Avoidance Behavior toward Social Network Advertising: Dimensions and Measurement

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Avoidance Behavior toward Social Network Advertising:
Dimensions and Measurement

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Abstract: While social network advertising is pervasive, research focused on avoidance behavior toward it is relatively rare. This study provides the development of a three-dimension scale to measure avoidance behavior toward social network advertising. Based on the survey of 195 social network users, evidence is provided for the reliability, factor structure and validity. Meanwhile, T-tests are used to examine the effects of gender, sample source and purchasing experience on the three-dimension avoidance behavior (i.e., skimming, ignoring and blocking). The results show males on social network are more likely to block social network advertising than females while users without purchasing experience on social network are more likely to skimming through advertisements on social network.

Keywords: avoidance behavior, social network, measurement, blocking

1. INTRODUCTION

Social network advertising is pervasive and takes a dominant role in companies’ marketing commutations [1]. Considering around 3.46 billion active users on social networks all over the world, spend an average of 136 minutes every day, companies regard the social network as a promising platform to launch advertising [2]. For example, digital advertising on Facebook increased by 43% in 2016 [3]. A report from eMarketer in 2018 forecasts that advertisers in the US will spend nearly $34 billion on social networks by 2021. Tencent Annual Report revealed that advertising revenue from WeChat and QQ increased by 55% to 39.8 billion RMB in 2018. Meanwhile, some individual sellers (i.e., individual vendors operated on WeChat) are also active on social networks. A report revealed that WeChat captured more than 15 million Youshopers, and the total sales had reached 328.8 billion RMB in 2016 [4]. Social network advertising is becoming a new trend [5].

Defined as all actions adopted to reduce their exposure to advertising contents, customer avoidance behavior would weaken the effectiveness of advertisements (ads) on social networks [6,7]. Individuals or companies post much advertising information on a social network to diffuse activities, create brand and product awareness, or just sell something. Nevertheless, users are not always open to this kind of information and often chose avoidance strategies. User avoidance behavior toward social network advertising is nothing new, along with the pervasiveness of social networks. Through focus groups and in-depth interviews, Kelly et al. [8] found advertising medium skepticism, advertising relevance, advertising skepticism and expectations of a negative experience drive teenagers to avoid ads on social networking sites. Then, Van den Broeck et al. [9] revealed ad avoidance toward sidebar ads and message stream ads on Facebook. However, research focused on avoidance behavior is relatively rare. Simultaneously, several limited studies do not reach a consensus on the content of avoidance behavior toward social network advertising, which has largely hindered the theoretical advancement. Therefore, this study is to construct a scale to measure avoidance behavior toward social network advertising.

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Following the basic procedures for developing measures of some marketing constructs, this research will report the development process. Some properties and implications of the scale are also addressed.

2. LITERATURE REVIEW

2.1 Advertising avoidance

Advertising avoidance has been recognized for several decades but formally defined by Speck and Elliott [10]. They saw advertising avoidance as behavioral responses, including all actions individuals take to "differentially reduce their exposure to unwelcomed contents". Then, advertising avoidance is examined across different media. For instance, Wilbur [11] examined zap response toward television advertising. Through surveys, Shin and Lin [12], Okazaki et al. [13] investigated mobile consumers’ avoidance of location-based advertising including ignoring, deleting, and stopping read ads. Baek and Morimoto [14] identified the potential avoidance toward personalized advertising including ignoring, discarding and blacklisting. Surveying across six countries and five media, van der Goot et al. [15] examined generational differences in media use and advertising avoidance (e.g., ignoring or closing ads).

While previous research enhanced our understanding of advertising avoidance, how to measure this construct has not reach a consensus. While some research saw advertising avoidance as a one-dimension construct and arbitrarily adapted some items to measure it (e.g., Okazaki et al. [13], van der Goot et al. [15]), Cho [16] developed a three-dimension measurement with affective, cognitive and behavioral avoidance. Although the latter measurement is accepted by many studies, it does not emphasize the behavioral responses and violates the definition proposed by Speck and Elliott [10]. More seriously, there is no research to measure avoidance behavior for the context of social network advertising, while some related research just described it by some words (e.g., Kelly et al. [8]). Therefore, we defined avoidance behavior toward social network advertising as all actions users adopt to reduce their unwelcome information, and filled the gap that a new measurement for it is also calling for development.

