

IS A POSITIVE REVIEW ALWAYS EFFECTIVE? ADVERTISING APPEAL EFFECT IN THE PERSUASION OF ONLINE CUSTOMER REVIEWS

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Abstract

Despite the expected value of online customer reviews as an emerging advertising medium, the manner of enforcing its effectiveness on customers' purchase behavior is still a question not well answered. To address the question, we propose a new central route cue called "advertising appeal" to examine attitude and intention to purchase a product or service based on the reasoning of the elaboration likelihood model. We also propose that consumers' consumption goal and attitude certainty separately moderate the advertising appeal effect on purchase intention through a degree of favorable attitude. We test these hypotheses by conducting a laboratory experiment with 50 participants. In this experiment, we manipulate two kinds of advertising appeals and consumption goals. This study demonstrates that attribute-based appeal reviews are more influential than emotion-based appeal reviews in the persuasion process, regardless of the individuals' consumption goals. However, the advertising appeal effect on purchase intention is more pronounced for hedonic consumers than for utilitarian consumers.

Keywords: attitude certainty, consumption goal, advertising appeal, purchase intention, elaboration likelihood model (ELM).

1 INTRODUCTION

Suppose that a customer is browsing web pages to decide on which restaurant to choose to celebrate a special occasion or just to have a dinner, and another customer has written a positive review for this restaurant. Therefore, predicting that the positive review will induce the reader to generate a favorable attitude and then conduct purchase behavior seems reasonable. However, is it always true?

To answer the aforementioned question, this study explores the persuasion of positive reviews by examining advertising appeal. Advertising appeal is originally used to describe the appeal of an advertisement that an advertiser uses to attract consumers to purchase a product or service (Jeong 2008). In the current study, we apply the concept of advertising appeal to the context of online customer reviews. As Hung et al. (2007) suggested, online customer reviews have become an emerging and important form of advertising. Moreover, based on the results of a Nielsen survey (2013), “consumer opinions online” as a form of advertising ranks higher in facilitating customers to take purchase action than other traditional advertising forms, such as ads on TV, magazines, and branded websites. Therefore, examining the persuasion of online customer reviews as a form of advertising tool is of immense practical necessity.

Previous studies examining online reviews generally focused on the quantitative features of the reviews, such as volume (Duan et al. 2008), dispersion (Godes et al. 2004), and rating (e.g., numerical valence) (Liu 2006). However, little is known about the review advertising appeal. In information systems literature, several studies have examined the effect of factual versus evaluative evidence in a review of consumer behavior (Hong et al. 2012; Lee et al. 2008; Park et al. 2009; Lee et al. 2008). However, these studies did not provide a thorough definition of the two reviews. The present study borrowed the concept of “advertising appeal” from the advertisement literature to examine the two kinds of reviews from the perspective of advertising appeal. Furthermore, although substantial studies have examined the economic effect of online reviews on customer purchase decisions (Duan et al. 2008; Liu 2006), only a few studies have investigated the mechanism by validating the mediating effect of attitude on the condition of high and low levels of attitude certainty. Moreover, whether the advertising appeal effect can be generalized to all consumers remains unclear; these consumers are typically classified by consumption goal, namely, hedonic goal versus utilitarian goal (Kushwaha et al. 2013).

This study conducts a laboratory experiment using the online Qualtrics survey, which examines the differential effects of an attribute-based and emotion-based positive review on consumers’ purchase intention and the psychological process, and comprehends the moderating role of consumption goal and attitude certainty. The results indicate that advertising appeals can directly and indirectly influence customers’ purchase intention significantly in a way that attribute-based reviews are more effective than emotion-based reviews. In addition, the hypothesized effect can be more pronounced for hedonic consumers than utilitarian ones. Although the result for the entire moderated mediation of attitude certainty is not completely significant, the significant interaction effect of attitude and attitude certainty on purchase intention also suggests that customers with a high attitude certainty may be more likely to generate higher purchase intention. This study expects to contribute to the online consumer reviews literature.

