

Responses to Two-sided Advertising: The Moderating Effects of Need for Cognition

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Abstract: This study considers the moderating effect of need for cognition (NFC) on consumers' response to one-sided vs. two-sided advertising. Results obtained from an experimental study confirm that though two-sided ads will generate more favorable source credibility perception, attitudes toward the ads and brand, and purchase intention in consumers with a high NFC as opposed to those with a low NFC, one-sided ads does not. The routes to persuasion of two-sided ads are also different for high or low NFC consumers. Specially, central route is employed by high NFC consumers, while peripheral route is employed by low NFC consumers. These findings provide a new economical way for enterprises to improve their advertising effectiveness in the absence of trust nowadays.

Keywords: two-sided advertising; need for cognition; central route; peripheral route

1 Introduction

Traditional advertisings attempt to present products as positive as possible, praising the advantages of the advertised products. However, the effectiveness of traditional ads is weakened because consumers are naturally suspicious of ads due to their mental set of 'every potter praises his own pot'. Exposed to some notorious companies' scandals (e.g. Sanlu's poisonous milk powder, etc), consumers become more and more doubtful of traditional ads. Adopting two-sided advertising 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^[1].

Crowley and Hoyer defined two-sided ads as "advertisings mentioning not only the benefits but also the shortcomings of a product"^[1]. A wealth of recent research confirmed that two-sided ads can enhance credibility^[2], reduce counterarguing^[3], and generate attitudinal resistance to attack^[3]. Unfortunately, our understanding of two-sided 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 reason for these unexplained inconsistencies is that extant research paid much attention on message structure vari-

ables, such as the nature and amount of negative information included in two-sided ads. Another important ignored variable is the need for cognition (NFC), which may be a crucial element that affects consumer perceptions of two-sided ads. Within the Elaboration Likelihood Model (ELM) framework, this study identifies which persuasive routes will be employed by high and low NFC consumers. The moderating role of NFC on two-sided ad effectiveness is also explored.

2 Literature Review and Hypothesis Formulation

2.1 The Elaboration Likelihood Model and NFC

According to Petty and Cacioppo's ELM^[4], 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 is employed by individual is depends on the elaboration likelihood of the communication situation. When the elaboration likelihood is high (low), the central (peripheral) route to persuasion is particularly effective. Attitude formation or change via central route, individuals need to possess both the motivation and ability to effortfully evaluate message arguments. A number of studies have shown that argument quality (strong or

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weak) and situational factors (such as personal relevance and message involvement) influence the extent of message processing and thus the route to persuasion^[4].

Other research indicated that dispositional variable of NFC serves as a moderator of elaboration via the central route^[5]. NFC is defined as “the tendency to engage in and enjoy thinking”^[6]. Research has found that high NFC individuals engage in more effortful processing of persuasive messages and are more influenced by the quality of arguments contained in an ad than low NFC individuals^[6]. Therefore, high (low) NFC individuals employed central (peripheral) route to form their attitude.

These findings suggest that high NFC individuals are motivated to process information, and thus will allocate more cognitive resources to message processing. Their attitude formation are a series of rational reasoning processes, that is, Aad leads to brand cognition and Abr, and PI in turn influenced by Abr. These relationships are represented by the Dual Mediation Hypothesis (DMH)^[7]. In contrast, low NFC individuals are less motivated to process information, their attitude formation are quite simple and easy, that is, Aad leads directly to Abr but not to brand cognition (which is shown in dotted line in Figure 1), and Abr leads to PI. These relationships are described by the Affect Transfer Hypothesis (ATH)^[7]. DMH and ATH are shown in Figure 1. Therefore, we hypothesize that: in context of two-sided ad,

H1: The DMH will be better at explaining how two-sided ad persuades high NFC consumers.

H2: The ATH will be better at explaining how two-sided ad persuades low NFC consumers.

