Liu, Y. and Keng, C. (2014). Cognitive dissonance, social comparison, and disseminating untruthful or negative truthful eWOM messages. *Social Behavior and Personality: an international journal* 42:979-995. Doi: 10.2224/sbp.2014.42.6.979.

Cognitive dissonance, social comparison, and disseminating truthful negative and untruthful eWOM messages

Abstract

This research explores consumers' intentions to provide truthful negative eWOM (electronic Word-of-Mouth) and untruthful eWOM messages when undergoing conflicting cognitive dissonance and after experiencing social comparison. One scenario-based experiment was employed: 480 Taiwanese Internet users were recruited to participate in the experiment. The findings show that after making downward comparisons on the Internet, consumers with high cognitive dissonance are more inclined to disseminate negative eWOM messages compared to consumers with low cognitive dissonance. After making upward comparisons, it was found that consumers with high cognitive dissonance are more likely to make untruthful eWOM statements compared to those with low cognitive dissonance. It is recommended that marketers monitor eWOM in an effort to reduce consumers' truthful negative and untruthful eWOM messages.

Keywords: untruthful eWOM; negative eWOM; upward social comparison; downward social comparison; cognitive dissonance

INTRODUCTION

In 1957, Leon Festinger cited a classical paradigm to explain the theory of cognitive dissonance: a group of doomsday cultists was persuaded that the world was coming to an end on a certain day, but that their God would appear at their gathering to save them. As expected, the believers gathered on that day, but the world did not come to an end and neither did their God appear. Confronted with cognitive dissonance, this group of believers persuaded themselves and others that God had, in fact, already saved everyone; this was why doomsday did not arrive, and God had no need to appear. The believers reduced their feelings of discomfort that resulted from cognitive dissonance by "believing" that such an explanation was truthful; however, it is clear that this explanation was untruthful.

In daily life, we are often confronted with facts that are inconsistent with our original cognition or expectation (Chiou & Wan, 2007). For instance, if we spend time collecting information before deciding to buy a particular product and it turns out to be a disappointment, we often try to persuade ourselves that the product is actually not as defective as originally perceived, but that the disappointment lies in personal factors (e.g., too-high expectations, inappropriate operation). Regardless of self-persuasion, however, these conflicting feelings remain, especially in the early stages after the purchase (Festinger & Carlsmith, 1959). Hennig-Thurau et al. (2004) suggest that one way to eliminate such conflicting feelings and reduce negative emotions as a result of cognitive dissonance is to share one's experience and opinion with others. The Internet is one of the most convenient and effective channels by which people can quickly share their thoughts. Depending on the degree of cognitive dissonance, or as a result of self-persuasion, the consumer in the above situation might provide negative information about the product (e.g., Hennig-Thurau et al., 2004) or provide positive or negative information that is actually untruthful (Argo et al., 2006). In addition, when cognitively dissonant consumers who are experiencing conflicting

emotions and engaging in self-persuasion read and compare their experiences with those of others (which may be more positive or negative than the consumer's personal experiences), their feelings and cognition might change; they might then accordingly change their word-of-mouth (WOM) messages about the product (Smith, 2000). The present research extends the cognitive dissonance theory, and addresses the influence of social comparisons on cognitively dissonant consumers' intentions to disseminate truthful negative WOM information and untruthful WOM information in online communities.

LITERATURE REVIEW AND CONCEPTUAL DEVELOPMENT

Cognitive dissonance is defined as a contradictory feeling in a person's mind or the discomfort that arises when a person simultaneously holds two conflicting thoughts (Festinger & Carlsmith, 1959). It becomes especially relevant when people experience a gap between negative results and positive expectations. Individuals may justify their behavior by changing the conflicting cognition or by insisting on the legitimacy of their behavior through the addition of other cognitions (Murray et al., 2012). Psychological studies (e.g., Murray et al., 2012) suggest that cognitive dissonance occurs in all types of personalities; the only difference lies in the degree of impact. When such conflicting feelings occur, individuals seek different ways to alleviate such spontaneous stress. Researchers such as Cheema and Kaikati (2010) have found evidence that one of the best ways to reduce the discomfort of cognitive dissonance after buying a product is to share the conflicting experience with others. The Internet is currently a convenient channel for sharing emotions and experiences with others. Hennig-Thurau et al. (2004) indicate that an increasing number of individuals are willing to provide detailed experiences online, especially when undergoing negative feelings such as disappointment or dissonance.