2 CONCEPTUAL DEVELOPMENT

Persuasion literature, in which the elaboration likelihood model (ELM) is briefly discussed, offers a conceptual lens with which to investigate the persuasiveness of online customer reviews. Proposed by Petty and Wegener (1999), ELM posits that in the persuasion process of a message, individuals go through either a central or peripheral route or both. Given that the central route involves scrutinizing and understanding message content, the change in the attitude or persuasion degree of the message depends on the characteristics of the message content, including information quality and valence. In contrast, the peripheral route involves content-irrelevant variables, such as source credibility. In this route, people can rely on simple cues to make a decision instead of exerting cognitive efforts in absorbing and analyzing information to generate their own thoughts. The effectiveness of these two routes have been determined based on individual elaboration likelihood (Petty and Cacioppo 1986). For instance, when the elaboration likelihood

is high, people may carefully consider the information delivered by the message content or is involved in the cognition of the message content via the central route. People generate their own thoughts on the message content and develop their attitudes according to the message information and their prior experience. In this situation, the informational features of the message content have key roles in attitude formation. In contrast, when the elaboration likelihood is low, people may be unable to expend cognitive efforts or become unwilling to devote cognitive efforts. These people may also search for peripheral cues, such as source credibility, to respond to message content and expend less cognitive efforts on the message content. Empirical studies suggest that elaboration ability and motivation are the two key factors that influence elaboration likelihood (Angst and Agarwal 2009).

We apply ELM to our research model as shown in Figure 1. From the perspective of review advertising appeal, we explore the effects of positive reviews, which are varied by consumption goal and attitude certainty. In terms of review content characteristics, we examine the advertising appeal of a positive review and propose that advertising appeal may affect how a recipient acquires product or service knowledge, which in turn will influence his/her motivation and ability to elaborate. We also examine the moderating role of consumption goal in attitude formation and propose that exposure to a positive review can shape or activate the attitude of a reader with high or low certainty.

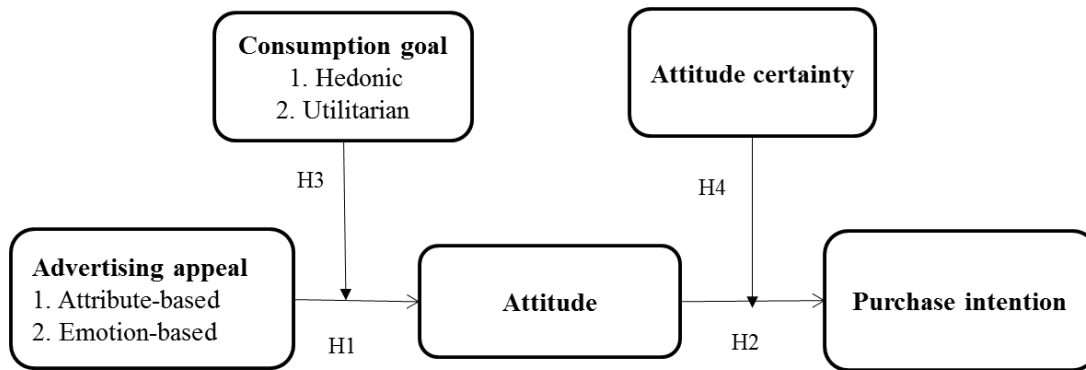


Figure 1. Research Model

3 HYPOTHESES DEVELOPMENT

3.1 Advertising Appeal Effect

As an emerging form of advertising medium (Nielsen, 2013), online reviews adopt advertising appeal to enhance persuasion. The most important function of adopting appeal is to gain immediate response, such as purchase behavior (Lautman and Percy 1984). In the present study, we focus on two kinds of appeal, namely, attribute-based appeal and emotion-based appeal. Attribute-based reviews indicate reasonable evaluations founded on the tangible features of a product, whereas emotion-based reviews are emotional evaluations that do not refer to the tangible aspects of a product.

Two types of reviews carry certain types of information that serve as evidence for purchasing a product. Attribute-based review contains product-relevant information signals that help customers infer the value of products, whereas emotion-based review only contains affect information based on the affect-as-information argument (Van den Bos 2003). The former is supposed to be more effective than the latter in inducing purchase intention for two reasons.

