Believe or Skepticism? An Empirical Study on Individuals’ Attitude to Blog Product Review

Chih-Chien Wang and Hung-Yu Chien

Abstract—The study discusses individuals’ skepticism to blog product review by an empirical survey. ANCOVA and Partial Least Square (PLS) were used to analysis the data. This study found that subjects were much skeptical about advertisement than blog product reviews. The influences on skepticism of influence and experience were moderated by product. Skepticism will reduce of the credibility of message and induce negatively product attitude. The credibility will positively influence subjects’ product attitude and then lead to intention to purchase and to recommend the product to others.

Index Terms—Blog, product review, word-of-mouth, skepticism.

I. INTRODUCTION

Consumers usually consult with friends and relatives before making purchase decision. Due to the popularity and advances in internet technology, now they can share their experience, opinions and critiques about product on internet and on their own blogs. The blog product reviews are one kind of word-of-mouths (WOMs) from consumers, which usually contained product information as well as personal usage experience and opinions to the product. People trust WOMs since they are basically consumers’ experience sharing rather than advertisements from firms. People doubt the credibility of advertising messages since advertisements disclose only positive side of the product. WOMs usually contain both positive and negative side evaluations for the product, although most of them are positive oriented.

From the point of credibility, the blog product reviews are more persuasive than advertisement. Nevertheless, some blog product reviews are overstated and exaggerated. The overstated messages provoke consumers’ skepticism. People may regard the exaggerated blog product reviews as one kind of advertisement. Obermiller and Spangenberg revealed that exaggerated marketing messages may cause consumers’ skepticism [1]. An overstated and exaggerated blog product review would enhance consumers’ skepticism, makes the message unpersuasive.

People can post any blog product reviews as they want. Nevertheless, to believe or not is determined by the blog audiences. Factors from both blogger and audience sides determine the influence of blog product reviews. The current research concentrates on the antecedents and consequences of skepticism to blog product review.

Antecedents of skepticism include factors of sender and receivers of blog product review. Expertise of message sender, the blogger who write the blog product review, serves as a clue for receivers to trust it. Besides, product involvement and experience of audiences influence their skepticism feeling to the blog product review.

Ohanian reported that sources with high expertise are more persuasive than source with less expertise [2]. Expertise of bloggers is seems like a clue for audiences to trust the blog product review. Individuals’ product involvement and product experience may also influence their skepticism feeling to the blog product review. When browsing blogs, people judge the accuracy and justice of the message in mind. As the argument of the elaboration likelihood model [3], audiences would elaborate the message before making decision if they involve in the product (are with motivation to elaborate) and have abundant product experience (have ability to elaborate). However, if individuals do not involve in the product or lack of product experience, they judge the blog product review based on peripheral cues.

Further, this research also focuses on the consequences of skepticism. People will regard the product review as credible if they are not skepticism to. When the blog product review is credible, people are easily persuaded by the message. Attitude to the product will be influenced by the credible blog product review and purchase intention will be consequently affected. When people are skepticism to the blog product review, they may think it incredibility. This incredibility feeling would lead to less positive attitude to the product, lower intention to purchase, and lower intention to recommend the product to others.

II. LITERATURE REVIEW AND HYPOTHESES

A. Skepticism

Obermiller and Spangenberg defined skepticism as the inclination to disbelieve an argument [1]. Mohr, Eroglu, and Ellen referred skepticism as a kind of cognitive response that varies based on the content and context of the communication [4]. Audiences are generally skeptical about advertisement and doubt the credibility of advertising messages since advertisements only disclose positive side of the product [1]. Nevertheless, when considering the credibility of message, people usually think that WOMs are much persuasive and less skeptical than advertisements since WOMs are basically consumers’ experience sharing rather than overstated messages from firms [5].

The blog product reviews are one kind of WOMs from other consumers, which usually contains product information as well as personal usage experience and opinions to products.
Blog product reviews may be more justice than advertisement, because the former ones usually contain both positive and negative side evaluations for the product while the later ones contain only unbalance propaganda from firms.