Based on the concept of cognitive dissonance, we observed a special type of WOM

messaging that exists on the Internet; we termed this *untruthful eWOM*. The content of such eWOM messages could be positive or negative, and it is characterized by a discrepancy between the actual performance of a product and the WOM content that contains an individual's cognitive dissonance feelings. The untruthful WOM messages are essentially different from how the past standard defined *deceptive* WOM messages. The individual providing untruthful WOM messages does not intend to mislead others; instead, after experiencing intense inconsistency and dissonance between cognition and expectation, the individual creates self-persuasion. Through WOM messages that contradict the individual's feelings prior to the cognitive dissonance, that individual can relieve these feelings of inconsistency caused by self-persuasion. For instance, after buying a digital camera, a buyer found that the images produced by the camera were quite fuzzy. This disparity between his expectations and the camera's performance was significant and obvious. Because he had already spent time investigating the performance of that particular camera model, he persuaded himself to question his photography technique rather than the camera itself. Such self-persuasion can reduce feelings of conflict; however, inner conflict can remain, especially during the early stages of cognitive dissonance (Festinger & Carlsmith, 1959). In order to achieve self-comfort, the buyer then self-adjusted and substituted the negative emotion, expressing it as a positive experience instead. In other words, although he felt that the photos were inferior, the highly cognitive dissonant individual persuaded himself to doubt other factors (e.g., his photography skills), and provide untruthful eWOM information, such as, *This camera has good functionality, and the results are satisfactory, but eventually you need to improve your photography skills to take good photos – I am also learning it.* The fact remains, however, that the camera itself is defective, and the fault does not only lie with the buyer's photography skills.

In the example of the camera buyer, it is evident that he is not attempting to influence

others (e.g., increase sales) or protect his self-image (e.g., portray to others that he is a smarter buyer). This consumer, through information sharing, is self-persuading in an attempt to reduce the feelings of discomfort rooted in the internal conflict that resulted from cognitive dissonance.

Milliman and Decker (1990) propose that by acquiring more information, people can validly reduce cognitive dissonance or increase consumer confidence regarding the purchased product. If after experiencing cognitive dissonance, consumers compare their experiences with those of other users, then their psychological cognition also changes. Along with these changes, other behaviors become more likely to change, such as sharing experiences and information via WOM or repeat buying (e.g., Nabi & Keblusek, 2014). Festinger (1957) uses the social comparison theory to explain that individuals have an internal drive to uphold outside images with which they evaluate their own opinions and abilities. These images may be references to physical realities or to other people. Haferkamp and Kramer (2011) indicate that people perceive images portrayed by others to be obtainable and realistic. When people are uncertain about the validity of their decisions or positions, they tend to make social comparisons with other people and adopt other people's experiences as guidelines.

There are two types of social comparisons: upward and downward. Upward comparison is when an object is compared to something that is better than itself. On the contrary, when the compared object performs worse, it is referred to as a downward comparison (Festinger, 1957). Continuing with the abovementioned example, the camera buyer tries to convince himself that he needs to improve his photography skills in order to take better photos; however, the conflicting feelings do not disappear immediately. He then searches the Internet for more information about other camera users' experiences. One caveat to this strategy is that people cannot predict what information they will find. This buyer may read another Internet user's experience of buying a different camera model at a much lower

price, and may see the user's high-quality photos in a discussion forum; this second buyer has bought a cheaper camera that has good functionality. In this case, the cognitively dissonant (first) buyer will face an upward social comparison. In contrast, if this buyer discovers a message posted by someone who bought a more expensive camera of a different model, but complained that the camera takes bad photos, then the first buyer will experience a downward social comparison.

