

Association for Information Systems AIS Electronic Library (AISeL)

WHICEB 2015 Proceedings

Wuhan International Conference on e-Business

Summer 6-19-2015

The Gender Differences in the Effect of Two-sidedness E-WOM Presentation Order on Product Attitude

Hanchi Ye

School of Business Administration, Zhongnan University of Economics and Law, Wuhan, 430074, China,
yehanchi37215@sina.com

Jie Gong

School of Business Administration, Zhongnan University of Economics and Law, Wuhan, 430074, China,
gongjiedzsw@163.com

Yun Luo

School of Business Administration, Zhongnan University of Economics and Law, Wuhan, 430074, China

Follow this and additional works at: <http://aisel.aisnet.org/whiceb2015>

Recommended Citation

Ye, Hanchi; Gong, Jie; and Luo, Yun, "The Gender Differences in the Effect of Two-sidedness E-WOM Presentation Order on Product Attitude" (2015). *WHICEB 2015 Proceedings*. 63.

<http://aisel.aisnet.org/whiceb2015/63>

This material is brought to you by the Wuhan International Conference on e-Business at AIS Electronic Library (AISeL). It has been accepted for inclusion in WHICEB 2015 Proceedings by an authorized administrator of AIS Electronic Library (AISeL). For more information, please contact elibrary@aisnet.org.

The Gender Differences in the Effect of Two-sidedness E-WOM Presentation Order on Product Attitude

Hanchi Ye¹, Jie Gong¹, Yun Luo^{1}*

¹School of Business Administration, Zhongnan University of Economics and Law,
Wuhan, 430074, China

Abstract: In the Internet environment, electronic word-of mouth plays an important role in affecting consumers' attitude toward product and service. However, there exists a widespread situation that consumers may receive two-sidedness e-WOM (An e-WOM has both positive and negative message about the same object), and past research has shown that gender differences and situational involvement affect consumers' perception of e-WOM. This article demonstrates how presentation order of two-sidedness electronic word-of-mouth and gender influence in consumers' perception and attitude toward product under different situations. Our study found that two-sidedness e-WOM presentation order and gender influenced product attitude: under low-involvement situation, males (females) exhibited primacy (recency) effects when receiving a two-sidedness e-WOM which containing both positive and negative messages about product. Under high-involvement situation, all respondents appeared to process two-sidedness e-WOM systematically and consider more relevant information in their evaluations. The result revealed that females continued to exhibit recency effects, but the primacy effects with males disappeared, they will exhibit obvious recency effects.

Keywords: two-sidedness e-WOM, presentation order, gender difference, involvement, product attitude

1. INTRODUCTION

Electronic word-of mouth refers to any opinion based on negative, neutral, or positive experiences made by potential, actual, or former consumers about a product, service, brand, or company, which is made available to a multitude of people and institutions via the Internet (such as web sites, social networks,)^[1]. Electronic word-of mouth can stimulate consumers' purchase intention by providing useful product information^[2]; it has a great impact on consumers' attitude toward product and buying behaviors^[1]. E-WOM is generated by consumer who have used and experienced the products, and Internet has dramatically increased the amount of available e-WOM message^[1] and message type. With that premise, it occurs frequently that we receive some two-sidedness e-WOM which containing both positive and negative message about product, and the presentation order of these two types of message may be different. The order in which information is encountered has a strong impact on judgments of products^[3], based on this, the order of two-sidedness e-WOM presentation will also affect consumers' attitude toward product.

The essence of word-of-mouth is how consumer processing of word-of-mouth information. Past research has demonstrated the way of information processing affects consumer's perception of advertising message and attitude toward product^[4]. Actually, there is a significant gender difference in information processing^[5]. We also found that many researches introduce involvement as a situational variable when study information processing^[6]. One important question is whether there exists a significant gender difference in the effect of two-sidedness e-WOM presentation order on consumer product attitude under different involvement situation. It means that the presentation order of two-sidedness e-WOM may lead to consumers more supportive of a topic, product and service or not, and the effect is different for males and females.

*Corresponding authors Email: yehanchi37215@sina.com (Hanchi Ye), gongjiedzsw@163.com (Jie Gong)

Previous research has well established the effect of e-WOM on consumers' attitude toward product and service, but most of the existing research is grounded in one-sidedness e-WOM, either positive or negative, little attention has been paid to how consumers respond to two-sidedness e-WOM. To our knowledge, very few studies have systematically examined gender differences in the effect of two-sidedness e-WOM presentation order on consumer attitude under different involvement situation. Hence, this paper aims to examine how two-sidedness e-WOM presentation order and gender affect consumers' attitude toward product under low and high involvement situation.

