

多數 / 少數效果對產品判斷的影響：涉入與資訊來源相關性的干擾效果

The Majority/Minority Effect on Product Judgment: Moderation of Involvement and Source Relevance

簡怡雯 / 國立臺灣大學商學研究所助理教授
Yi-Wen Chien, Assistant Professor, Department of Business Administration, National Taiwan University

蕭明欽 / 國立台灣師範大學管理研究所副教授
Chung-Chiang Hsiao, Associate Professor, Graduate Institute of Management, National Taiwan Normal University

邱玉璽 / 健行科技大學行銷與流通管理系助理教授
Yu-Yeh Chiu, Assistant Professor, Department of Marketing and Distribution Management, Chien Hsin University of Science and Technology

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摘要

本文探討多數 / 少數效果對產品態度的影響，是否會受到涉入程度以及訊息相關性的干擾。我們認為在不同涉入程度之下，多數 / 少數訊息來源對產品態度的影響能扮演不同角色。在低涉入之下，多數 / 少數訊息來源被視為一種週邊線索，可以直接影響產品態度；在中涉入之下，多數 / 少數訊息來源會影響消費者處理產品訊息的程度；在高涉入之下，當多數 / 少數訊息來源與判斷產品的品質相關時，就會被視為是核心論點之一，並會偏誤對所有核心論點的處理。本文為首先提出整合架構，解釋多數 / 少數效果在低中高三種涉入程度下以不同機制影響產品判斷的研究。

【關鍵字】多數 / 少數效果、來源相關性、涉入

Abstract

This study investigates the majority/minority effects on product attitudes with involvement and source relevance as moderators. We posit that the majority/minority source can play different roles affecting product judgments at different involvement levels. It can serve as a peripheral cue directly influencing product attitudes under low involvement; it can alter the processing amount under moderate involvement; finally, it can serve as a central argument and bias processing if it is perceived as relevant to judging the true quality of the target product under high involvement. The current study is the first to provide an integrated framework to explain the different mechanisms by which the majority/minority may influence product judgments under three involvement levels (low, moderate, and high).

【Keywords】majority/minority effect, source relevance, involvement

1. Introduction

Majority/minority source status has remained an important issue in the area of social psychology ever since seminal works of Asch (1956) and Moscovici (Moscovici, 1976; Moscovici, Lage, & Naffrechoux, 1969). It has been demonstrated that a majority or minority source can exert considerable influence on message recipients. Several theoretical explanations for the persuasion processes of majority- and minority-endorsed messages exist (Latane & Wolf, 1981; Moscovici, 1980, 1985; Nemeth, 1986), including recent applications of dual-process models of persuasion (e.g., Heuristic Systematic Model; HSM (Chaiken, 1980); Elaboration Likelihood Model; ELM (Petty & Cacioppo, 1986)) to analyze the processes underlying majority and minority influence (Crano & Chen, 1998; Kerr, 2002; Martin, Hewstone, & Martin, 2007; Trost, Maass, & Kenrick, 1992). The majority/minority influence on product judgments has been gaining enormous attentions by marketers since the majority effect is regarded as and has been employed as a useful marketing technique to influence consumers' product perceptions through ads, salespeople, or publicity (e.g., "eight out of ten dentists recommend Crest toothpaste") (Bone, 1995; Kulviwat, Bruner II, & Al-Shuridah, 2009; Trusov, Bucklin, & Pauwels, 2009).

However, does the majority source that advocates products' positive features always lead to positive effects on product judgments? Based on the Elaboration Likelihood Model (Petty & Cacioppo, 1984, 1986), attitude change depends on two different strategies for processing persuasive messages. When people's motivation and ability to process is low (low involvement), peripheral-route persuasion likely takes place. People form their attitudes based on simple, easy-to-process decision rules or cues, without extensive scrutiny of persuasive arguments (minimal cognitive efforts). Generally, source variables (e.g., endorser or majority/minority) act as peripheral cues, which can directly affect judgments in low-involvement conditions (Petty, Cacioppo, & Schumann, 1983). In contrast, when people's motivation and ability to process a message is high (high involvement), central route persuasion is more likely, whereby people carefully scrutinize the persuasive message and form their attitudes based on the information related to judging the true quality of the target (i.e., central arguments) (using effortful cognitive activity). Under this circumstance, will the majority/minority source, serving as a peripheral cue under low involvement, affect judgments under high involvement?