The affective consequences of upward and downward comparisons can be negative or positive (e.g., Brown et al., 2007). Smith (2000) explains that affective consequences depend on the consumer feeling a contrastive effect (e.g., "that consumer is not me") or an assimilative effect (e.g., "that consumer could be me"). The comparison that results in an assimilative effect or a contrastive effect can be influenced by environmental factors (Brown et al., 2007). Stapel and Koomen (2005) propose that cooperative contexts promote a mind-set in which the emphasis is on a group's members. This may result in an assimilative effect; in other words, consumers interacting with each other in an online discussion forum belong to a cooperative context, resulting in eWOM messaging, which results in an assimilative effect. Downward comparisons with assimilative effects promote negative thoughts and feelings (Smith, 2000). Hence, more negative eWOM messaging would result after making a downward comparison than without any social comparison, especially when consumers are at the highest cognitive dissonance levels. Upward comparisons with assimilative effects, on the other hand, promote positive thoughts and admiration (Smith, 2000).

Therefore, after making an upward comparison, consumers do not seem to engage in more negative eWOM messaging than they would without making any social comparison, especially when consumers are at high-cognitive-dissonance levels; this is not the case for consumers at low-cognitive-dissonance levels. If, as expected, assimilative effects stem from social comparison, consumers with the highest cognitive dissonance have the strongest

intention to provide negative eWOM messages after making downward comparisons. Additionally, a comparison of this population with subjects who have low cognitive dissonance and who make upward comparisons reveals a larger difference between the reactions of the two subject groups. Conversely, upward comparisons with assimilative effects do not encourage individuals to disseminate negative eWOM messages, and in this case, a gap would not emerge between people with high cognitive dissonance and those with low cognitive dissonance. The current research anticipates a similar dynamic in Internet environments:

Hypothesis 1a: After making downward comparisons on the Internet, consumers with high cognitive dissonance are more willing to disseminate negative eWOM messages compared to consumers with low cognitive dissonance.

Hypothesis 1b: After making upward comparisons on the Internet, there will be no difference in the dissemination of negative eWOM messages between consumers with high cognitive dissonance and those with low cognitive dissonance.

To further elucidate the findings of untruthful WOM messages (for the purpose of releasing conflicting pressure), Argo et al. (2006) argued that when individuals perceive social-comparison information as threatening, they are more likely to provide deceptive or untruthful information, because they are striving to protect themselves or relieve stress. Thus, we infer that after making upward comparisons on the Internet, individuals with high dissonance perceive themselves to be in a more threatening situation compared to the situation in which low-cognitive-dissonance individuals perceive themselves to be. Therefore, compared to low-cognitive-dissonance individuals, high-cognitive-dissonance individuals will make more untruthful eWOM statements to strengthen their beliefs. Furthermore, consumers who make downward comparisons on the Internet will not perceive social-comparison information as threatening, because all other information providers are

faced with a worse situation. Therefore, there will be no difference between high-cognitive-dissonance consumers and low-cognitive-dissonance consumers in their dissemination of untruthful eWOM messages.

Hypothesis 2a: After making upward comparisons on the Internet, individuals with high cognitive dissonance are more likely to make untruthful eWOM statements compared to individuals with low cognitive dissonance.

Hypothesis 2b: After making downward comparisons on the Internet, there will be no difference between high-cognitive-dissonance consumers and low-cognitive-dissonance consumers in their dissemination of untruthful eWOM messages.

METHOD

A scenario-based experiment was employed to test and verify post-purchase cognitive dissonance as well as the influence of eWOM dissemination after upward and downward social comparisons.

Participants

Using telnet://ptt.cc (one of the most popular bulletin board system sites in Taiwan), we recruited 480 Internet users, in nine batches, to a computer laboratory that accommodated 60 users. Participants were randomly divided into four groups, each comprising 120 people. Of the participants, 89.4% had a bachelor's degree, or higher, and 49.6% were female. Participants were aged between 18 and 42, with 58.1% aged between 18 and 28. These figures correspond with a survey conducted by the Taiwan Net Consumers Association (NCA) in 2010 which indicated that approximately 50% of Taiwanese Internet users were aged between 18 and 30. Moreover, 68.5% of the participants selected for the present study had been participating in virtual-community experiences for more than two years. Pearson's

chi-square tests showed that the four groups did not significantly differ from one another in terms of gender, age, educational level, virtual-community experience, or Internet use experience, showing that the random assignment was successful.

