

# The Impact of Message Sidedness on Online Ads Effectiveness: The Moderating Role of Involvement

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**Abstract**—This study considers the moderating effect of involvement on consumers' response to one-sided vs. two-sided online advertising. Results obtained from an experimental study confirm that involved consumers' responses to two-sided online ads are more favorable than that of one-sided online ad, but only for involved consumers. Two-sided ad is no more persuasive for uninvolved consumers except for those who recognize the two-sided nature of the communication. The routes to persuasion of two-sided ads are also different for involved and uninvolved consumers. These findings provide a new economical way for enterprises to improve their online advertising effectiveness in the absence of trust nowadays.

**Keywords**—message sidedness; involvement; persuasion route; advertising effectiveness

## I. INTRODUCTION

The widespread use of the Internet has brought profound impact on the way enterprises communicating with their consumers. Unlike any other costly traditional media, such as television, radio, and print, the Internet has become a major platform for companies to sell products through online advertising. However, according to the latest Nielsen global online survey over 25,000 internet users from 50 countries, traditional advertising channels are trusted far more than online advertising, such as search engine advertising and banner advertising. One exception is that 70% consumers trust other consumers' opinions posted online [1]. This makes the online ad trust even worse since the anonymous nature of online consumer opinions gives the competitors a chance to spread negative information deliberately. Adopting two-sided advertising strategy may change this situation; as it is particularly true when consumers already hold negative beliefs about a brand or when consumers will be exposed to negative counterclaims about the brand by competitors [2].

Two-sided ad was defined by Crowley and Hoyer as "advertisings mentioning not only the benefits but also the shortcomings of a product [2]". A wealth of recent research regarding off-line ads confirmed that two-sided ads can enhance source credibility [3], reduce counterarguing [4], and generate attitudinal resistance to attack [4]. Unfortunately, our understanding of two-sided off-line ads' effectiveness is confused by ambiguous empirical findings regarding other important dependent variables that have been widely used in consumer research, such as attitude toward the ad (Aad), attitude

toward the brand (Abr), and purchase intention (PI). One possible reason for these unexplained inconsistencies is that extant research paid much attention on message structure variables, such as the nature and the amount of negative information included in two-sided ads. Another important variable that has largely been ignored in the literature is involvement, which may be a crucial element that affects consumer perceptions and processing two-sided ads. Broadening the off-line context into the online context, this study scrutinizes the moderating effects of involvement on the effectiveness of one-sided and two-sided online ad within the Elaboration Likelihood Model framework. In addition, the different persuasive routes which will be employed by high and low involved consumers are also explored.

## II. LITERATURE REVIEW AND HYPOTHESES FORMULATION

### *The Elaboration Likelihood Model and Involvement*

Petty and Cacioppo's Elaboration Likelihood Model (ELM) is one of the most popular theories used to explain individual's persuasion process [5]. According to the ELM, persuasion can be described as the results of the relative operation of two routes. First, the central route, occurs when individual carefully and thoughtfully consider the arguments presented in a message. Second, the peripheral route, occurs when individual use peripheral cues such as expertise or attractiveness of a message source to form attitude. The basic tenet of the ELM is that which route of persuasion employed by individual depends on the elaboration likelihood of the communication situation. The elaboration likelihood is a continuum going from no thought about the issue-relevant information presented (low elaboration likelihood) to complete elaboration of every argument and integration of this elaboration into individual's attitudinal schema (high elaboration likelihood). When the elaboration likelihood is high (low), the central (peripheral) route to persuasion is particularly effective.

The individual's motivation determines the elaboration likelihood, which is described in ELM as the level of involvement [6]. In the context of advertising, involvement was defined as the motivational state of an individual induced by a particular advertising stimulus or situation [7]. Individuals with high motivation and ability (e.g. involved and knowledgeable subjects) adopt central route to persuasion. By contrast, unmotivated (e.g. uninvolved) or unable individuals follow

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peripheral route to persuasion. A number of studies have shown that personal relevance and message involvement influence the extent of message processing and thus the route to persuasion [8]. Previous empirical findings suggest that involved individuals are motivated to process advertising, and thus allocate more cognitive resources to message processing. Their attitude and purchase intention are formed through a series of rational reasoning processes. On the contrary, uninvolved individuals process the ad information in a cursory and superficial manner; their attitude formation is quite simple and easy. Therefore, applying the ELM to the two-sided online ad context, we hypothesize that:

H1: Exposed to two-sided online ad, involved and uninvolved consumers employ different persuasion route.