First, Park and Lee (2009) suggest that the attribute-based review is perceived as more informative than the emotion-based review. That is, the feelings and evaluations on various aspects of a product can be internalized as personal beliefs about a product or service. In contrast, the emotion-based review that merely

transfers abstract emotions can hardly increase the knowledge or upgrade the beliefs of customers on a product or service.

Second, effective information signals must be visible and clear (Rao and Monroe 1989) to help customers reduce their information search and processing costs. Emotion appeal, such as an emotion-based review that only provides affective recommendation of a product, is ambiguous, thereby increasing the difficulty of information processing and making the review less diagnostic. In contrast, the attribute-based review embedded with concrete information can help customers complete their purchase behavior. Therefore, attribute-based reviews have explicit product information and facilitate elaboration, whereas emotion-based reviews lack concrete information and prohibit elaboration.

When a customer considers purchasing a product, an attribute-based review can significantly help him/her make purchase decisions by clearly stating the benefits of such product. However, given the lack of evidence to support its favorable recommendations, the emotion-based review may demotivate individuals from purchasing a product. Therefore, we posit the following:

H1: A customer has a higher purchase intention when encountering a positive review of the attribute-based appeal than when encountering a positive review of the emotion-based appeal.

Based on ELM, information processing is an antecedent of attitude formation, and it argues that “attitudes are formed and modified as people gain information about attitude objects” (Eagly et al. 1993). In turn, attribute-based and emotion-based reviews lead to differential attitude activation, which subsequently influences behavioral intention, as suggested by the attitude–intention model (Fishbein and Ajzen 1975). Therefore, we propose that the purchase intention stimulated by advertising appeal is achieved through an underlying attitude activation mechanism. Thus, we posit the following:

H2: Attitude mediates the advertising effect on purchase intention.

3.2 Moderating Effect of Consumption Goal

In the current study, utilitarian goal is defined as consumption dominant on such attributes as functionality, practicality, cognition, and instrumental orientation (Dhar et al. 2001). Conversely, a hedonic goal is dominant on such attributes as experiential benefits, affect, enjoyment, and aesthetics (Dhar et al. 2001). For customers with a utilitarian goal, product evaluation requires cognitive involvement (Novak et al. 2003). Therefore, these customers are most likely to spend time and exert effort to search information for the cognitive analysis of their benefits and weaknesses to make a wise decision. By contrast, Arnold and Reynolds (2003) suggested that customers with hedonic goals are most likely to follow predecessors without significant cognitive effort. ELM argues that individuals economize on cognitive efforts to validate information. Therefore, they will engage in deeper processing only when the participant judges the incoming information as relevant. Extending this logic to our study, we propose that the utilitarian consumption goal may perceive a review as important information, which will arouse deep processing, whereas hedonic consumption pushes people away from cognitive elaboration. Therefore, an attribute-based review that provides explicit product information is more favorable for utilitarian customers who are engaged in deep processing, whereas an emotion-based review that is focused on affective stimulation is more beneficial for hedonic customers who have no significant cognitive involvement. Therefore, we posit the following:

H3: Hedonic consumers have a more favorable attitude and purchase intention when faced with an emotion-based positive review. By contrast, utilitarian consumers have a more favorable attitude and purchase intention when faced with an attribute-based positive review.

3.3 Moderating Role of Attitude Certainty

Emerging research suggests that marketers should consider consumers’ attitude certainty when examining advertising effectiveness (Wan et al. 2010). Attitude certainty is defined as the subjective conviction or certainty of an attitude (Tormala et al. 2002) that has been shown to enhance the attitude–behavior relationship (Fazio et al. 1978). For example, two consumers holding the same positive attitude

toward a product after reading a positive product review could have different intentions to purchase the product because of their differences in attitude certainty. In particular, regardless of valence of attitude, the attitude held with high certainty is likely to serve as a stronger guide for behavior than the attitude held with low certainty (Bizer et al. 2006). Therefore, we posit the following:

H4: The more certain consumers are of their favorable attitudes, the stronger the positive influence of attitudes on purchase intention.