Scenarios and measurements

Scenario A: Cognitive dissonance

Participants were instructed to enter the experimental web page, and read and imagine a scenario that described a situation involving social interaction in an Internet environment.

Past research (e.g., Soutar & Sweeney, 2003) revealed that satisfaction with the product and the price of the product are the most important factors that arouse cognitive dissonance. In scenario A, the participants read a commercial advertisement indicating a "special price" for a digital camera, which was selected from the pre-test that featured both experiential and searching characteristics; according to the scenario, the participants were asked to imagine that they decided to buy the new Olympus mju-1020. In the high-cognitive-dissonance group, the participants were informed that they had paid NT$14,990 (approximately US$490) for the camera and would experience low satisfaction with the product (e.g., poor picture-taking effects, long waiting time when turning on the camera). In the low-cognitive-dissonance group, the participants were told that they had paid NT$7,990 (approximately US$260) for the same camera; the functioning of the camera would be similar to that in the previous group. After completing this part of the scenario, participants were asked to complete a 20-item cognitive dissonance questionnaire (developed by Sweeney et al., 2000) on a 7-point scale (1 = strongly disagree; 7 = strongly agree) for the manipulation check.

Scenario B: Social comparison

After reading the description of scenario A, participants were asked to join an online discussion forum—that we created for this study—to discuss the digital camera. The virtual community served as a platform where the participants could evaluate the merchandise (Olympus mju-1020) on the basis of members' related opinions, which would be in the form of eWOM messages. Each participant read four pieces of eWOM messaging, selected from either upward or downward social-comparison information that we selected from pre-test results.

After completing these tests in the virtual community, the participants responded to a manipulation check to compare the targeted contents in relation to upward or downward social comparisons. The responses to the manipulation check's questions were on a seven-point scale: "After having considered comments made by members of this digital camera discussion group, do you think that your decision (regarding the Olympus mju-1020) was better than, as good as, or worse than other members' decisions?" Options ranged from 1 = my decision was much worse than the decisions by members of the digital camera discussion group, to 7 = my decision was much better than the decisions by members of the digital camera discussion group.

Participants then completed response forms on two topics that they wished to share with the virtual community. The first topic concerned negative eWOM messages, and they were asked to rate the related statements—four questions based on Hennig-Thurau et al.'s research (2004) to ensure content reliability—on a 7-point scale (1 = strongly disagree; 7 = strongly agree). The statements were as follows: After reading the eWOM messages, I would respond by (1) getting online and expressing regret about my decision, (2) talking about the product I bought and expressing my displeasure to other people in this virtual community, (3) exhibiting my unhappiness in the virtual community with details (i.e., why I think the product is so unsatisfying), and (4) sharing my negative experience with other users on my social

media web page(s) (e.g., Facebook, Twitter).

The second topic concerned untruthful eWOM messages, and related statements—to be rated on a scale of 1 = strongly disagree to 7 = strongly agree)—were as follows: After experiencing this situation, I tended to (1) tell people in the virtual community about it and exaggerate the positive aspects of the product instead of the negative ones; (2) refrain from admitting that my decision had been worse than those made by other members of the virtual community (instead, I told other members that my decision was actually not too bad); (3) refrain from admitting that my decision had been wrong and from talking about the mistake in this virtual community (this item was revised from Argo et al.'s 2006 questionnaire); and (4) join the other members' experience discussions and share mine in a positive way.

Finally, the participants identified their gender, age, education level, virtual-community experience, and Internet-use experience.

Manipulation checks

The result of t-test revealed that the high-cognitive-dissonance group (M = 5.56, SD = .72, SE = .05) and the low-cognitive-dissonance group (M = 3.01, SD = .75, SE = .06) significantly differed from each other on the cognitive dissonance levels [t(478) = 34.45, $p < .001$, $r = .84$], revealing the manipulation to be successful. Responses to the 20-item questionnaire also displayed good internal consistency ($\alpha = .90$).