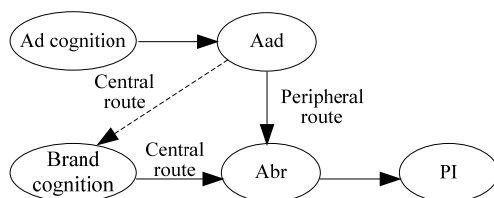


Figure 1. Model of DMH and ATH

2.2 Attribution Theory and the Different Response to Two-sided Ad in High and Low NFC Consumers

When exposed to an 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^[1], 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, may improve Aad, brand cognition, Abr, and PI.

However, the findings of previous research are rather mixed. Some research confirmed that two-sided ads are more persuasive than one-sided ad, while others did not^[2]. These paradox findings are in part due to recipients' heterogeneity, namely, consumers with high or low NFC. High NFC consumers are more likely to elaborate issue-related and fact-based appeals rather than peripheral cues (such as the attractive of ad endorser). As mentioned above, because the two-sided ad is more factual and trustworthy than the one-sided ad, more positive responses to the two-sided ad are assumed to be obtained in high NFC consumers. In contrast, low NFC consumers' response to the two-sided or one-sided ad will be no different due to the fact that low NFC consumers do not engage in effortful processing. Therefore, we propose:

H3: High NFC consumers' responses to two-sided ad are more positive than their responses to one-sided ad.

H4: Low NFC consumers' responses to one-sided and two-sided ad are not significantly different.

3 Method

3.1 Design and Subjects

A between-subject (one-sided vs. two-sided ad) experiment design was conducted to test the hypotheses. A total of 463 MBA students participated in the study. Of these, 405 provided usable responses. Subjects were randomly assigned to one-sided or two-sided ad group.

3.2 The Product Used and Independent Variable

A fictitious ball point pen was used as the stimulus. The product was selected through a pilot study that 46 subjects participated. Ball point pen is a product which the 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 past experiences.

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

3.3 Procedure and Measures

Upon arrival, subjects were asked to look through a booklet containing seven ads. The fifth ad in the booklet was the target ad. Each ad was preceded by a brief description and a picture, which subjects were instructed to read carefully. After subjects had finished reading the booklet, 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. Brand cognition was measured on three items (bad/good, dislike/like, negative/positive), Aad on three items (bad/good, unconvincing/convincing, unappealing/appealing), Abr on four items (bad/good, worthless/valuable, inferior/superior, unpleasant/pleasant), PI on two items (not willing to buy/rather willing to buy, not intent to buy/ intent to buy). The Cronbach's alpha for credibility, brand cognition, Aad, Abr, and PI were 0.909, 0.913, 0.844, 0.897, and 0.869, respectively.

Items of NFC were taken from the original 18-item short form from Cacioppo et al^[8]. The Cronbach's alpha for NFC was 0.864.

4 Results

4.1 Manipulation Check

Effectiveness of message sidedness manipulation was checked by examining beliefs on the two attributes (material and color variety) that were disclaimed in the two-sided ad. 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: $3.31 < 4.91$; color variety: $2.91 < 4.72$, all $p < 0.001$). Thus, the message sidedness manipulation was successful.

4.2 Hypotheses Testing

A K-means cluster was used to separate the 405 subjects into two groups on the basis of their NFC scores. 202 (203) subjects belonged to high (low) NFC group.

4.2.1 Multi-group Structural Equation Model Results

Confirmatory Factor Analyses (CFA) was run as a first step to test construct validity. The measurement model fit the data well, $\chi^2(71)=99.01$, CFI=0.988, NNFI=0.982, RMSEA=0.044, SRMR=0.040. Average variance extracted (AVE) ranged from 0.638 to 0.749, and the square roots of AVE were larger than correlation parameters of latent variables. These indicated that the construct validity was well.