2.2 Three dimensions of avoidance behavior

Following Speck and Elliott [10], we view the avoidance patterns as the (possible) profiles of the action strategies that are employed by users who are motivated to reduce exposures. Considering social network advertising combines individual physical effort, attention and information system, we identify three patterns of avoidance behavior to contextualize physical avoidance, cognitive avoidance and mechanical avoidance [10,17].

2.2.1 Skimming

Physical avoidance entails a variety of physical efforts aiming at not exposing the ads [17]. It means behavioral avoidance in a narrow sense. For example, while Rojas-Mendez et al. [18] regarded talking to others as behavioral avoidance, Speck and Elliott [10] classified it into physical avoidance. It can be concluded that physical avoidance places emphasis on individuals’ physical effort to shun unlike contents, and is a physically involved behavioral pattern. In traditional media like magazines, newspapers, flipping past or skipping over ads is seen as typical behavior of physical avoidance [19,10]. When advertising comes into screens such as Internet and mobile devices, scrolling down Web pages to avoid banner ads, purging pop-up ads, clicking away from the ad are classified into physical avoidance by Cho [16]. As social network advertising is also presented on an interactive screen, popping up on the screen is identified as physical avoidance [8]. Standing in line with them, we propose skimming to represent physical avoidance, which entails a variety of skipping strategies without much thinking to avoid ads on the social network.

Skimming is pervasively adopted by users on social networks. During users browsing friends’ status updates, many ads are scrolled down the screen [8]. It generally takes only a little time to determine whether the content needs to process. It can be seen as a subconscious or habitual response toward uninterested content.
When skimming functions, individuals look like disabled people without seeing or hearing other content \[20\].

### 2.2.2 Ignoring

According to cognitive dissonance theory, individuals would tend to avoid media contents which contradict their own beliefs. Consistent with the notion of cognition, cognitive avoidance engages in the distribution and switch of attentions associated with exposures \[16\]. It occurs as a result of cognitive process in some forms of selective exposure or avoidance \[21,22\]. When individuals encounter advertising with high strength or extremity, selective exposure or switching attentions seem effective for them.

This study chooses ignoring to represent cognitive avoidance. Ignoring is frequently referred in previous research in the domain of advertising avoidance. Speck and Elliott \[10\] used it to describe individuals pay attention to other things even though they are exposed to some ads in traditional media. Cho \[16\] adopted it to represent an intentional avoidance response to unfavorable contents on the website. Previous studies also found individuals ignore location-based mobile ads and personalized ads, and do not look at social media ads \[12,14,8\]. Moving to the context of social network advertising, users actually cannot escape the exposure of ads, and only choose selective exposure or attention \[17\]. In other word, users have to distribute their attentions on consonant ads and withdraw attention from contents which violate their beliefs. Thus, ignoring is used to describe what extent individuals distribute or switch their attentions.

### 2.2.3 Blocking

Mechanical avoidance involves the use of technology to reduce their exposure \[10\]. In the 1990s or before, mechanical avoidance is just used to describe zapping, zipping, or muting the television or radio when encountering ads. These behaviors are seen as the main avoidance pattern in those days. While technologies available to people today have far surpassed the small remote control in the past, the concept has not been proposed to describe the pattern associated with avoidance behavior in this circumstance. We see mechanical avoidance as an avoidance pattern in which individuals reduce exposure to advertisements with the assistance of technologies and propose blocking to represent it in the context of social networks.

Blocking refers to actions users adopt technology to keep unwelcomed information away from them. People sometimes block several commercials or channels, filter email, or subscribe to ‘do not connect’ \[23\]. Deletion and blacklist are also identified as an avoidance response \[13,14\]. Moving to social network advertising, some technologies are available to users to avoid unlike contents, such as blacklist, deletion, or unsubscribe. Therefore, we use blocking to represent mechanical avoidance.

### 3. METHOD

#### 3.1 Conceptualization of avoidance behavior scale

The construct of avoidance behavior toward social network advertising addresses the actions of users adopted to reduce exposure of advertising information. Several previous relevant studies had served as the groundwork in our conceptualization stage. Speck and Elliott \[10\] proposed eliminating, ignoring and flipping past ads as the main behavior of advertisement avoidance. Cho \[16\] reported a three-dimension measurement for advertisement avoidance (i.e., cognitive, affective and behavioral avoidance). We think affective avoidance is the affective response rather than a kind of behavior; thus removing the affective dimension. Some items in other research (e.g., Huh et al. \[19\], Shin and Lin \[12\], van der Goot et al. \[15\]) also are adopted to form the initial pool. Following a conceptualization process, we construct the three dimensions based on subsequent scale development efforts on them, namely, skimming, ignoring and blocking.