2. THEORETICAL BACKGROUNDS AND HYPOTHESES

2.1. Order effects

Order effect is a phenomenon that a person's judgment is sensitive to the order in which message is presented (Asch, 1946) ^[7]. More specifically, two types of order effects have been discussed: primacy and recency effects. Primacy effect characterized message presented earlier has a greater impact on perception and judge than presented later. Contrast with primacy, recency effect occurs when judges are more influenced by message presented later rather than earlier.

The existing consumer research of order effect has focused on presentation order of interview information (Farr, 1973), teaching performance (Steiner and Rain, 1989), advertising message (Brunel, 2003), product attributes (Kardes and Herr 1990). Davis (1984) found that the presentation order has a great effect on jury decision making ^[8]. Wang (2007) shows that presentation order of integrating messages has impact on consumer behaviors ^[9]. Although order effects has been studied by many scholars, there always exist disagreement concerning what kind of order effects are most prevalent. Davis (1984) indicated that recency effects are more likely to show up in a study of jury decision making ^[8]. However, this conclusion is contradicted by a psychological research, the research result have shown that primacy effects are more prevalent than recency effects ^[10]. Researcher found that many situational and personal factors influence the order effects. People show obvious primacy effects with the topic they are interested in, but recency effects with topic not interested in (Lana, 1963) ^[11]. Strong primacy effects were found in memory set conditions, but these effects disappear in choice set conditions (Frank, 1990) ^[3].

Hogarth and Einhorn (1992) developed a belief-adjustment model to explain how presentation order influenced the change of personal attitude. The core point of the model is anchoring-and-adjustment process ^[13]. An individual's current belief serves as an anchor that is adjusted on the basis of new evidence; this revised belief then becomes the anchor for the next adjustment, and so on. While the model seems to accounts for order-effect phenomena as arising from the interaction of information-processing and task characteristics ^{[13][14]}, it is also important to consider gender-based differences in information processing.

2.2 Gender differences in information processing

Systematic gender differences in information processing have been established in past research (Meyers-Levy, 1989). Meyers-Levy (1991) puts forward the "selectivity model", who believes that men and women use different strategies to process information ^[5]. According to the selectivity model, females are more likely to attempt to process information in a more comprehensive and effortful manner than males ^[15]. They tend to consider a broad scope of information ^[5], while males are selective information processors who tend to heuristically process information by focusing on single cues that is readily available during processing ^[15].

The gender differences in information processing occur only when message or task factors do not strongly encourage a particular type of processing strategy ^[5]. When message content or tasks motivate a certain type of processing, gender difference will not emerge ^[12]. More specially, both males and females uniformly employed detailed processing when message content cue fostered heightened access to specific message or a task impelled

the detailed retrieval of such claims ^[5].

The research of information processing also found that there is a gender differences in the threshold for elaborative processing that is females' threshold is lower than males ^[16]. Therefore, gender differences in information processing are expected to be manifested when message cue or situation cue are sufficient reach females' threshold for elaborative processing but not males ^[17]. Based on prior research and the threshold for elaborative processing, it is important to consider situational factor in study gender differences in information processing, so we introduce involvement as a situational variable in our study.

2.3 Involvement

Zaichkowsky (1985) defines involvement as 'a person's perceived relevance of the object based on inherent needs, values and interests'. Involvement is a key factor for consumers' information-seeking behavior regarding information gathering, processing and storage ^[18]. According to previous research, situational involvement is a temporary elevation of interest that fluctuates, usually within the time frame of a purchase decision ^[6]. There are two types of situational involvement, low-involvement and high-involvement situation.

Under a high-involvement situation, people exerted greater cognitive effort during comprehension of message, increasingly focused their attention on the related information, and engaged in more elaboration of the information during comprehension ^{[6][19]}; While under low-involvement situation, people are not encouraged to make great effort to search and process information ^[19].