The manipulation check of social-comparison information showed that the downward-social-comparison group (M = 5.18, SD = .81, SE = .07) and the upward-social-comparison group (M = 3.10, SD = .83, SE = .06) differed significantly from each other [t(478) = 27.85, $p < .001$, $r = .79$]. This result confirmed that the manipulation of social comparison was also successful.

RESULTS

Willingness to disseminate negative eWOM messages

The responses to the four items regarding willingness to provide negative eWOM messages were combined and averaged to provide a single composite score; responses to these four items revealed high internal consistency ($\alpha = .81$). A two-way ANOVA was employed for the 2 (high cognitive dissonance vs. low cognitive dissonance) × 2 (upward social comparison vs. downward social comparison) data analysis. The two-way interaction was found to be significant [$F(1, 476) = 99.06$, $p < .001$], showing that social comparison was a moderator that affected individuals' (with different cognitive dissonance degrees) intentions on providing negative eWOM messages in a virtual society. Levene's test indicated that the error variances of the dependent variables were not unequal among the four groups [$F = 1.68$, $p = .17$].

Table 1 about here

Supporting H1a, in the downward social-comparison situation, individuals with high cognitive dissonance revealed a significantly stronger intention ($M = 5.10$, $SD = .82$, $SE = .08$) to disseminate negative eWOM messages compared to the participants who were in the low-cognitive-dissonance group ($M = 3.54$, $SD = .95$, $SE = .08$) [$t(238) = 13.57$, $p < .001$, $r = .66$]. In the upward-social-comparison condition, the t-test showed that there was no significant difference of intention to disseminate negative eWOM messages between participants with high cognitive dissonance ($M = 3.66$, $SD = .89$, $SE = .08$) and low cognitive dissonance ($M = 3.71$, $SD = .86$, $SE = .08$) [$t(238) = .48$, $p = .64$, $r = .03$]. Therefore, H1b was supported.

Willingness to disseminate untruthful eWOM messages

Responses to the four items regarding willingness to disseminate negative eWOM messages were combined and averaged to provide a single composite score, which also showed high internal consistency (α = .91). A two-way ANOVA was conducted, and the result revealed that the two-way interaction was significant [$F(1, 476) = 80.22$, $p < .001$]. The result indicated that social comparison had a significant, moderating effect on individuals' (with different cognitive dissonance degrees) intentions to disseminate untruthful eWOM messages online. Levene's test also showed that the error variances of the dependent variables were statistically equal in the scenario groups [$F = 1.97$, $p = .12$].

Table 2 about here

Supporting H2a, the results of the t-test showed that after experiencing upward-social-comparison, individuals with high cognitive dissonance had a significantly higher intention (M = 4.68, SD = .97, SE = .09) to provide untruthful eWOM messages compared to individuals in the low-cognitive-dissonance group (M = 3.13, SD = .76, SE = .07) [$t(238) = 13.72$, $p < .001$, $r = .65$]. In the downward-social-comparison condition, participants with high cognitive dissonance (M = 2.69, SD = .88, SE = .08) and participants with low cognitive dissonance (M = 2.58, SD = .89, SE = .08) had almost the same intention to disseminate untruthful eWOM messages [$t(238) = .93$, $p = .35$, $r = .06$]. Therefore, H2b was supported.

Figure 1 about here

CONCLUSION AND IMPLICATION

The Internet provides a convenient environment of information exchange. Today, people share information and personal experience with other online community members easily and quickly (Huang et al., 2012). Many researchers have devoted their studies towards exploring and examining the influences of the eWOM messages on consumers' attitude and how this affects their behaviour; including the information content, message valence, source credibility, social relationships with the members in the online communities (tie strength), and online involvement of the Internet communities (Filieri & McLeay, 2014). The basis assumption of these studies is that the information providers primarily share information about the service/product that they have experienced. It is assumed that the information providers are not seriously biased due to their inconsistency feelings. For instance, they provide negative information about the product because the buyer genuinely believes that the product may have flaws or defects. Other researchers (e.g., Wilsem, 2013) have investigated the influence of Internet fraud and deceptive eWOM messages on consumers. These research focus on the online WOM messages that the providers intentionally disseminate deceptive information in the effort to derive benefits from the buyers. The deceptive eWOM messages can damage a company's reputation and also the market if information recipients adopt the advice from the misleading information providers. Jewkes and Yar (2013) indicate that this type of deceptive message needs to be constrained by the online community rules and that community members have a responsibility to expose these distrustful information sources.