#### 3.2 Generation and purification of scale items

From previous studies and exploratory research, we generated the initial pool of 44 items for the three facets. After removing the same words, we got 22 items (see item keywords in Table 1). The focus group
comprising 13 participants was conducted to purify the items. First, the participants, including seven bachelor students, three master students, and three Ph.D. candidates (six males and seven females) were asked to recall and describe how they respond to some advertising information on their WeChat Moment, QQ Shuoshuo or MicroBlog. Then three researchers made an interpretation for the focus group transcripts using the items from the initial pool. After researchers and participants together compared, deleted, replenished, and modified those items, the 13-item scale was yielded. Lastly, one marketing professor and two Ph.D. candidates rechecked the items and prepared two versions (in English and Chinese) for the following survey through a blind translation-back translation [24].

### Table 1. Item keywords for the initial pool

<table>
<thead>
<tr>
<th>Item Keywords for Initial Pool</th>
<th>Skimming (5)</th>
<th>Ignoring (7)</th>
<th>Blocking (10)</th>
</tr>
</thead>
<tbody>
<tr>
<td>eliminating, flipping past,</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>throw away, popping up on the</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>screen, ignoring ads,</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>cognitive avoidance, not reading, stop reading, hang up, closing ads, not look ads</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>rip out, discard, turning out, switching to other things, talking to someone, zap, block zip, delete ads, deletion, blacklist</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Table 2. Scale factor structure and reliability

<table>
<thead>
<tr>
<th>Items</th>
<th>Skimming</th>
<th>Ignoring</th>
<th>Blocking</th>
</tr>
</thead>
<tbody>
<tr>
<td>X5: I glance through ads on my social network.</td>
<td>0.797</td>
<td>0.100</td>
<td>-0.026</td>
</tr>
<tr>
<td>X6: I scroll down the screen to avoid ads on my social network.</td>
<td>0.875</td>
<td>0.189</td>
<td>0.185</td>
</tr>
<tr>
<td>X7: I skip over ads on my social network.</td>
<td>0.833</td>
<td>0.301</td>
<td>0.217</td>
</tr>
<tr>
<td>X8: I fast-forward ads on my social network.</td>
<td>0.793</td>
<td>0.217</td>
<td>0.301</td>
</tr>
<tr>
<td>X9: I intentionally don't pay attention to ads on my social network.</td>
<td>0.273</td>
<td>0.827</td>
<td>0.235</td>
</tr>
<tr>
<td>X10: I intentionally ignore ads on my social network.</td>
<td>0.270</td>
<td>0.825</td>
<td>0.288</td>
</tr>
<tr>
<td>X11: I intentionally don't put my eyes on my social network.</td>
<td>0.168</td>
<td>0.876</td>
<td>0.291</td>
</tr>
<tr>
<td>X12: I don't read any ads on my social network, even if some draw my attention</td>
<td>0.165</td>
<td>0.843</td>
<td>0.263</td>
</tr>
<tr>
<td>X13: I would do something rather than browse ads on my social network.</td>
<td>0.217</td>
<td>0.240</td>
<td>0.771</td>
</tr>
<tr>
<td>X14: I would log out my social network account to avoid any ads.</td>
<td>0.068</td>
<td>0.168</td>
<td>0.865</td>
</tr>
<tr>
<td>X15: I want to delete the ad on my social network if possible.</td>
<td>0.167</td>
<td>0.239</td>
<td>0.876</td>
</tr>
<tr>
<td>X16: I block the advertising on my social network if possible.</td>
<td>0.213</td>
<td>0.217</td>
<td>0.833</td>
</tr>
<tr>
<td>X17: I want to blacklist the one who sends me ads if possible.</td>
<td>0.066</td>
<td>0.352</td>
<td>0.701</td>
</tr>
</tbody>
</table>

The eigenvalue

- 6.776
- 1.973
- 1.407

Cronbach’s alpha value

- 0.889
- 0.932
- 0.911

Notes: a. The rotation converges after five iterations; b. Orthogonal rotation method with Kaiser standardization.

