8.56, \Lambda = 0.88, p < 0.01$), indicating that direction of eWOM positively affect the dependent variables. More importantly, the interaction effect of direction of eWOM and self-construal was also significant ($F(4,241) = 5.11, \Lambda = 0.92, p < 0.01$), suggesting that the effects of direction of eWOM on the four dependent variables were significantly moderated by self-construal.

Univariate effects were examined by using ANOVA to see the effects of independent variable on each of the four dependent variables. On average, the participants exposed to positive eWOM had a significantly higher level of intention to click than that of participants exposed to negative eWOM (3.56 vs. 2.65, $F(1, 32) = 20.62, MSe = 2.52, p < 0.0001$). Similarly, participants exposed to positive eWOM also reported a higher level of attitude toward the product Ad (4.20 vs. 3.56, $F(1, 24) = 32.73, MSe = 0.79, p < 0.0001$), higher level of product attitude (4.14 vs. 3.30, $F(1, 13) = 33.80, MSe = 1.30, p < 0.0001$), and higher level of purchase intention (3.23 vs. 2.35, $F(1, 2) = 8.89, MSe = 4.84, p = 0.05$) than their counterparts in the negative eWOM conditions. In sum, the empirical results show that direction of eWOM had simple main effects on intention to click, attitude toward the ad, product attitude, and purchase intention. The results were consistent with past research (Lee et al. 2008; Xia & Bechwati 2008).

As shown in Figure 2(a), the relationship between direction of eWOM and user's intention to click was moderated by self-construal in that the effect of eWOM direction on intention to click was stronger for interdependent than for independent participants. However, the interaction between eWOM direction and self-construal was insignificant for intention to click ($F(1, 2) = 1.28, MSe = 7.60, p = 0.19$, therefore, hypotheses 1a was not supported.

As expected, the relationship between direction of eWOM and user's attitude toward the ad was moderated by self-construal. As shown in Figure 2(b), the effect of eWOM direction on attitude toward the ad was stronger for interdependent than for independent participants. Moreover, the interaction between eWOM direction and self-construal was statistically significant for attitude toward the ad ($F(1, 3) = 10.48, MSe = 1.86, p < 0.05$). That is, hypotheses 1b was supported.

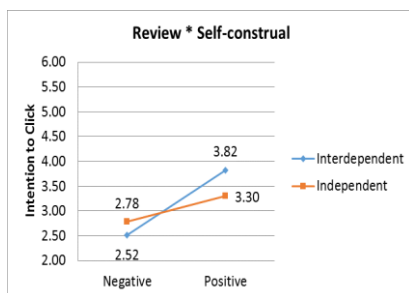


Figure 2(a). The Effect of Direction of eWOM and Self-construal for Intention to Click

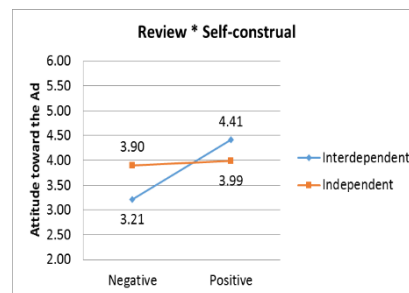


Figure 2(b). The Effect of Direction of eWOM and Self-construal for Attitude toward the ad

As shown in Figure 2(c), the relationship between direction of eWOM and user's product attitude was also moderated by self-construal in that the effect of eWOM direction on product attitude was stronger for interdependent than for independent participants. The interaction between direction of eWOM and self-construal was statistically significant for product attitude ($F(1, 3) = 4.91, MSe = 2.10, p = 0.06$). Thus, hypothesis 1c was also supported.

Lastly, the relationship between direction of eWOM and user's purchase intention was moderated by

self-construal. As figure 2(d) illustrates, the effect of eWOM direction on purchase intention was stronger for interdependent than for independent participants. Moreover, the interaction between direction of eWOM and self-construal was highly significant for purchase intention ($F(1, 10) = 16.45$, $MSe = 1.36$, $p = 0.001$), strongly supporting hypothesis 1d. The findings of study 1 indicate that the relationships between direction of eWOM and user's attitude toward the ad, product attitude and purchase intention are moderated by self-construal. Specifically, the results show that the effect of eWOM direction on attitude toward the ad, product attitude and purchase intention was stronger for interdependent individuals than for independent individuals.