Based on the above discussion, this study advocates that consumers are more skepticism to advertisement than blog product review. Thus, this study proposes the following hypothesis.

Hypothesis 1: Audiences are more skeptical to advertisement than blog product review.

B. Expertise

There are plenty of blog product reviews on Internet. All people, no matter experts or non-experts, can post their own product review in blogs. These product reviews, or WOMs, consist of facts as well as personal opinions, subjective or objectives, to the products. Both high quality professional reviews and biased criticizes co-exist in cyberspace.

Expertise is an essential element in source credibility which referred to professional knowledge and capability of message senders [2, 6]. Communicators with expertise are usually considered as effective message source. Maddux and Rogers reported that perceived expertise of source had a positive impact on change of attitude [7]. Belch and Belch revealed that an endorsement from an expert source can have an effect on opinion, attitude, and behavior by a process called internalization [8]. When consumers accept message posted by others, the internalization was aroused at the same time. When the blogger is an expert in the field, individuals will trust the information because of their credibility and trustworthiness toward the source. Kiecker and Cowles revealed that if individuals perceived that the source of WOMs was blogger with expertise, the message in the blog would be more persuasive and credible [9].

From the inferences mentioned above, an expert source is more convincing and persuasive than a non-expert source. Once consumers think the blogger is an expert on the product domain, they may consider the posted blog product review as reliable information. For this reason, consumers may incline to the product endorsed or referred by the professional blogger with expertise. Thus, this research advocated the following hypothesis.

Hypothesis 2: Audiences are more skeptical to blog product review posted by non-expert blogger than by expert one.

C. Involvement

Zaichkowsky referred “involvement” as the personally perceived relevance of objects based on internal interests, values, and needs [10]. The involvement concept originates in the idea of “ego involvement” that mentions the connection between an object and a person [11]. A lot of research works about involvement construct have done in the consumer research. Low involvement is relevant to less interest about the specific message or goods, whereas high involvement is meant as more interest [12, 13].

High level product involvement means that an individual highly care more about the product. Dardis & Fuyuan found that consumers are more easily prevailed upon believe gain-framed message when they are under a high product involvement scenario [14]. Most blog product reviews are gain-framed messages with positive WOM. Individuals with high product involvement may read all details of the blog product reviews and be in immersion in them. When with long immersion time, consumers are easily persuaded by the blog product review. Therefore, high involvement consumers are less skeptical to blog product review which recommends the product. Thus, this study proposed the following hypothesis.

Hypothesis 3: People with high product involvement are less skeptical about blog product review than ones with low involvement.

D. Product Experience

People usually accumulate their domain knowledge of product by purchase and usage experience. When consumers are with abundant product experience, they may evaluate the blog product review based on their previous experience. Previous experience reflects individuals’ ability to elaborate the contents of message. As the argument of the elaboration likelihood model [3], there are two routes to persuasion: the “central route,” where individuals consider the message logically; and the “peripheral route,” in which the individuals use peripheral cues (such as cues about message sources) to elaborate. If individuals are with product experience, they will judge the blog product review by their previous experience.

If the description about product is exaggerated, experienced consumers may exert their skepticism to the message. When the blog product review proposes an extremely positive recommendation toward the product, consumers with abundant product experience may doubt the motivation of bloggers. Accordingly, this study proposed the following hypothesis.

Hypothesis 4: People with product experience are more skeptical about the blog product review than ones without.

E. Consequences of Skepticism

Skepticism is a potential obstacle to persuasive communication. As Obermiller and Spangeberg revealed, skepticism means the inclination to disbelieve a statement [1]. The consequences of skepticism is to regard the message source is incredible, and to disbelieve the message. When people are skeptical to the blog product review, they will not be persuaded by the message. They will hold less positive attitude to product, and be with less intention to purchase the product and recommend to others.

Choi & Rifon revealed the negative relationship between skepticism and credibility. High level of skepticism would lead to low credibility. Credibility plays a critical role in influencing audiences’ attitude [15] and is one important element for persuasive communication. When the source exhibits itself as credible, it probably persuades audiences [2, 3, 16, 17].