### 3.3 Sample procedure

To test the measurement on the basis of its psychometric properties, an online survey was conducted through Sojump (http://www.sojump.com). Through a small gamble game, respondents were encouraged to actively participate in the investigation. We collected data from February 9 to February 23 in 2018 and obtained 207 completed responses. After eliminating those who did not identify the screen item, 195 valid responses are applied to the analysis. Specifically, 44.6 percent of the respondents were men and 55.4 percent were women. In terms of age, 7.2 percent were below 20 years, 75.9 percent were 20-29 years, 20.5 percent were 30-40 years, and 3.6 percent were older than 40 years. Among them, 69.7 were students seeking bachelor, master, or Ph.D. degree. As to their experience of social commerce, 62.1 percent had not ever purchased products from social networks. In addition, we added attention as the control variable to check the validity of the measurement model,
because the variable is vital to advertising on social networks. Attention was measured by four items (i.e., As to
the ad on my social network, I paid close attention to it (x1), I was able to concentrate on it (x2), it held my
attention (x3), and I was absorbed by it (x4).), which were adapted from Davis\textsuperscript{[25]}.

4. RESULTS

4.1 Scale factor structure and reliability

First, we made item-to-total correlation and item-to-item correlation examinations for each set of the three
dimensions. The results show that all item-to-total correlations are above 0.6 and each item-to-item correlation
is above 0.4 at the 0.001 level. Then, we run the Kaiser–Meyer–Olkin (0.882) and the Bartlett’s test of sphericity
tests ($\chi^2 = 2091.67, p < .001$) and found the data supports a factor analysis. Last, we performed a principal factor
analysis with max variance rotation to evaluate the factor structure. Through several iterative processes, we got
factor loading with the eigenvalues, which are greater than 1. As Table 2 shows, the factor analysis results in
three factors, which explain 78.121 percent of the total variance. The three-factor measures achieved Cronbach’s
alpha values with 0.889 (skimming), 0.932 (ignoring), and 0.911 (blocking), all exceeding the 0.70 cut-off value
recommended.

<table>
<thead>
<tr>
<th>Table 3. Reliability and Discriminant Validity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dimension</td>
</tr>
<tr>
<td>Three-dimension model</td>
</tr>
<tr>
<td>Skimming</td>
</tr>
<tr>
<td>Ignoring</td>
</tr>
<tr>
<td>Blocking</td>
</tr>
<tr>
<td>One-dimension model</td>
</tr>
<tr>
<td>Avoidance behavior</td>
</tr>
</tbody>
</table>

Notes: a. AVE = average variance extracted, CR = Composite reliability; b. The figures below the diagonal are correlation coefficients (all $p < 0.05$), and the bold figures in the diagonal represent the square root of the AVE.

Notes: 1. Figure (a) is a four-factor correlated measurement model with $\chi^2 (264.959) / df (113) = 2.34$, CFI = 0.939, TLI = 0.927, SRMR = 0.051 and RMSEA = 0.085.

2. Figure (b) is a two-factor correlated measurement model with $\chi^2 (277.638) / df (115) = 2.41$, CFI = 0.935, TLI = 0.923, SRMR = 0.060 and RMSEA = 0.085.
4.2 Confirmatory factor analysis with three dimensions vs. one dimension

By introducing attention, we first test the validity of the scale with confirmatory factor analysis using MPLUS 17.0. The four-factor correlated measurement model got an acceptable fit with the data (see Figure 1). The four variables have enough reliability, convergent validity, and discriminant validity with criteria of composite reliability (> 0.7), average variance extracted (> 0.5) and the results the square roots of AVE of the individual factors are bigger than the correlations between factors (see Table 3).

Next, we tested whether measures of skimming, ignoring and blocking can be organized hierarchically in a second-order CFA model, given that they are so highly correlated yet are distinct. A two-factor measurement model with second-order measure was run by MPLUS 7.0. Results also show it is an acceptable fit with the data (see Figure 1), and the two variables obtained a good reliability, convergent validity, and discriminant validity (see Table 3). Even so, there is no significant improvement with the model in item level or factor level (see Figure 1). We can conclude that the one-dimension model may be an alternative to measure avoidance behavior.