4 METHOD

This experiment examined the advertising appeal effect of positive reviews on the participants' subsequent decisions when they are given either a hedonic goal or a utilitarian goal. The questions assessed the participants' psychological attitude and purchase intention to eat in a restaurant. On the basis of the proposed hypotheses, we expect hedonic participants to have a higher purchase intention when exposed to emotion-based reviews and utilitarian participants to be influenced more by attribute-based reviews. In addition, we measure the participants' attitude and attitude certainty toward the restaurant and examine their roles in the decision-making process. To particularly examine the effect of attitude certainty in the present study, we hold the valence constant by focusing only on positive reviews and the extremity constant by studying only the positive reviews with an extremely high five-star rating.

4.1 Sample and Target Product

We recruit college students from the Hong Kong Polytechnic University for our experiment because of several reasons. First, college students often browse the Internet and purchase products online. Second, this study requires a large sample size and students are the most accessible population. Third, given their limited knowledge on judging product quality and their willingness to listen to the opinions of others, college students depend on online customer reviews when making purchase decisions. Therefore, the perceptions of college students toward these reviews can provide valuable insights for our study. Finally, we have little reason to believe that the decisions of students influenced by online customer reviews are different from the decisions of other people because human decisions result from the collection and transmission of information into cognitive and behavioral systems (Panksepp 2005).

We also target restaurants in the experimental design because our study is guided by the notion that experience goods (e.g., restaurant), wherein quality (e.g., food taste, staff service, and atmosphere), cannot be determined completely and accurately by inspection prior to consumption, unlike search goods. Therefore, consumers have to depend on the opinions of others to accumulate knowledge and form optimal decisions.

4.2 Procedures

Fifty college students from the Hong Kong Polytechnic University participated in our experiment (65% female, Mage=25 years). The participants were randomly assigned to one of four conditions in a 2 (positive review appeal: attribute-based or emotion based) × 2 (consumption goal: hedonic or utilitarian) between-subject posttest-only factorial design. In the beginning, the participants were informed that the study was related to consumer–consumer communications. Afterwards, they were randomly assigned and instructed to go to a restaurant either to have fun or to simply have dinner. They were then asked to imagine this scenario: “You find a restaurant. Before going to the restaurant, you look it up in a review website.” The participants were then exposed to a restaurant review. Following the review, we introduced the measures of these constructs with the following instruction: “Please answer the following questions based on the review you read.”

4.2.1 Manipulation of the consumption goal

Based on random assignment, the consumption goal was either for hedonic benefits or for utilitarian benefits. In the hedonic condition, the participants were told to “Imagine that you are looking for a restaurant for a ‘gathering of friends.’ You only want to maximize your enjoyment and happiness.” In the utilitarian condition, the participants were told to “Imagine that you are looking for a restaurant to simply have dinner. You only want to satisfy your hunger in a good environment.”

4.2.2 Manipulation of the advertising appeal

Based on random assignment, the appeal of the positive review was either attribute based or emotion based. In the attribute-based condition, the participants read a review that praises various aspects of the restaurant, including food, service, and environment, among others. In the emotion-based condition, the participants read a review that only emotionally praises the restaurant without providing any reason for supporting the positive comments. These two reviews are included in the Appendix.

4.3 Measures

4.3.1 Attitude

We asked the participants the question “What do you think of the restaurant?” measured by three items ($\alpha = 0.95$) (Bad /Good, Unfavorable /Favorable, and Dislike/Like). A scale ranging from 1 to 7 was used, with the larger numbers indicating more favorable attitudes.

4.3.2 Attitude certainty

Attitude certainty was measured by two items ($\alpha = 0.93$): “How certain are you of your attitude?” (Response range: 1 = “not at all” to 7 = “extremely”) and “How convinced are you of your attitude?” (Response range: 1 = “not at all” to 7 = “extremely”).

4.3.3 Purchase intention

To assess purchase intention, we asked the participants the question “To what extent do you think you will go to the restaurant?” using four items ($\alpha = 0.93$) (Unlikely/Likely, Improbable/Probable, Uncertain/Certain, and Definitely Not/Definitely). A scale ranging from 1 to 7 was used, with the larger numbers indicating higher purchase intention.