#### *The effects of message sidedness on involved and uninvolved consumers*

The findings of extant research are rather mixed with regard to the effects of message sidedness on involved and uninvolved consumers. Hastak & Park [9], and Stayman [10] confirmed that involved and uninvolved subjects' responses to two-sided ad were statistically not different, while Chebat & Picard [11] found that there was a significant interaction between involvement and message sidedness. Because of these limited and mixed findings, Eisend [12] could not identify the exact moderating effects of involvement on two-sided ad's effectiveness in his meta-analysis, and he strongly suggested that future study should explore the moderating role of involvement in detail.

The possible reasons for these mixed findings may lie in: 1) unsuccessful manipulates the involvement; 2) does not categorize the uninvolved subjects into those who identify and those who do not identify the two-sided nature of the communication. Following Eisend's advice, this study tests the moderating effect of involvement thoroughly.

When exposed to an online ad, consumers can attribute claims either to the advertiser's desire to sell the product or to actual characteristics of the product. Mentioning negative aspects in a two-sided ad goes against common sense and intuition. According to Attribution Theory [2], the inclusion of negative information leads consumers to conclude that the advertiser is telling the truth. This enhances the perception of source credibility, and in turn, improves the attitude toward the ad, the attitude toward the brand and purchase intention.

However, we expect that two-sided online ad is more effective than one-sided online ad, but only for involved consumers. This is because involved consumers will allocate more cognitive resources to message processing, and are more likely to elaborate issue-related and fact-based appeals rather than peripheral cues (such as the attractiveness of ad endorser). As mentioned above, because two-sided online ad is more factual and trustworthy than one-sided online ad, more positive responses to the two-sided online ad are assumed to be obtained in involved consumers. Thus, we hypothesize that:

H2: Involved consumers' responses to two-sided online ad are more positive than their responses to one-sided online ad.

When exposed to two-sided online ad, uninvolved consumers can be divided into two groups, namely, those who identify and those who do not identify the two-sided nature of the communication. As for the former, they occasionally notice the negative information embedded in two-sided online ad, and then two-sided ad will induce more source believability according to the Attribution Theory. However, because uninvolved consumers process message in a superficial manner, this increased source believability does not be used as a cue to form more favorable Aad, Abr, and PI. As for the latter, since they do not even recognize the two-sided nature of the communication, two-sided message have no advantage over one-sided message in influencing these consumers' Aad, Abr and PI. In summary, we hypothesize that:

H3a: When uninvolved consumers identify the two-sided nature of the communication, their source credibility perception is higher than that of one-side ad. But other responses (Aad, Abr, and PI) to one-sided and two-sided ad are not significantly different.

H3b: When uninvolved consumers do not identify the two-sided nature of the communication, their responses to one-sided and two-sided ad are not significantly different.

### III. METHOD

#### *Design and subjects*

A 2 (one-sided vs. two-sided ad) by 2 (involved vs. uninvolved) factorial experiment was conducted to test the hypotheses. A total of 423 MBA students participated in the experiment. Of these, 327 provided usable responses. Subjects were randomly assigned to one of four experiment groups.

#### *The product used and independent variable*

A fictitious signature pen was used as the stimulus. The product was selected through a pilot study that 46 subjects participated. Signature pen is a product which all subjects are familiar with and hold the same attributes importance judgments. According to the pilot study, nib quality, writing smoothness and handhold cosiness are relatively more important than material and color variety. A fictitious brand name (Pensive) was used in order to avoid the potential influence of prior experiences.

The pen ad showed a picture of the pen and a message containing five attributes which describing the pen. In two-sided version, two relatively unimportant attributes (material and color variety) were disclaimed. In contrast, all attributes were described positively in one-sided version.

The manipulation of involvement closely paralleled the manipulation used by Petty, Cacioppo, and Schumann [13]. First, the one page of introduction for high (low) involvement subjects stated that at the end of the experiment they would be rewarded by the advertised signature pen (cafeteria coupon) which worth 10 Yuan RMB. Second, the brief description which preceded the signature pen ad for involved subjects stated that the pen would soon come into the local market. Subjects assigned to the low involvement condition were told that the cafeteria would soon be locally introduced.