2.4 Hypotheses

Previous research has shown that males are less likely than females to access or use the information in subsequent task. Males more likely focus exclusively on information readily available and will be less likely to access and integrate other relevant information ^[20], usually form evaluations on the basis of early information and then stick with those evaluations, even in the face of subsequent contradictory information (Hogarth and Einhorn 1992; Kruglanski and Webster 1996) ^[21]. As a comprehensive processor, females tend to attempt to integrate newly encountered information with previously learned information available in memory ^[20]. They will not only latch onto the early information but rather withhold judgment until more information has been received and considered ^[20]. As a result, females' evaluations of targets are more based on later information than on the early information alone ^[21]. The belief-adjustment model also point that later information has more impact on personal attitude than earlier information when people process information comprehensively as females does rather than selectively as males does ^[12].

Under low-involvement situation, we expected that the effects of two-sidedness e-WOM presentation order on attitude will be different between males and females. Under this condition, situation cue reach the female' threshold for elaboration processing but not males; according to previous research, males tend to be a low-effort processor ^[5], and this information processing style make earlier presented information has greater impact on males' perception and evaluation ^[21]. While females tend to be a comprehensive processor ^[5], their information processing style make later presented information has greater impact on females' perception and evaluation ^[21] ^[13]. The gender differences in the effect of two-sidedness e-WOM presentation order on consumers' product attitude will appear, thus we hypothesize:

H1: Under low-involvement situation, males tend to exhibit primacy effects (positive-negative presentation order of two-sidedness e-WOM will lead more positive attitude than negative-positive presentation order).

H2: Under low-involvement situation, females tend to exhibit recency effects (positive-negative presentation order of two-sidedness e-WOM will lead less positive attitude than negative-positive presentation order).

Under high-involvement situation, situation cue reach threshold of males and females. Both males and females are encouraged to use a particular type of processing, they all tend to be comprehensive processors ^{[5][12]},

and adjust their evaluation according to later presented information when received two-sidedness^{[20][21]}. Later presented information has greater impact on consumers' perception and evaluation for both males and female, the gender differences in the effect of two-sidedness e-WOM presentation order on consumers' product attitude will disappear, thus we hypothesize:

H3: Under high-involvement situation, both males and females tend to exhibit recency effects (positive-negative presentation order of two-sidedness e-WOM will lead less positive attitude than negative-positive presentation order).

3. METHOD

3.1 Subjects and design

To test the proposed hypotheses, a 2 (presentation order of a two-sidedness e-WOM: positive-negative vs. negative-positive) \times 2 (situational involvement: low vs. high) \times 2 (gender: male vs. female) factorial design is set up to create experimental conditions.

We used English training course as the target product for the experiment because of the relevance of this product to the subjects. Moreover, as an experience-based product, consumers' attitude and purchase intention rely on online reviews from other product users to a great extent. To avoid the influence of prior training course school attitude, we choose a school which not existed in real life. The online reviews of this training course were adopted mainly from web-site and processed them to form our final reviews which we used in our experiment.

Before our formal experiment, we conducted a series of pretests to examine the effectiveness of manipulation of our final reviews. Based on previous research, we measured positive and negative target review from three aspects: extremity, strength, believability^[22]. Subjects were exposed to either a positive or negative review. Then, they were asked to rate the review on a 7-points scales (-3 to +3). Pretest showed that the positive and negative review presented were significantly different in their extremity; but not in strength and believability. Besides, the positive review accommodates four supportive arguments and the negative review accommodates four opposing arguments. The review message was equal in length (approximately 135 words each).

3.2 Procedure

240 students from a University were randomly assigned to eight experiment conditions. The participants were instructed to imagine that they plan to take part in a spoken English training course, and an English training school was considered. In low-involvement situation, participants were told that our study selected 1000 students from different school, their opinions just as our reference; in high-involvement situation, participants were told that our study only choose 30 students, their opinions are very important to us, please read and complete the questions seriously. Then, all participants showed a two-sidedness e-WOM about English training school that contains two parts opposite reviews, sequentially. In different situational involvement, half of males and females received e-WOM in a positive-negative order and the rest in negative-positive order. After reading the e-WOM, participants answered several questions about attitude toward the English training school and four questions about degree of involvement. Finally, they completed some questions on demographic information.

3.3 Measures

The participants' attitude toward target product was measured on three 7-point semantic differential scales (Park, 2007) assessing how good/bad, like/unlike, satisfactory/unsatisfactory participants considered the English training course would be ($\alpha = 0.904$).

The participants' degree of involvement was measured by using a 4-items, 7-point Likert scales (Song, 2011).