Table 1 presents the means, standard deviations, and correlations that show the significant correlations between attitude and certainty ($r = 0.53$, $p < 0.01$), between attitude and intention ($r = 0.63$, $p < 0.01$), and between certainty and intention ($r = 0.63$, $p < 0.01$). These correlations indicate that individuals have a high purchase intention when they have a favorable attitude and great confidence than when they have an unfavorable attitude. To test the proposed hypotheses, we conducted ANOVA and regressions. The results are presented in the following section.

Table 1. Descriptive statistics of the variables measured in experiment

Variable	Mean	SD	1	2	3
1. Attitude (1-7)	5.28	1.49	0.95		
2. Attitude certainty(1-7)	4.92	1.32	.53**	0.93	
3. Purchase intention(1-7)	5.07	1.18	.63**	.63**	0.93

** $p < .01$. Note: the bold diagonal values are the reliability for each construct.

5 RESULTS

5.1 Manipulation Checks

For each manipulation check, the participants were asked to indicate on a seven-point Likert scale the extent to which they agreed (1= “strongly disagree”, 7= “strongly agree”) with a statement about the manipulation check in question.

As a manipulation check of consumption goal, the participants were asked two questions. The first question asked them to indicate the extent to which they agreed with this statement: “If I go to the restaurant, it will only be for fun.” The results failed to obtain a significant main effect of consumption goal. This

finding indicates that the manipulation of the hedonic goal was not successful: the participants in the hedonic condition (mean = 4.109, SD = 0.257) did not report more hedonic goals than did the participants in the utilitarian condition (mean = 4.109, SD = 0.257). In addition, the participants were asked the extent to which they agreed with this statement: “If I go to the restaurant, it will be for its benefits.” ANOVA results failed to obtain a significant main effect of the consumption goal. This finding indicates that the manipulation of the utilitarian goal was not successful. The participants in the utilitarian condition (mean = 4.507, SD = 0.292) did not report more utilitarian goals than did the participants in the hedonic condition (mean = 4.659, SD = 0.259).

The participants answered two questions to check whether the advertising appeal of a positive review had been perceived as intended. The first question focused on the extent to which they agreed with this statement: “The review tells me the features of the restaurant (food, service, convenience of location, etc.)” An ANOVA yielded a significant main effect of advertising appeal ($F(1, 34) = 5.163, p < 0.05$), suggesting that the manipulation of the attribute-based appeal was successful. The participants in the attribute-based condition (mean = 4.564, SD = 0.369) reported more attribute appeal than did the participants in the emotion-based condition (mean = 3.300, SD = 0.416). Furthermore, the participants were asked the extent to which they agreed with this statement: “The review tells me only about what the reviewer felt about the restaurant.” ANOVA results failed to obtain a significant main effect of advertising appeal, indicating that the manipulation of the emotion-based condition was not successful. The participants in the emotion-based condition (mean = 5.650, SD = 0.308) did not report more attribute appeal than did the participants in the attribute-based condition (mean = 5.473, SD = 0.273).

5.2 Hypotheses Tests

5.2.1 Testing the simple mediation of attitude

To examine whether the advertising appeal of a positive review influenced the participants’ attitude of the restaurant that altered their purchase intentions, we first regressed the purchase intention on advertising appeal (1 = feature-based appeal, 0 = emotion-based appeal) and obtained a significant main direct effect of advertising appeal ($\beta = 0.693, t(48) = 2.15, p < 0.05$), thus supporting H1. Second, we performed a simple mediation analysis using PROCESS of Model 4. The output is presented in the Appendix. Figure 2 shows that the advertising appeal significantly predicts ($\beta = 1.297, p < 0.001$) attitude. The advertising appeal explains the 43.7% variance in attitude ($R^2 = 0.437$). The coefficient is positive, suggesting that the attribute-based appeal arouses more favorable attitude than the emotion-based appeal, thus supporting H1. Moreover, when regressing both appeal and attitude on purchase intention, the results indicate that appeal does not significantly predict purchase intention ($\beta = 0.065, p = 0.827$). Attitude significantly predicts purchase intention ($\beta = 0.484, p = 0.000$), suggesting the significant mediating or indirect effect of attitude ($\beta = 0.628, \text{BootLLCI} = 0.302, \text{BootULCI} = 1.12$). Therefore, H2 is supported.