The present study proposed the concept of untruthful eWOM messages; in the research, individuals who experienced cognitive dissonance were found to not intend to lie to other Internet users; instead, their primary motive is to release their feelings of inconsistency by sharing their experience with others. However, this dissonance leads them to blame the negative experience from the product to their personal issues and to avoid addressing the

problems with the product. Untruthful eWOM messages can be influential because the content could be perceived as more logically sound than intentionally fraudulent messages. Furthermore, these messages can be difficult to restrict by the online community rules. Extensive dissemination (e.g., on a popular discussion forum) of untruthful eWOM messages provided by a consumer may lead to more consumers purchasing a defective product. From the manufacturer's perspective, this is not necessarily a bad phenomenon, as the company may experience increased sales at the beginning; however, not every customer perceives the same level of cognitive dissonance to the same event and the level of dissonance may differ owing to factors such as the perceived importance of the decision and the price of the product (Chiou & Wan, 2007). Therefore, although some high-cognitive-dissonance buyers may persuade themselves not to blame the product, it is possible that buyers with less cognitive dissonance will be aware of the product's blemish, and after using the flawed product, these consumers may request a refund or damage the company's reputation through negative messaging.

The present study further integrates the cognitive dissonance theory and social comparison theory with research on the online interpersonal exchange of products using experience to provide insight into consumers' intentions to disseminate negative eWOM and untruthful eWOM. Previous research (e.g., Argo and Shiv, 2012) demonstrated that social comparisons occur frequently in online communities and can influence consumers' buying decisions. When people face upward comparisons, it is likely that they are more conservative about the eWOM messages behaviour (Argo et al., 2006). Sengupta et al. (1999) explain that people tend to protect their public-self when comparing themselves to those who perform better. When facing downward comparisons, people are more likely to feel released because the compared subjective performs worse than themselves and tend to be encouraged to have higher intentions towards disseminating their experiences online. In the downward situation,

people can be more objective to review the actual problems of the product or service and to provide information that is not biased by the inconsistency of their inner feelings.

The results of this study support the theory of social comparison and also provide evidence that with cognitive dissonance, one's intention of disseminating untruthful eWOM messages is obstructed by social-comparison information. Social comparisons play a significant moderating effect on cognitive-dissonance consumers' eWOM providing intention; in other words, an individual's willingness to disseminate negative (truthful) eWOM or untruthful eWOM depends on the level of the cognitive dissonance that they perceive. After making upward comparisons on the Internet, individuals with high cognitive dissonance are more likely to make untruthful eWOM statements compared to individuals with low cognitive dissonance. The possible explanation is that these high cognitive dissonance consumers may perceive social-comparison information as threatening (Argo et al., 2006), and tend to increase their belief about the product itself positively for comforting their unbalanced feelings. In contrast to this, individuals who have a high cognitive dissonance level are more willing to provide negative WOM messages than those who experience lower cognitive dissonance when face downward comparisons. This demonstrates that the inconsistency feelings are released and that these individuals are willing to provide information about their actual negative experience.

The research results also support the assumption of assimilative effect as proposed by Smith (2000). The evidence showed that people are significantly influenced by members in online communities when they *compare* their experience with the online information providers. The assimilative effect changes customers' view of the product and can lead to them sharing their experience in the community. The Internet creates an ideal environment for making upward or downward social comparisons and the peer influence in online communities can also be significant, owing to the new Internet connection technologies, such

as the LTE mobile service (Brodie et al., 2013). It is important for organizations to consider the impact of customers' online comparison behaviors and the possible impacts - both for their own products and for those of their competitors.