4. RESULT

Of the subjects, 5% subjects failed to complete the questionnaire and thus were dropped. Hence, the final sample was 228 (49.6% men and 50.4% women),

The 2×2 ANOVA results indicated that the manipulation was successful as the degree of involvement was significantly higher in high-involvement situation versus low-involvement conditions ($M_{high} = 4.82$; $M_{low} = 4.18$; $t(248) = 3.16$, $p < 0.05$).

Under low-involvement situation, a 2 (presentation order: positive-negative vs. negative-positive) × 2 (gender: male vs. female) ANOVA with the attitude toward product as the dependent variable was revealed a significant two-way interaction between presentation order and gender ($F(1,115) = 52.632$; $p = 0.00$), the main effects for presentation order ($F(1,115) = 0.009$; $p = 0.925$) and gender ($F(1,115) = 2.368$; $p = 0.127$) were not significant. The result revealed that consistent with expectation. For male, they tend to process message heuristically, do not process message comprehensively, so when positive and negative online reviews presentation in different order, they exhibit obvious primacy effects. That is, P-N presentation order lead more positive attitude toward product than N-P order ($M_{P-N} = 4.88$; $M_{N-P} = 3.88$, $p < 0.05$). H1 was supported. While, for female, they tend to demonstrate integrative processing strategies, when opposite e-WOM message presented in a certain order, they would form their attitudes according to the final e-WOM message, exhibiting recency effects. That is, P-N presentation order lead less positive attitude toward product than N-P order ($M_{P-N} = 3.69$; $M_{N-P} = 4.66$, $p < 0.05$). Therefore, H2 was supported. Figure 1 displays the outcome of the analysis.

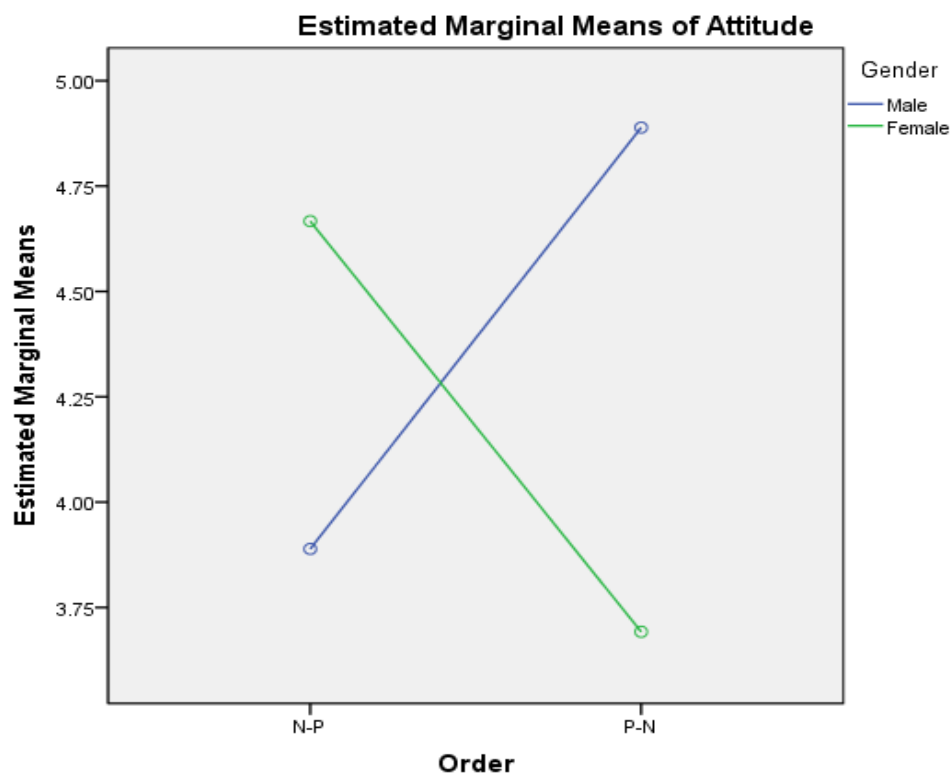


Figure 1. The Interaction Effects of E-WOM Presentation Order and Gender under low-involvement situation

Under high-involvement situation, a same 2×2 ANOVA with the attitude toward product as the dependent variable was not revealed a significant two-way interaction between presentation order and gender ($F(1,111) = 3.277$; $p = 0.902$). The result revealed that consistent with expectation. Under high-involvement situation, males and females are all tend to demonstrate integrative processing strategies, and the final e-WOM message has

greater impact on their attitude toward product, exhibiting recency effects. That is, P-N presentation order lead less positive attitude toward product than N-P. For male, ($M_{P,N} = 4.28$; $M_{N,P} = 4.884$, $p < 0.05$), for female, ($M_{P,N} = 3.77$; $M_{N,P} = 4.32$, $p < 0.05$), H3 was therefore supported. Figure 2 displays the outcome of the analysis.