A lot of previous studies investigated the effect of source credibility on the audiences’ attitude and behavior intentions, indicating that highly credible sources produce a more positive attitude and provoke more behavioral conformity than less credible sources [2, 6, 12]. When consumers read a positive product review from a blogger with high source
credibility, they will be more easily persuaded and have a good product attitude to the product. Previous studies also revealed the impact of message credibility on persuasion effect. Thus, skepticism is with negative impact on the persuasion effect of message.

Berwowitz et al. suggested that attitudes are overall evaluation for people, events, and things [18]. Attitude included three components: Cognition, emotion, and conation [19, 20]. Cognitive component is a belief of individuals toward subject matter. Emotional component presents individuals' evaluations regarding subject. Conation means person's purchase intention or behavior tendency for target object.

Perceived blogger credibility and skepticism are cognitive component of attitudes in the current research. Individuals' attitude to product seems as the emotional part of attitude. Purchase intention and intention to recommend the product to others belong to intention dimension of attitude. Product attitude means consumers' evaluation to the product. Individuals judge whether value of product is benefit to them and produce their own product attitude [21]. Purchase Intention is consumers' tendency to buy the product [22, 23]. Recommend intention is consumers' tendency to recommend the product to others.

Previous studies in attitude advocated the relationship among cognitive, emotion and conation components of attitude. Thus, skepticism will negatively impact the perceived credibility which weakens persuasion effect of the message. The weaken persuasion effect will lead to less positive product attitude, lower purchase intention and intention to recommend the product to others.

The exaggerated message would easily cause consumers' skepticism [1, 24]. Once individual are skeptical of message, they may regard the message incredible and the persuasion effect will decrease accordingly. Once consumers perceived the credibility of a blogger is less credible, they might not be persuaded by and induce skepticism to the trustworthiness of contents in the meanwhile. Simultaneously, consumers might reduce their attitude toward product due to the skeptical feeling. To go further, individuals may not purchase the product and do not have the intention to recommend product to others. Thus, this research proposed the following hypothesis:

Hypothesis 5: Skepticism will weaken the persuasion effect of blog product review.

III. METHODOLOGY

The current research concentrates on individuals' skepticism to product review. This research included three antecedents of skepticism: Message source, audiences' product involvement, and audiences' previous product experience. Product attitude, purchase intention, and recommend intention are three consequences of skepticism considered in the study.

Previous research revealed that individuals were more skeptical of WOM referring product quality or performance [25, 26]. Since performance and quality of the product cannot be represented detailed and briefly by product specification, the research selected experience product as the experimental target. Before consumers purchase an experience product, they might consult others on Internet for advice.

This research designs an empirical study to discuss individuals’ skepticism to blog product review as well as advertisement. The target products were a cosmetic product, which is basically experience product. The study chooses Blemish Balm Cream (BB cream) as research target. BB cream is an innovative cosmetic product immerging recently and no single brand has substantial market share in BB cream.

A. Participants

The study posted a call-for-volunteers message on a cosmetic discussion board in an online community. This study offered a lottery of thirty gifts worth about 10 US dollars each as incentives for encouraging participation.

Since most buyers of BB creams are females, this study only includes female subjects and all male subjects are excluded. In total, 195 female subjects join voluntarily this study.

The average age of the subjects was 26.10 years old with a standard deviation of 6.05 years. Most subjects were with college education (76.41%) or above (10.77%). 89 (45.64%) subjects were employed, 81 (41.54%) were students, and remain 25 (12.82%) were between jobs. 122 (62.56%) participants reported that they always or often wear make-up, while 19 (9.74%) casually wear make-up, and 54 (27.69%) seldom wear make-up.

B. Design

The study created two pseudo bloggers, an expert and a non-expert blogger, in experimental manipulation to examine the impact of blogger’s expertise on persuasion effect of blog product review. The expert blogger was a professional cosmetologist with plentiful make-up experience and knowledge. In contrast with expert blogger, the other one was an ordinary non-expert female cosmetic consumer who bought a BB cream and shared her experience in her own blog. The pseudo personal profiles of these two bloggers were included in the experimental blogs. A pseudo-brand was created to avoid the interference of brand image.