## Procedure and measures

Upon arrival, subjects were asked to read the experiment introduction carefully. Then they were exposed to seven ads displayed in slides. The fifth ad was the target ad (signature pen), while the third ad was the cafeteria ad. Each ad displayed in the slides was formatted as closely as to the actual online ad. After all subjects had finished reading the ads, they were given a series of questionnaires to complete. Finally, subjects were debriefed and thanked for their participation.

All responses were measured on 7 point scales. The ad's credibility was measured by asking whether the ad was not credible/credible, untrustworthy/trustworthy, and dishonest/honest. Aad was measured on three items (bad/good, unconvincing/convincing, unappealing/appealing), Abr on four items (unpleasant/pleasant, bad/good, worthless/valuable, inferior/superior), PI on two items (not willing to buy/rather willing to buy, not intent to buy/intent to buy). The Cronbach's alpha for source credibility perception, Aad, Abr, and PI were 0.932, 0.883, 0.865, and 0.814, respectively.

## IV. RESULTS

### Manipulation checks

The success of involvement manipulation was obtained by three measures. First, subjects were asked to recall the product category in which they would be rewarded. As expected, 128 out of 133 subjects in the high involvement condition correctly identified the signature pen category, while 186 out of 194 subjects in the low involvement condition correctly identified the cafeteria category. Only four subjects in low involvement condition incorrectly identified the pen category. Thus, these four subjects were excluded from further analysis. Second, subjects were asked to indicate how likely they thought that the signature pen would be available in local market in near future. As expected, involved subjects believed that it was much more likely that the pen would be available in local market (mean=5.25) than did uninvolved subjects (mean=3.62,  $F(1,325)=97.737$ ,  $p<0.001$ ). Third, subjects were requested to indicate their level of message response involvement (MRI) when they read the ads. ANOVA results revealed that the MRI of involved subjects (mean=4.98) were significantly higher than that of uninvolved subjects (mean=4.28,  $F(1,325)=27.950$ ,  $p<0.01$ ). The results of these three measures suggested that our involvement manipulation was successful.

Effectiveness of message sidedness manipulation was checked by examining beliefs in the two attributes (material and color variety) that were disclaimed in the two-sided version. As expected, subjects exposed to the two-sided ad reported significantly weaker beliefs in these attributes than did subjects exposed to the one-sided ad (material:  $3.70<4.93$ ; color variety:  $2.92<4.58$ , all  $p<0.001$ ). Thus, the message sidedness manipulation was successful.

### Validity checks

Confirmatory Factor Analyses (CFA) was run as a first step to test the construct validity. The measurement model fit the data well ( $\chi^2(71)=74.33$ , GFI=0.960, AGFI=0.929, CFI=0.989, NFI=0.979, NNFI=0.984, RMSEA=0.056, SRMR=0.035).

Average variance extracted (AVE) ranged from 0.685 to 0.826, and the square roots of AVE were larger than correlation parameters of latent variables. These indicated that the construct validity was well.

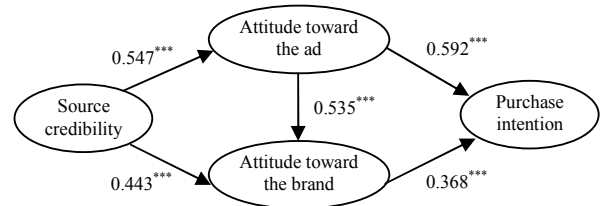
### Structural equation modeling results

Structural equation modeling was conducted to test hypothesis 1. The model fit indices were well ( $\chi^2=31.64$  vs. 43.63, GFI=0.923 vs. 0.906, RMSEA=0.000 vs. 0.060, NFI=0.968 vs. 0.923, SRMR=0.053 vs. 0.055 for involved and uninvolved subjects, respectively). The results indicated that the high and low involvement groups were different in how the variables in the model interrelate (see Fig.1 and Fig. 2). As shown in Fig.1 and Fig. 2, source credibility had significant positive effects on Aad and Abr, but only for involved subjects. The path coefficients from Aad to Abr were positive for both involved and uninvolved subjects (with standardized  $\beta=0.535$  vs. 0.389, respectively). Involved subjects' PI was positively influenced by Aad and Abr (with standardized  $\beta=0.592$  vs. 0.368, respectively), while uninvolved subjects' PI was positively influenced only by Aad (with standardized  $\beta=0.597$ ). The results clearly showed that the routes to persuasion of two-sided ad were significantly different. Thus, H1 was supported.