According to the "Multiple Role Hypothesis" (Petty & Wegener, 1998, 1999), any persuasion variable can operate through different mechanisms (i.e., serving as a peripheral

cue, a central argument, and an influence on the extent or direction of message processing) at different points along the elaboration continuum (i.e., at different involvement levels) (Petty & Wegener, 1999). This approach recognizes multiple roles for variables in the persuasive process rather than attempting to determine whether a variable is central or peripheral. Any persuasive variable (such as the majority/minority source status) may play different roles under different involvement or elaboration levels. In the current study, we attempt to investigate the possibility that the majority/minority source in the persuasive communications may play different roles on affecting product judgments under different involvement levels. Of particular interest, we would like to examine under which condition the majority/minority cue can influence product judgments of high-involvement consumers by serving as a central argument. Our study is the first to provide an integrated framework to explain the different mechanisms by which the majority/minority source may exert its influence on product judgments in terms of three different involvement levels (i.e., low, moderate, and high). The manuscript proceeds as follows. First, we discuss our conceptual model and develop hypotheses. Second, we explain the procedures and results of two experiments to test our hypotheses. Finally, we discuss the implications of our findings and future research.

2. Conceptual Model and Hypotheses

Drawing upon the dual-process models of persuasion (e.g., Heuristic Systematic Model; HSM (Chaiken, 1980); Elaboration Likelihood Model; ELM (Petty & Cacioppo, 1986)), it is suggested that low-involvement consumers, due to lack of ability or motivation to process information, tend to use simple cues to form their attitudes without careful elaboration on the arguments. The majority/minority source status may serve as an easy-to-process peripheral cue and therefore directly influence product judgments through a peripheral route. In this case, neither the product-source relevance nor the argument quality will be carefully considered or processed, because of limited cognitive resources exerted for the judgmental task. Consumers will form their product perceptions simply based on the majority/minority cue without elaboration on whether the source cue is judgmentally relevant and whether the arguments contained in the persuasive message are sufficiently cogent. In a word, when consumers encounter a message advocating a product's positive features by the majority source, they tend to form more favorable product attitudes, compared with when they encounter the same message advocated by the minority source, disregarding whether the

source is relevant to the product's true quality and whether the product's positive arguments are strong or weak. Our first hypothesis is:

H1a: For consumers with low involvement, the majority source status advocating products' positive features is likely to lead to more favorable product judgments than does the minority source status, regardless of source relevance and argument quality.

Based on the Multiple Role Hypothesis (Petty & Wegener, 1998, 1999), it is proposed that any persuasion variable can operate through different mechanisms (i.e., serving as a peripheral cue, a central argument, and an influence on the extent or direction of message processing) at different points along the elaboration continuum (i.e., at different involvement levels) (Petty & Wegener, 1999). A peripheral cue, which serves as a peripheral cue under low involvement, can possibly play as a central argument under high involvement, if a person perceives the cue as relevant to judging the true quality of the target (Miniard, Bhatla, Lord, Dickson, & Unnava, 1991; Petty & Cacioppo, 1984; Shavitt, Swan, Lowrey, & Wänke, 1994). For example, Petty and Cacioppo (1984) find that endorser attractiveness influences attitudes toward a shampoo in both high- and low-involvement conditions. High-involvement consumers consider endorser attractiveness relevant to judging the true merit of the product, because the endorser provides direct evidence of the product's function (Petty & Cacioppo, 1984). In this case, source attractiveness acts as a central argument in high-involvement conditions. However, in low-involvement conditions, endorser attractiveness influences attitudes by simply serving as an easy-to-process peripheral cue. Similarly, Shavitt et al. (1994) reveal that endorser attractiveness influences high-involvement consumers' product judgments only when endorser attractiveness is related to the central merits of the product (i.e., the salient attributes of the product were relevant to public image, such as creating a good social impression). Miniard et al. (1991) find that, when consumers perceive an ad's picture (a peripheral cue) to be relevant by sharing some specific feature with the advertised product (e.g., a picture of juicy orange slices in an ad for a juice drink), the picture influences product judgments even under high involvement.