One original model (OM) and two over-identified model (OM1 & OM2) were built to conduct multi-group structural equation model (SEM)^[9]. OM was an unconstrained model in which all coefficients were allowed to vary freely across high and low NFC groups. A non-significant increase in χ^2 was observed with the only λ s equality constraints of OM1 ($\Delta\chi^2(9)=7.45$, $p=0.59$), and other model fit indices were slightly improved (RMSEA=0.070 vs. 0.067, CFI=0.973 vs. 0.964, and NNFI=0.956 vs. 0.960 for OM and OM1, respectively). This meant measurement model can be equalized across high and low NFC groups. A significant increase in χ^2 was observed with the λ s, γ s, and β s equality constraints of OM2 ($\Delta\chi^2(5)=11.59$, $p<0.05$), and other model fit indices were: RMSEA=.070, CFI=.960, and NNFI=.956. The results indicated that the two groups were different in how the variables in the model interrelate (see Figure 1 and Figure 2).

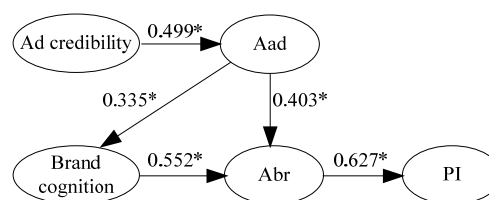


Figure2. Two-sided ad's persuasion route: high NFC

Figure 1 and 2 clearly showed that a significant relationship exists between Aad towards the brand cognition (DMH), but only for high NFC subjects. The path

coefficient from Aad to brand cognition is not significant (which was represented by dotted line) for low NFC subjects. Thus, H1 and H2 were supported.

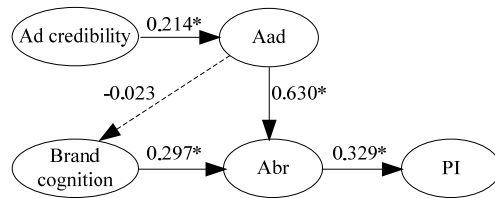


Figure 3. Two-sided ad's persuasion route: low NFC

4.2.2 ANOVA Result

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

Table 1. ANOVA results for high and low NFC consumers

	High NFC		Low NFC		Mean difference	
	TS	OS	TS	OS	I ₁ - J ₁	I ₂ - J ₂
	I ₁	J ₁	I ₂	J ₂		
Brand cognition	5.30	4.91	4.87	4.86	0.39***	0.01
Ad credibility	5.11	4.52	4.62	4.58	0.59***	0.04
Aad	4.99	4.41	4.67	4.64	0.58***	0.03
Abr	4.93	4.56	4.56	4.51	0.37***	0.05
PI	4.99	4.51	4.58	4.55	0.48***	0.03

Note. TS means Two-sided ad; OS means one-sided ad; *** $p < 0.001$

As expected, subjects high in NFC responded to two-sided ad more favorably than to one-sided ad (all $p < 0.001$), whereas low NFC subjects' responses to two-sided and one-sided ad were not statistically significant (all $p > 0.05$). These findings strongly support H3 and H4.

5 Discussions

This study introduces a new individual difference variable, namely, NFC into the research of the effectiveness of two-sided ad. The findings confirm our hypotheses that two-sided ad's persuasion routes are different for subjects with different levels of NFC. Specifically, high NFC subjects are motivated to process information; their

attitude formation process is more complicated and rational than those of low NFC subjects. The process of their attitude formation is in line with DMH. In contrast, low NFC subjects are less motivated to process information; their attitude formation is in accordance with ATH.

Furthermore, this study compares the effectiveness of two-sided and one-sided ad for both high and low NFC subjects. Results show that two-sided ad is more effective than one-sided ad, but only for high NFC subjects. For low NFC subjects, two-sided ad is not more persuasive than one-sided ad. These findings may help to explain the mixed results in extant research.

Most companies advertise their products or services positively. Unfortunately, this strategy may not be effective any more especially in the absence of trust nowadays. Including some relatively unimportant attributes in their ads may be a more effective and cost saving way to resume consumers' trust and purchase intention.

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