4.3 T-tests for demographic variables

We checked whether gender, purchasing experience and sample source (i.e., students sample or not) have influences on the three-dimension avoidance behavior. To simplify it, we just made the T-test between the two groups for gender, sample source and purchasing experience. As Table 4 shows, male users are more likely to block social networking advertising than female users (t = 2.598, p < 0.05), and users without purchasing experience on social networks are more likely to skim through social networking advertising than those who have ever purchased products on social network (t = 2.598, p < 0.01). Meanwhile, there is no significance for gender in skimming and ignoring, for sample source in skimming, ignoring and blocking and for social purchasing experience in ignoring and blocking (all ps > 0.05).

Table 4. Results of the T-tests

<table>
<thead>
<tr>
<th>Demographic variable</th>
<th>Dimension</th>
<th>Classification</th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
<th>T-value</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Skimming</td>
<td>Male</td>
<td>87</td>
<td>5.037</td>
<td>1.290</td>
<td>1.234</td>
<td>0.219</td>
</tr>
<tr>
<td>Gender</td>
<td></td>
<td>Female</td>
<td>108</td>
<td>4.822</td>
<td>1.147</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Male</td>
<td>87</td>
<td>4.302</td>
<td>1.435</td>
<td>1.516</td>
<td>0.131</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Female</td>
<td>108</td>
<td>4.019</td>
<td>1.173</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Ignoring</td>
<td>Male</td>
<td>87</td>
<td>4.386</td>
<td>1.380</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Female</td>
<td>108</td>
<td>3.906</td>
<td>1.202</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Blocking</td>
<td>Student</td>
<td>136</td>
<td>4.998</td>
<td>1.150</td>
<td>1.404</td>
<td>0.162</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Not student</td>
<td>59</td>
<td>4.733</td>
<td>1.342</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Skimming</td>
<td>Student</td>
<td>136</td>
<td>4.261</td>
<td>1.214</td>
<td>1.906</td>
<td>0.058</td>
</tr>
<tr>
<td>Sample source</td>
<td></td>
<td>Not student</td>
<td>59</td>
<td>3.877</td>
<td>1.458</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Ignoring</td>
<td>Student</td>
<td>136</td>
<td>4.141</td>
<td>1.226</td>
<td>0.344</td>
<td>0.731</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Not student</td>
<td>59</td>
<td>4.071</td>
<td>1.475</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Blocking</td>
<td>Zero time</td>
<td>121</td>
<td>5.122</td>
<td>1.150</td>
<td>3.063</td>
<td>0.003</td>
</tr>
<tr>
<td></td>
<td></td>
<td>One or more time</td>
<td>74</td>
<td>4.585</td>
<td>1.250</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Purchasing experience</td>
<td>Skimming</td>
<td>Zero time</td>
<td>121</td>
<td>4.195</td>
<td>1.297</td>
<td>1.028</td>
<td>0.305</td>
</tr>
<tr>
<td></td>
<td></td>
<td>One or more time</td>
<td>74</td>
<td>3.997</td>
<td>1.312</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
5. CONCLUSION

This study developed a three-dimension instrument with good reliability and validity that advertisers on social networks can use to understand users' responses toward social networking advertising. First, the scale provides a new tool to recognize customer avoidance behavior on social networks, which fulfills the gap of understanding of avoidance behavior thoroughly. We proposed the scale and examined the difference between one-dimension and three-dimension models, which would enrich and progress the domain of avoidance behavior toward advertising.

Then we made a t-test on the three dimensions (skimming, ignoring and blocking) between male and female and found there is different influence only for blocking. The founding provides new evidence of the effects of gender on avoidance behavior, which are still inconsistent in previous studies. For example, Rojas-Mendez et al. [18] found that gender has different effects on avoidance behavior across cultures, while van der Goot et al. [15] found that gender has no significant influence on advertisement avoidance. Our findings may give an alternative explanation of the inconsistent effects. Because avoidance behavior may have three dimensions, the globe avoidance behavior in their studies may cover up some effects. The results of T-tests also reveal that users without purchasing experience on social networks are more likely to choose skimming behavior. The findings indicated that an effective measure to conquer avoidance behavior is to make users have a try to purchase on social networks.

Despite many valuable implications, this study has several limitations. First, the proposed scale is just examined by one survey sample. Another survey in future is needed to verify its reliability and validity. Second, the quantities of the two groups used for T-tests are not equal, which may lead to findings that are not robust. Third, more theoretical and practical discussions are needed in future research on one-dimension or three-dimension model for avoidance behavior toward social network advertising.

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