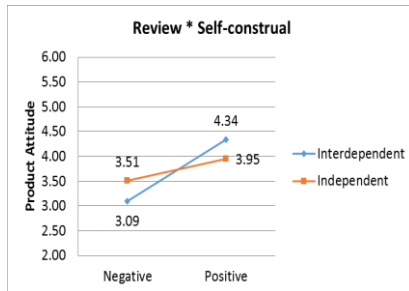


Figure 2(c). The Effect of Direction of eWOM and Self-construal for Product Attitude

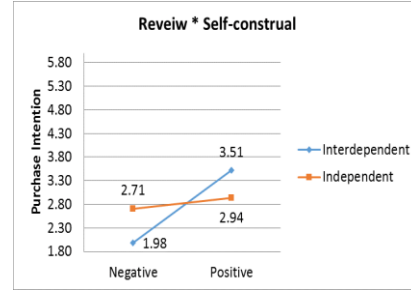


Figure 2(d). The Effect of Direction of eWOM and Self-construal for Purchase Intention

4.4 Study 2: Effects of Tie Strength and Self-construal

MANOVA was also used to analyze the empirical results of experiment 2. The results of MANOVA analysis did not show a significant multivariate main effect for tie strength ($F(4,165) = 0.27$, $\Lambda = 0.99$, $p = 0.90$). This insignificant result could be caused by effects of tie strength offset by people of different self-construal, suggesting the need for testing interaction effects. As expected, the interaction effect of tie strength and self-construal was significant ($F(4,165) = 2.36$, $\Lambda = 0.95$, $p = 0.05$), suggesting that the effects of tie strength were significantly moderated by self-construal.

ANOVA was used to examine the effects of independent variables on each of the four dependent variables. On average, the participants exposed to strong tie did not have a significantly higher level of intention to click (3.11 vs. 2.94, $F(1, 7) = 0.33$, $MSe = 3.77$, $p = 0.29$), attitude toward the ad (4.04 vs. 4.05, $F(1, 10) = 0.01$, $MSe = 1.25$, $p = 0.47$), product attitude (3.96 vs. 3.96, $F(1, 12) = 0$, $MSe = 1.16$, $p = 0.49$), and purchase intention (2.97 vs. 2.85, $F(1, 37) = 0.23$, $MSe = 2.88$, $p = 0.32$) than that of participants exposed to weak tie. This is because that the presence of interaction limited the generalizability of main effect. Specifically, results from participants exposed to interdependent and independent self-construal offset each other's effects. Therefore, further analysis was needed.

After performing ANOVA, it was found that the interaction between tie strength and self-construal was statistically significant for intention to click ($F(1, 25) = 6.46$, $MSe = 2.67$, $p < 0.01$), supporting hypothesis 2a. As shown in Figure 3(a), strong ties generated higher intention to click than weak ties for interdependent participants (3.80 vs. 3.00, $t(78) = 2.158$, $sd = 0.37$, $p < 0.05$); whereas weak ties generated higher intention to click than strong ties for independent participants (2.94 vs. 2.45, $t(96) = -1.45$, $sd = 0.34$, $p = 0.08$).

As predicted, the interaction between tie strength and self-construal was statistically significant for attitude toward the ad ($F(1, 33) = 7.54$, $MSe = 0.91$, $p < 0.01$). Thus, hypothesis 2b was supported. As figure 3(b) illustrates, the relationship between tie strength and user's attitude toward the ad was moderated by self-construal in that strong ties generated higher attitude toward the ad than weak ties for interdependent participants (4.35 vs. 3.97, $t(78) = 1.648$, $sd = 0.23$, $p = 0.05$); whereas weak ties generated higher attitude toward the ad than strong ties for independent participants (4.17 vs. 3.73, $t(84.41) = -2.511$, $sd = 0.17$, $p < 0.01$).

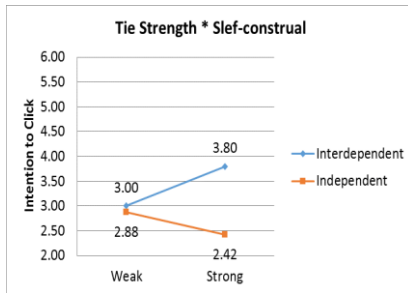


Figure 3 (a). The Effect of Tie Strength and Self-construal for Intention to Click

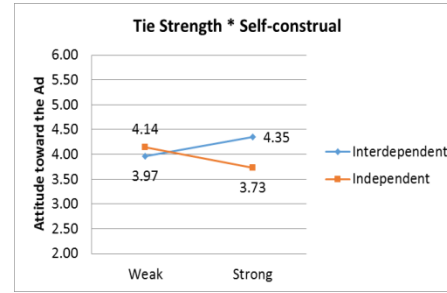


Figure 3 (b). The Effect of Tie Strength and Self-construal for Attitude toward the ad

As predicted, the interaction between tie strength and self-construal was statistically significant for product attitude ($F(1, 19) = 7.59, MSe = 1.06, p < 0.01$). Thus, hypothesis 2c was supported. As shown in Figure 3(c), strong ties generated higher product attitude than weak ties for interdependent participants (4.21 vs. 3.78, $t(78) = 1.829, sd = 0.24, p < 0.05$); whereas, weak ties generated higher product attitude than strong ties for independent participants (4.14 vs. 3.71, $t(96) = -2.592, sd = 0.18, p < 0.01$).