Some limitations and suggestions for future research need to be addressed. First, there is insufficient research on untruthful eWOM messaging which arises from cognitive dissonance (i.e., not deliberate lying); therefore, the hypotheses in the present study are based on clues from psychology articles and real-life social interactions. Future research findings may receive stronger support and utilize a more rigorously applied method than the present study. Furthermore, this research adopts the perspective of consumers after their exposure to cognitive dissonance and negative experience. Future studies could investigate the moderating effect of variables such as consumer's expertise and self-pride on consumer's cognitive dissonance levels.

Further investigation is also recommended into consumer perspectives or the consumer impact of negative truthful and untruthful eWOM messaging. As research variables, the impressions and lasting effects that product-related eWOM messages have on a consumer and whether recipients of the messages can correctly distinguish different types of eWOM messages from one another could also be considered. Consumers' impressions of a target product, changes in consumers' perceptions of a target product's value and consumers' post-purchase behavior are also important topics for future discussion.

The Internet has changed modern life and exchanging eWOM messages has become an important mode of communication that companies cannot ignore. Product suppliers need to determine how they can reduce people's tendencies to spread truthful negative and untruthful eWOM messages and solve problems related to eWOM-based information. However, members of the Internet community should also consider carefully this overall issue from their own vantage point. More research is needed from psychological, behavioral, and

organizational perspectives in order to explain as yet undiscovered phenomena and to provide further insights into this research area.

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Table 1 Intention to provide truthful negative eWOM messages

Social comparison	Cognitive dissonance	Mean	SD	N
Downward	High	5.10	.82	120
	Low	3.54	.86	120
Upward	High	3.66	.90	120
	Low	3.71	.87	120

Table 2 Intention to provide untruthful eWOM messages

Social comparison	Cognitive dissonance	Mean	SD	N
Downward	High	2.69	.88	120
	Low	2.58	.89	120
Upward	High	4.68	.97	120
	Low	3.13	.76	120

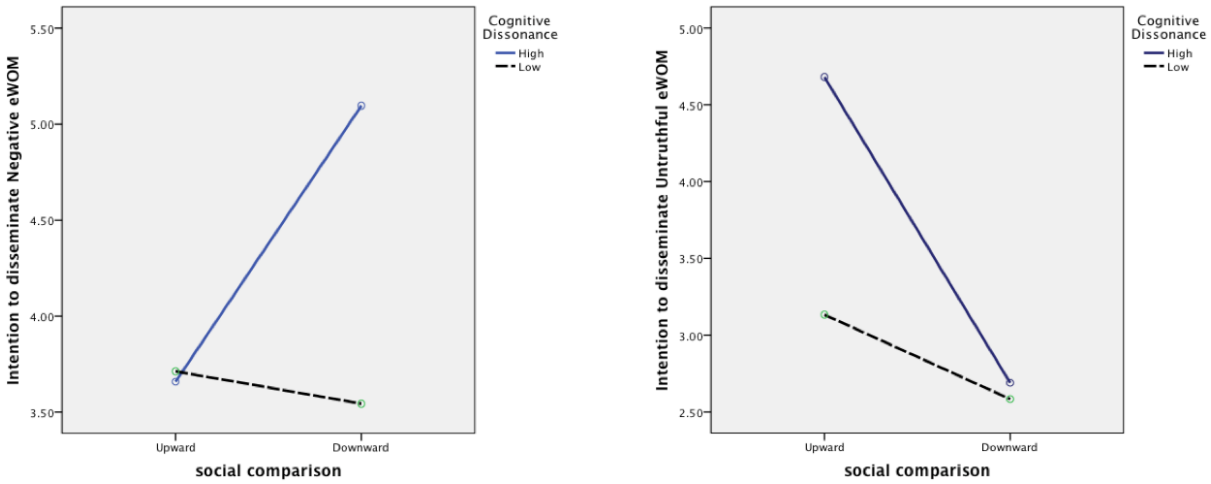

Figure 1 Results of H1 (left, intention to disseminate negative eWOM messages) and H2 (right, intention to disseminate untruthful eWOM messages)