The study also created an advertisement as a control group. The message content of advertisement was the same as that of two blogs.

C. Measurement

The measurement composed of six parts. In the first part, subjects were asked for their usage experience. Two items were used in this part: “How frequently did you use BB cream?” and “How frequently did you purchase BB cream?” The second part measured the degree of respondents’ involvement. The 10 item revised PII (RPII) which proposed by Zaichkowsky have been broadly used in consumer research [10]. Thus, the current study utilized the 10-item RPII scale to access involvement.

After filling out the scales of product experience and product involvement, participants were randomly assigned into three groups to read an advertisement, a blog product review by an expert, or a blog product review by a non-expert blogger. After reading, subjects were asked one question about a specific question in the message content to make sure
the subjects had read the message content in detail.

The next part of questionnaire measured subjects’ perception to the expertise of pseudo bloggers to confirm the experiment manipulate of blogger expertise. This part adopted the scale developed by Ohanian [2], which was five-item semantic scale.

The fourth part measured the skepticism to the experimental advertisement and two blogs. To measure consumer skepticism, Tan proposed a scale of four-dimension scale: disbelief, mistrust, undesirable, and misinform. Since the undesirable and misinform dimensions are irrelevant with this study, the current study adopted only dimensions of disbelief and mistrust [27]. Six items were adopted in this part.

The fifth part assessed the perceived credibility of advertisement and two blogs. This part adopted four-item bipolar semantic scale developed by Johnson and Kaye [4] to measure subjects’ perceived credibility.

The last part measured persuasion effect of the advertisement and two blog product reviews. The current study used three indicators to measure persuasion effect: product attitude, purchase intention, and recommend intention. This part measured product attitude by the scale proposed by Ying and Chung [22]. Besides, this study employed two items to assess purchase intention, which base on previous research [23, 24]. Recommend intention was estimated by three items developed by Babin, Lee, Kim, and Griffin [29].

Seven-point semantic and Likert scale was used in the study.

D. Reliability and Validity

The current study employed Cronbach’s alpha and composite reliability (CR) analysis to evaluate the reliability and average variance extracted (AVE) to evaluate validity of the measurement. The Cronbach’s alpha were .95, .98, .80, .95, .94, .97, .97, .96; the CR were .95, .98, .91, .96, .96, .98, .99, .98; the AVE values of scales were .83, .84, .83, .79, .84, .91, .97, .93, for expertise, involvement, experience, involvement, skepticism, credibility, product attitude, purchase intention, and recommend intention, respectively. All Cronbach alpha and CR were higher than .70 which revealed that the measurement scales were with acceptable reliability. All AVE were above .5, which revealed the acceptable validity level [30].

E. Data Analysis

All participants were randomly assigned into three groups: Advertisement, blog product review by expert, and blog product review by non-expert blogger. Subjects were asked to read the message provide to them and then complete the questionnaire. To check the experimental manipulation, this study conducted t-test which revealed the significant difference in perceived expertise between expert group (M=4.95; SD=1.11) and non-expert blogger group (M=4.23; SD=1.16). This revealed that expertise was successfully manipulated (t=3.75, P<.01).

This study conducted covariance analysis (ANCOVA) to examine the influence on skepticism of expertise of blogger and subjects’ product involvement and experience. The ANCOVA analysis contained the experimental manipulation as the independent variable. Product involvement and experience were included as covariates.

The ANCOVA analysis results revealed that consumers induced the highest level of skepticism when they read an advertisement than the blog product reviews. However, the difference in skepticism was insignificant between expert and non-expert blog groups.

Besides, product involvement was significantly covariates to skepticism. The correlation coefficient was -.31 (p<.01) between product involvement and skepticism. The significant negative relationship means that low involvement subjects were with much skeptical feeling to the advertisement as well as blog product reviews.