Finally, the interaction between tie strength and self-construal, was statistically significant for purchase intention ($F(1, 39) = 6.62, MSe = 2.77, p < 0.01$), supporting hypothesis 2d. As shown in Figure 3(d), strong ties generated higher purchase intention than weak ties for interdependent participants (3.55 vs. 2.76, $t(78) = 2.149, sd = 0.36, p < 0.01$); whereas, weak ties generated higher purchase intention than strong ties for independent participants (2.98 vs. 2.41, $t(96) = -1.84, sd = 0.31, p < 0.05$). The findings of study 2 indicate that the relationships between tie strength and user's intention to click, attitude toward the ad, product attitude and purchase intention are also moderated by self-construal. Specifically, the effects of tie strength on intention to click, attitude toward the product ad, product attitude and purchase intention were stronger for interdependent consumers than for independent consumers when receiving eWOM from their strong ties; whereas, the effects were stronger for independent consumers than for interdependent consumers when receiving eWOM from their weak ties.

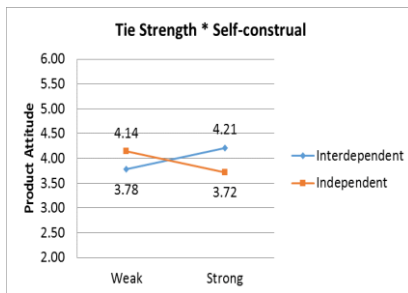


Figure 3 (c). The Effect of Tie Strength and Self-construal for Product attitude

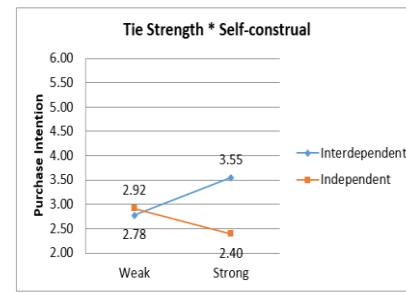


Figure 3 (d). The Effect of Tie Strength and Self-construal for Purchase Intention

5 DISCUSSION AND CONCLUSION

This research examined how consumers' difference in self-construal influence how they perceive eWOM from members of their social networks, which affects their intention to click, attitude toward the ad, product attitude and purchase intention. The empirical results show that the effects of eWOM direction on the dependent variables were stronger for interdependent individuals than for independent individuals. Moreover, the effects of tie strength were positive for interdependent individuals but negative for independent individuals.

This study proposed self-construal as an important factor that could influence the relationship between direction of eWOM, tie strength, and consumer purchase decisions. Thus far, the factors investigated for the effects of eWOM, such as involvement (Park et al. 2007), prior knowledge (Park & Kim 2009), and source credibility (Cheung et al. 2009), relate to consumer’s cognitive capacity and message source’s perceived ability. Whereas, self-construal relates to the degree to which the consumer want to be influenced and investigate the influence of eWOM from social aspect. As suggested by the findings, interdependent individuals reacts stronger than independent individuals to direction of eWOM. Online advertisers could design special mechanism to temporarily activate consumer’s interdependent self-construal in order to enhance the effectiveness of the spreading of eWOM favoring their products. Moreover, the results show that tie strength has a positive eWOM effects on interdependent consumers whereas negative effects on independent consumers. Thus, online advertisers should customize their marketing strategy on SNS according to consumer’s self-construal.

Although this study provides implications that will be useful to researchers and marketers, the study also has some limitations. First, the experiment was conducted on an experiment webpage constructed based on Facebook, the most popular social networking site. However, features available on other SNS, such as Google+ or Twitter, were not included. Thus, future studies may be conducted on different social networking sites to provide further implications for online marketing strategy. Second, purchase intention was used as a surrogate for actual purchase. Given that purchase intention is different from purchase behavior, actual purchase decision should also be studied in future research. Several other related topics may be addressed in future research. First, advertising content can come in different richness (e.g. word, pictures, and video). Future studies may investigate how would difference in advertising content richness influence eWOM effect. Second, eWOM on SNS can be “liked” or “shared” by other users. The number of likes or shares represent the popularity of the eWOM and agreement among fellow users. Future research may study whether large number of likes or shares would increase people’s interest and ultimately generate higher purchase intention. eWOM has played an increasingly important role in influencing consumer’s purchase decision. Further research would be beneficial to determine how companies can effectively design their marketing strategies.

6 APPENDIX

6.1 Appendix A: Study 1 - Effects of Direction of eWOM and Self-Construal



6.2 Appendix B: Study 2 - Effects of Tie Strength and Self-Construal



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