5.2.2 Testing moderating effect of consumption goal

The 2×2 ANOVA results indicate that the main effect of advertising appeal was significant ($F(1, 46) = 4.18, p < 0.05$), supporting H1 and that the main effect of consumption goal was not significant. Overall, the participants had a significant intention of eating in the restaurant when exposed to the attribute-based review (mean = 5.39, SD = 1.15) than when exposed to the emotion-based review (mean = 4.70, SD = 1.12). Most importantly, the advertising appeal \times consumption goal interaction in both purchase intention and attitude was not significant. Thus, H3 was not supported.

5.2.3 Testing moderating effect of attitude certainty

First, we regressed attitude, certainty, and their interaction on purchase intention and obtained only a significant interaction effect ($\beta = 0.135, t = 2.404, p < 0.05$). The non-significant main effect of attitude on intention may be correct because the coefficient is negative, which contradicts my hypothesis and reasoning ($\beta = -0.272, t = -1.033, p = 0.307$). Second, we conducted an ANOVA analysis, with advertising appeal as the independent variable, attitude certainty as the covariate, and their interaction in attitude, and obtained a significant main effect of advertising appeal ($F(1, 46) = 5.153, p < 0.05$) and a non-significant interaction effect ($F(1, 46) = 2.340, p = 0.133$). Thus, H4 was not supported.

5.3 Conclusion

To summarize the results, we determined the direct and indirect effects of advertising appeal on purchase intention through attitude. Despite the limited evidence for the moderating effect of consumption goal, we posit that such an advertising appeal effect is more pronounced for hedonic consumers than for the utilitarian ones. Despite the lack of significant moderated mediation effect of attitude certainty on appeal influencing intention through attitude, we determined that attitude certainty positively influences intention significantly. Therefore, H1 and H2 are supported, and H3 and H4 are not well supported. The reasons for the failure to obtain the expected results are as follows

First, the manipulations of both hedonic and utilitarian goals failed. We might have used poorly constructed questions for the manipulation check. Using the HEDUT scale (Voss et al. 2003) to check the consumption goal would have been more appropriate. Moreover, the manipulation of the emotion-based appeal failed despite the successful manipulation of the attribute-based appeal. However, we conducted a survey using another pool of 41 participants, asked them the manipulation questions of the two appeals, and obtained significant results for both attribute-based ($F(1,37) = 0.137, p < 0.000$) and emotion-based ($F(1,37) = 6.077, p < 0.05$) appeals. Therefore, the manipulation of advertising appeal may be in the right direction to a certain extent.

Second, for the high rate of dropping out, several participants answered the questions on the dependent variables but did not answer the manipulation check questions. Therefore, even the small size of data to conduct a 2×2 ANOVA for manipulation checks can also be a reason for failure.

6 DISCUSSION

6.1 Theoretical Implications

This paper investigates the advertising appeal effect by manipulating two distinct positive reviews, namely, attribute-based review of high informational features and emotion-based review of high emotional features. Our experimental results show that relative to emotion-based appeal, a positive review in attribute-based appeal is more influential in fostering the intention of individuals to purchase the product or service favored in the review regardless of the hedonic or utilitarian goals of the customers. Our findings may contribute to emerging literature on online customer reviews in the following ways.

First, beyond the frequently discussed quadratic metrics of reviews such as ratings (e.g., Moe and Trusov 2011; Tirunillai and Tellis 2012), this paper builds upon and contributes to the stream of research that examines the textual features of reviews, such as affective content (Ludwig et al. 2013) and information richness (Goh et al. 2013). Although we do not employ the automated text-mining technique directly to quantify review contents into quantitative indices, we distinguish attribute-based review from emotion-based review according to the informativeness of their content and emotionality.