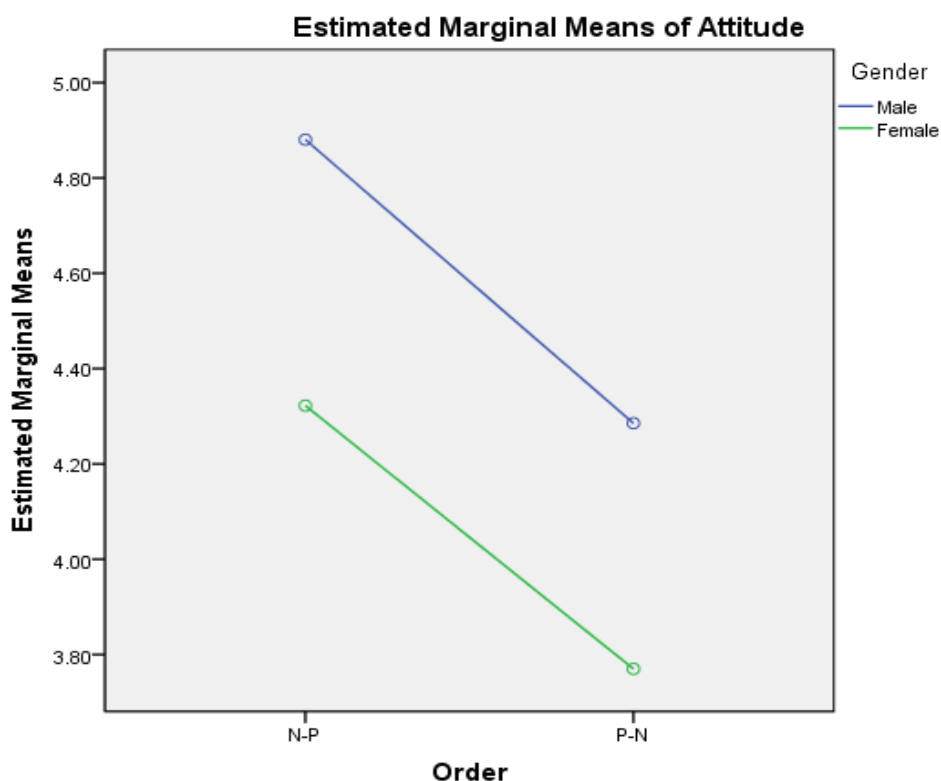


Figure 2. The Interaction Effects of E-WOM Presentation Order and Gender in high-involvement situation

5. CONCLUSION AND MANAGERIAL IMPLICATIONS

All the hypotheses are accepted. We find that under low-involvement situation, there is a significant gender difference in the effect of two-sidedness e-WOM presentation order on consumer attitude, but not under high-involvement situation. Under low-involvement situation, the earlier presented message of a two-sidedness e-WOM has greater impact on males' attitude toward a product or service compared to later presented (primacy effects). While female just opposite to male, the later presented message of a two-sidedness e-WOM has greater impact on their attitude compared to earlier presented (recency effects). Under high-involvement situation, the gender differences will disappear. Later presented message of a two-sidedness e-WOM has greater impact on consumers' attitude than first e-WOM for both males and females (recency effects).

In particular, it is important for online sellers to adopt different strategies for male and female consumers. Marketers should control the order of e-WOM message purposefully, for the product that main consumers are males, make sure the positive message about this type of product was presented at first, for the product that main consumers are female, marketers should try to present more positive reviews to female consumers, and decrease negative online reviews, because as comprehensive processors, females tend to analyze all available information and e-WOM has a stronger effect on females than males. Also, online sellers can take advantage of the consumers' information processing style in high-involvement situation, and use positive message to make consumers generate positive attitude toward a product or service.