<table>
<thead>
<tr>
<th>TABLE I: ANCOVA ANALYSIS</th>
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<tbody>
<tr>
<td>Independent variables</td>
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<tr>
<td>Experimental manipulation</td>
</tr>
<tr>
<td>Product involvement</td>
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<tr>
<td>Product experience</td>
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</table>

Product experience was significantly covariates to skepticism in ANCOVA analysis. The relationship between product experience and skepticism was negative. Less experience subjects were with much skeptical feeling to the ads and blog product review than much experience ones. However, the relationship was not significant in statistics.

This study utilized cluster analysis to separate subjects into high involvement (M=5.38, n=138) and low involvement groups (M=2.48, n=57). Figure 1 and table 2 revealed the statistic analysis results. For both high and low involvement subjects, advertisement group was with highest skepticism, while expert group was with lowest skepticism. Nevertheless, the skepticism level was not significant between expert and non-expert blogger groups.

Besides, this study used cluster analysis to divide participants into much experience (M=3.92, n=126) and less experience groups (M=1.51, n=69). For much experience subjects, advertisement group was with highest skepticism than groups of blog product reviews by both expert blogger and non-expert blogger. The skepticism level was not significant between expert and non-expert blogger groups for much experience subjects. For less experience subjects, the difference in skepticism was insignificant among three experimental groups of advertisement, blog product review by expert, and blog product review by non-expert blogger.

IV. DISCUSSIONS

The above statistical results revealed that skepticism level of blog product review groups by expert and by non-expert bloggers were lower than that of advertisement one, for much experience subjects, and for both high and low involvement subjects. That is, blog product review aroused less skepticism to subjects than ads.

Besides, involvement is negative relative with skepticism. High involvement subjects were less skeptical to the persuasive message of BB cream used in this study. The
possible explain may be that consumers with low involvement may doubt the performance of BB cream and doubt the motivation of bloggers. However, when consumers were involved in BB cream, they may believe the performance the BB cream. The much the involvement is, the less skepticism to the persuasive message for the BB cream.

After investigating the factors which provoke consumer skepticism, this study also look into the possible consequences of skepticism. To examine the impact of skepticism on its consequences, this study adopted partial least square (PLS) analysis. Credibility, product attitude, purchase intention, and recommend intention are the consequence factors considered in the current study. Table 3 revealed the detailed measurement and structure models of PLS, as well as the explained variances for all constructs. The four PLS models in table 3 reveal similar results in the relationships among constructs of skepticism, credibility, product attitude, purchase intention, and recommend intention.

PLS results of all the four models represented a negative relationship between skepticism and credibility. It indicated that when consumers read persuasive messages with doubts, they would have less perceived credibility toward the messages. Besides, there was a positive relationship between credibility and product attitude. When subjects thought the persuasive messages were high credibility, they might hold more positive product attitude. When the persuasive messages were considered as incredibility, subjects were not persuaded by the messages.

However, there was no significant negative relationship between skepticism and product attitude. The outcome revealed that skepticism would not lead directly negative product attitude. Credibility is a moderate factor for the influence of skepticism to persuasive effect. For BB cream, skepticism leaded to low credibility, and then leaded to less positive product attitude.