Second, to the best of our knowledge, many empirical studies on customer reviews have provided evidence on the effect of customer reviews on product sales (Duan et al. 2008), examined the determinants of helpful reviews (Mudambi et al. 2010), and focused on specific features of these reviews (e.g., volume and valence (Liu 2006)). However, little is known of the different effects of attitude certainty activated by positive reviews at the interpersonal level. When an individual expresses positive arguments in various advertising appeals, the exposure of this individual to an attribute-based review can affect his/her attitude formation and certainty significantly.

6.2 Practical Implications

Online customer reviews have expanded the reach of marketers to the point that nearly any customer feedback on products or services can be considered an influential product review. This research proposes several means through which online retailers can increase the influence of their retail sites.

First, the significant effect of advertising appeal indicates that customers tend to be persuaded by an online review embedded with relevant product information rather than by arguments that simply

recommend without providing any evidence, regardless of the hedonic or utilitarian goals of these customers. Therefore, to improve the persuasiveness of a review, online retailers must encourage their customers to describe their consumption experiences in detail and to identify their favored aspects of the product or service. The intensity of product-relative information evaluation increases the persuasiveness of a positive review of a product or service, which subsequently influences the motivation and ability of customers to purchase such product or service.

Second, the failure of the moderating role of consumption goal suggests that an attribute-based review is always more influential than an emotion-based review in an anonymous environment. That is, customers are less likely to conduct an impulsive consumption facilitated by hedonic goal and instead make wise decisions according to product knowledge regardless of their aims.

Finally, this study offers insights for retail managers who collect customer reviews from other websites and then post them on their own websites (e.g., as testimonials) or add them to product descriptions. These purchasers can improve their return on investments by selecting those reviews with the highest persuasiveness as determined by advertising appeal.

6.3 Limitations and Future Research

The following questions on the effects of learning on the participation of customers in the marketing process must be investigated.

First, the moderating effect of consumption goal is not well supported in our experimental design, which may be attributed to the imperfect design as analyzed in the conclusion section. We may adopt two solutions to test the moderating role of utilitarian versus hedonic goal. One solution is to manipulate the consumption goal by choosing two different products by conducting a pretest to rate several experience goods using the HEDUT scale (Voss et al. 2003). Based on the results, we can choose one product with a high utilitarian value and a low hedonic value, and then choose another product with a low utilitarian value and a high hedonic value. The second solution is to manipulate advertising appeal in the experiment and then measure hedonic and utilitarian goals as two dimensions of consumer attitude.

Second, although a positive review is closely related with favorable product evaluations, such review could provide a strong and comprehensive support for the advertising appeal effect if the negative review is also considered in our proposed model.

Third, the current experimental design, in which the participants are asked to imagine that they have already chosen a restaurant by simply reading a single review, may disregard another situation in which the customers search for restaurants via online reviews and have not decided which one to select. Future studies must develop a more complete theoretical framework to explore further the effectiveness of reviews and fulfill this limitation.

Finally, despite the observed causal relations with high internal validity, the controlled laboratory setting, limited number of target products, and student sample may lead to suspicions that our findings lack external validity. We plan to conduct further studies to address this potential limitation. For example, we will utilize other settings, such as hotels, tourism hotspots, and spas for our findings to explain the same phenomenon in other settings, products, or services.

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Appendix

Attribute-based Review



John. Chan
Hong Kong

★ ★ ★ ★ ★ 10/22/2014

This restaurant is very beautiful and clean.
Food selection is excellent with reasonable prices.
The waiters are super friendly and helpful.
The atmosphere is very relaxing.
And the restaurant has super cool looking and ample parking.

What do you think of this review?



Emotion-based Review



John. Chan
Hong Kong

★ ★ ★ ★ ★ 10/22/2014

I LOVE LOVE LOVE, did I mention I love this restaurant!?
This restaurant is awesome!
Can I get by with a review which simply says GO HERE!?!
I don't even know where to begin in telling you how fantastic it is!
I can't wait to go back!

What do you think of this review?