6. LIMITATIONS AND FURTHER RESEARCH

The results presented in this study are limited by a number of factors—many of which can be addressed in future studies. First, only undergraduates and graduates participated in our experiment, and generalizing the findings from this study should use cautiously. Even if undergraduates and graduates are reasonable samples for the study, for they are the heaviest Internet users, future works must include various age groups to validate the gender differences found in this study. Second, there are many factors influence the way of information processing, such as the message content. In our study, we only consider involvement. Further research should attempt to investigate the interaction between other factors and clearly more research is needed. Third, the premise of this study is that consumers have no prior attitude to the product, but in our real life, consumers may have prior knowledge of a product and have existed attitude towards it. Hence, future studies need pay attention to the prior attitude about a product that this study did not consider.

REFERENCES

- [1] Godes, D. and Mayzlin, D. (2004). Using online conversations to study word-of-mouth communication. *Marketing Science*, 23(4), 545-560.
- [2] Bae, S., and Lee, T. (2011). Gender differences in consumers' perception of online consumer reviews. *Electronic Commerce Research*, 11(2), 201-214.
- [3] Herr, P. M. (1990). Order effects in consumer judgment, choice, and memory: The role of initial processing goals. *Advances in Consumer Research*, 17, 541-546.
- [4] Darley, W. K., and Smith, R. E. (1995). Gender differences in information processing strategies: An empirical test of the selectivity model in advertising response. *Journal of Advertising*, 24(1), 41-56.
- [5] Meyers-Levy, J., and Maheswaran, D. (1991). Exploring differences in males' and females' processing strategies. *Journal of Consumer Research*, 63-70.
- [6] Celsi, R. L., and Olson, J. C. (1988). The role of involvement in attention and comprehension processes. *Journal of consumer research*, 210-224.
- [7] Highhouse, S., and Gallo, A. (1997). Order effects in personnel decision making. *Human performance*, 10(1), 31-46.
- [8] Davis, J. H. (1984). Order in the courtroom. *Psychology and law*, 251-265.
- [9] Wangyilin (2010). The Effects of Integrating Word-of-Mouth Exchange in Order on Consumer Behavior. MS D Thesis. National Central University. (in chinese)
- [10] Nisbett, R. E., and Ross, L. (1980). Human inference: Strategies and shortcomings of social judgment.
- [11] Lana, R. E. (1963). Interest, media, and order effects in persuasive communications. *The Journal of Psychology*, 56(1), 9-13.
- [12] Brunel, F. F., and Nelson, M. R. (2003). Message order effects and gender differences in advertising persuasion. *Journal of Advertising Research*, 43(03), 330-341.
- [13] Hogarth, R. M., and Einhorn, H. J. (1992). Order effects in belief updating: The belief-adjustment model. *Cognitive psychology*, 24(1), 1-55.
- [14] Tubbs, R. M., Gaeth, G. J., Levin, I. P., and Van Osdol, L. A. (1993). Order effects in belief updating with consistent and inconsistent evidence. *Journal of Behavioral Decision Making*, 6(4), 257-269.
- [15] Kempf, D. S., and Palan, K. M. (2006). The effects of gender and argument strength on the processing of word-of-mouth communication. *Academy of Marketing Studies Journal*, 10(1), 1-18.
- [16] Darley, W. K., and Smith, R. E. (1995). Gender differences in information processing strategies: An empirical test of the selectivity model in advertising response. *Journal of Advertising*, 24(1), 41-56.
- [17] Meyers-Levy, J., and Sternthal, B. (1991). Gender differences in the use of message cues and judgments.

- Journal of marketing research, 84-96.
- [18] Park, D. H., Lee, J., and Han, I. (2007). The effect of on-line consumer reviews on consumer purchasing intention: The moderating role of involvement. *International Journal of Electronic Commerce*, 11(4), 125-148.
 - [19] Zaichkowsky, J. L. (1994). The personal involvement inventory: Reduction, revision, and application to advertising. *Journal of advertising*, 23(4), 59-70.
 - [20] Kempf, D. S., Laczniak, R. N., and Smith, R. E. (2006). The effects of gender on processing advertising and product trial information. *Marketing Letters*, 17(1), 5-16.
 - [21] Ein-Gar, D., Shiv, B., and Tormala, Z. L. (2012). When blemishing leads to blossoming: The positive effect of negative information. *Journal of Consumer Research*, 38(5), 846-859.
 - [22] Park, C., and Lee, T. M. (2009). Information direction, website reputation and eWOM effect: A moderating role of product type. *Journal of Business Research*, 62(1), 61-67.