### TABLE II: ANOVA ANALYSIS BY INVOLVEMENT AND EXPERIENCE

<table>
<thead>
<tr>
<th></th>
<th>Non-expert blogger</th>
<th>Gourmet Expert</th>
<th>Ad p</th>
<th>Post hoc test</th>
</tr>
</thead>
<tbody>
<tr>
<td>All Subjects</td>
<td>N=75</td>
<td>M=3.79</td>
<td>SD=1.06</td>
<td></td>
</tr>
<tr>
<td>N=66</td>
<td>M=3.73</td>
<td>SD=1.275</td>
<td>AD &gt; Expert</td>
<td></td>
</tr>
<tr>
<td>N=64</td>
<td>M=4.47</td>
<td>SD=1.33</td>
<td>AD &gt; Non-expert blogger</td>
<td></td>
</tr>
<tr>
<td>High Involvement</td>
<td>N=57</td>
<td>M=3.72</td>
<td>SD=0.99</td>
<td></td>
</tr>
<tr>
<td>N=44</td>
<td>M=3.53</td>
<td>SD=1.36</td>
<td>AD &gt; Expert</td>
<td></td>
</tr>
<tr>
<td>N=37</td>
<td>M=4.18</td>
<td>AD &gt; Non-expert blogger</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low Involvement</td>
<td>N=22</td>
<td>M=3.99</td>
<td>SD=1.28</td>
<td></td>
</tr>
<tr>
<td>N=18</td>
<td>M=4.13</td>
<td>SD=0.97</td>
<td>AD &gt; Expert</td>
<td></td>
</tr>
<tr>
<td>N=17</td>
<td>M=5.11</td>
<td>AD &gt; Non-expert blogger</td>
<td></td>
<td></td>
</tr>
<tr>
<td>More Experience</td>
<td>N=53</td>
<td>M=3.74</td>
<td>SD=1.01</td>
<td></td>
</tr>
<tr>
<td>N=44</td>
<td>M=3.55</td>
<td>SD=1.33</td>
<td>AD &gt; Non-expert blogger</td>
<td></td>
</tr>
<tr>
<td>N=29</td>
<td>M=4.60</td>
<td>AD &gt; Expert</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Less Experience</td>
<td>N=22</td>
<td>M=3.92</td>
<td>SD=1.20</td>
<td></td>
</tr>
<tr>
<td>N=22</td>
<td>M=4.08</td>
<td>SD=1.08</td>
<td>No significant difference</td>
<td></td>
</tr>
<tr>
<td>N=25</td>
<td>M=4.33</td>
<td>SD=1.44</td>
<td></td>
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</tbody>
</table>

### TABLE III: PLS RESULTS OF STUDY 1

<table>
<thead>
<tr>
<th>Parameters</th>
<th>All groups</th>
<th>Group 1: Non-expert</th>
<th>Group 2: Expert</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skepticism</td>
<td>-.723*</td>
<td>-.636*</td>
<td>-.786*</td>
</tr>
<tr>
<td>Credibility</td>
<td>-.106</td>
<td>-.011</td>
<td>-.072</td>
</tr>
<tr>
<td>Product attitude</td>
<td>.627*</td>
<td>.663*</td>
<td>.699*</td>
</tr>
<tr>
<td>Product Attitude</td>
<td>.760*</td>
<td>.785*</td>
<td>.748*</td>
</tr>
<tr>
<td>Purchase intention</td>
<td>.723*</td>
<td>.729*</td>
<td>.764*</td>
</tr>
<tr>
<td>WOM communication</td>
<td>.52</td>
<td>.41</td>
<td>.62</td>
</tr>
<tr>
<td>Credibility R²</td>
<td>.50</td>
<td>.45</td>
<td>.57</td>
</tr>
<tr>
<td>Purchase intention R²</td>
<td>.58</td>
<td>.62</td>
<td>.56</td>
</tr>
<tr>
<td>WOM communication R²</td>
<td>.52</td>
<td>.53</td>
<td>.58</td>
</tr>
</tbody>
</table>

It means that consumers with positive product attitude may have much intention to buy the product and recommend the product to others.

Base on the statistics mentioned above, subjects were more skeptical to advertisement than to blog product reviews. This finding is consistence with previous studies [1, 31]. This means that blog product review is a better vehicle for persuasive communication than ads.

The results also indicated that product involvement and product experience have significantly influence on consumers’ skepticism toward persuasive messages by advertisements and by blog product reviews. Individuals’ skepticism would affect their perceived credibility. Credibility would influence individuals’ attitude to product, and then influence purchase intention and recommend intention.

Beside, highly involved consumers were more easily persuaded by advertisement, since they concerned much about the cosmetic. When consumers read advertisements or blog product reviews of cosmetic, involvement will reduce their skeptical feeling toward it.

The original idea of this study is to test the difference of message senders, advertiser, expert blogger, and non-expert
blogger, on skeptical feeling. The study revealed the highest skeptical feeling for advertisement. People are convinced much by blog product review than by advertisement. Nevertheless, the difference on skepticism is not significant between blog product review by expert and non-expert blogger.

Fig. 1. Skepticism of study 1.

REFERENCES