### ANOVA results

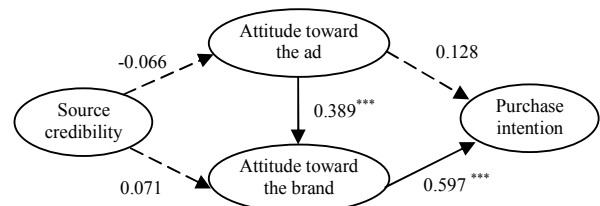
All means for dependent measures were calculated and the resulting composites were used in subsequent analysis. Table 1 presents the dependent variables and corresponding mean differences. The dependent variables were subjected to a two-way ANOVA with involvement and message sidedness as independent variables.

As expected, involved subjects responded to two-sided ad more favorably than to one-sided ad (all  $p<0.001$ ). The mean difference of source credibility, Aad, Abr, and PI were 0.630, 0.778, 0.723, and 0.709, respectively. Uninvolved subjects who recognized and not recognized the two-sided nature of communication responded to two-sided ad differently. As for



\*\*\* $p<0.001$

Figure 1. Two-sided online ad's persuasion route: high involvement



The not significant path were represented by dotted line; \*\*\* $p<0.001$

Figure 2. Two-sided online ad's persuasion route: low involvement

TABLE I. ANOVA RESULTS OF HIGH VS. LOW INVOLVED SUBJECTS' REPONSES TO ONE-SIDED VS. TWO-SIDED AD

Dependent variables	High involvement			Low involvement				
	TS $I_1$	OS $J_1$	Mean difference	TS, Recognize $I_2$	TS, Not recognize $I_3$	OS $J_2$	Mean difference	
			$I_1-J_1$				$I_2-J_2$	$I_3-J_2$
Source credibility	5.048	4.418	0.630***	5.313	4.883	4.749	0.564**	0.134
Aad	5.143	4.365	0.778***	5.010	4.748	4.716	0.294	0.032
Abr	5.162	4.439	0.723***	4.833	4.946	4.716	0.117	0.230
PI	5.121	4.413	0.709***	4.734	4.838	4.689	0.045	0.149

Note: TS=Two-sided ad; OS=One-sided ad; \*\*p&lt;0.01; \*\*\*p&lt;0.001.

the uninvolved subjects who recognized the two-sided message, their source credibility perception were significantly higher than that of one-sided ad (mean difference=0.564,  $p<0.01$ ). But message sidedness did not further influence their Aad, Abr, and PI (all  $p>0.05$ ). As for the uninvolved subjects who did not recognize the two-sided message, two-sided message did not have the advantages over one-sided message (all  $p>0.05$ ). These findings strongly support H2, H3a, and H3b.

## V. DISCUSSION

This study introduces a new variable, namely, involvement into the research of the effectiveness of two-sided online ad. The findings confirm our hypotheses that two-sided ad's persuasion routes are different for subjects with different levels of involvement. Specifically, involved subjects are motivated to process information; their attitude formation is more complicated and rational than that of uninvolved subjects. Furthermore, this study compares the effectiveness of two-sided and one-sided online ad for both high and low involvement subjects. Results show that two-sided ad is more effective than one-sided subjects, but only for involved subjects. For uninvolved subjects who recognize two-sided message, their source credibility perception is improved; but their Aad, Abr, and PI are not improved by two-sided ad. For uninvolved subjects who do not recognize two-sided message, their responses to two-sided ad are the same as that of one-sided ad.

Finally, we believe that the implication derived from this study is useful. First, two-sided ad can resume consumers' trust and purchase intention. Online ads are more likely to be attacked by competitors than traditional communication channels because of its anonymous nature. Two-sided ad serves as an immune system for consumers who will be exposed to negative information. Furthermore, two-sided ad will enhance involved consumers' responses, and do no harm to uninvolved consumers. Second, for all kinds of online ad, two-sided ad is especially suitable to be embedded in web site ad. Unlike more intrusive banner or pop-up, web site ad is actively sought by consumers. Since web site exposure can be viewed as high involvement context [6], using two-sided ad may be most effective.

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