We suggest that the majority/minority source, which generally serves as a peripheral cue under low involvement, should be able to serve as a central argument influencing product judgments of high-involvement consumers, if consumers regard the majority/minority cue as with judgmental relevance. It can also be possible that this central argument (the source cue) will influence processing of the other arguments (Petty & Wegener, 1999), which provides an indirect effect on product judgments. In this study, we conduct a path

analysis to examine such direct and indirect effects of the majority/minority source on product attitudes under high involvement. On the other hand, when high-involvement consumers do not perceive the majority/minority source to be judgmentally relevant, they tend to disregard this piece of information or discount its weight in judgments. In this case, high-involvement consumers will form their attitudes through careful elaboration only on the central arguments of the product (Petty & Cacioppo, 1984, 1986; Petty & Wegener, 1999). Accordingly, products with strong arguments are likely to generate more favorable attitudes than the ones with weak arguments, irrespective of the majority or minority cue.

When will consumers perceive the majority/minority source to be judgmentally relevant? Previous findings suggest that expert sources are generally perceived as relevant, credible, and diagnostic information, and as a result can produce effects on product judgments under both low and high involvement (Biswas, Biswas, & Das, 2006; Bone, 1995; Goldsmith, Lafferty, & Newell, 2000; Lafferty & Goldsmith, 1999). Besides, Till and Busler (2000) find that when the endorser has the expertise consistent with the product, the endorser is considered as fit or matched with the product and thus will produce greater effects on product judgments. Based on this notion, the current study proposes that, if the majority/minority information is based on an expert source, it will be more likely perceived as product-relevant information, and thus will serve as a central argument and influence processing under high involvement. However, if the majority/minority information is advocated by a non-expert source, it will be less likely to be perceived as judgmentally relevant and diagnostic. In this case, the majority/minority cue will simply play as a peripheral cue affecting product judgments under low involvement, but not under high involvement. Our second hypothesis is:

- H1b: For consumers with high involvement, the majority source status advocating products' positive features is likely to lead to more favorable product judgments than does the minority source status, when the majority/minority information is from a relevant source (i.e., expert source). However, when the majority/minority information is from an irrelevant source (i.e., non-expert source), the majority/minority source status does not produce any effects on product judgments.

The current study also explores the role of the majority/minority effects on influencing product judgments, when the elaboration likelihood (or involvement level) is moderate. Though few researches focus on the moderate level of involvement, we cannot deny the fact that most consumers are in the status of moderate involvement when they watch TV

commercials, browse products in stores, or read newspaper/magazine ads. Petty and Wegener (1999) posit that, when the elaboration likelihood is not constrained by other variables to be high or low (i.e., at the moderate involvement), a persuasive variable is likely to affect the amount of processing. Previous literature finds that a peripheral cue (such as a spokesman), which attracts people's attention or violates general expectations (Baker & Petty, 1994), is more likely to trigger more information processing, when the involvement level is moderate.

Also, it has been found that the race of a spokesman (a peripheral cue) of a persuasive message influences the extent of message elaboration when the involvement is not constrained to be high or low, such that white participants tend to carefully scrutinize the message (i.e., engage in a larger amount of processing) when the message is advocated by a black source than by a white source (Petty, Fleming, & White, 1999; White & Harkins, 1994).

Thus, the current study predicts that, under moderate involvement, the majority source is more likely to trigger a larger amount of information processing than is the minority source, since the majority's opinions are more likely to be accepted as reflecting objective reality and catch participants' attentions, and thus are more likely to provoke greater message processing. The above prediction should demonstrate the outcome that the positive persuasive message with strong arguments will lead to more favorable product attitudes than the one with weak arguments, when the message is advocated by the majority source. On the other hand, since moderate-involvement consumers are less likely motivated to process the message advocated by the minority source, there should be no difference in product attitudes between strong and weak arguments. The third hypothesis is:

H1c: For consumers with moderate involvement, the majority source status advocating products' positive features is likely to lead to greater message elaboration than does the minority source status. Thus, for the positive messages advocated by the majority source, the messages with strong arguments produce more favorable product judgments than those with weak arguments. In contrast, for the positive message advocated by the minority source, product judgments will not differ between strong and weak argument conditions.

As a main objective to provide an integrated framework of the majority/minority effects on product judgments, the current study attempts to examine the different roles that the majority/minority may play on influencing product attitudes through different mechanisms at different levels of involvement (i.e., high vs. moderate vs. low), and considers the relevance of the majority/minority source status as a potentially important factor for determining

whether the majority/minority cue can serve as a central argument under high involvement. Our proposed model is depicted in Figure 1.

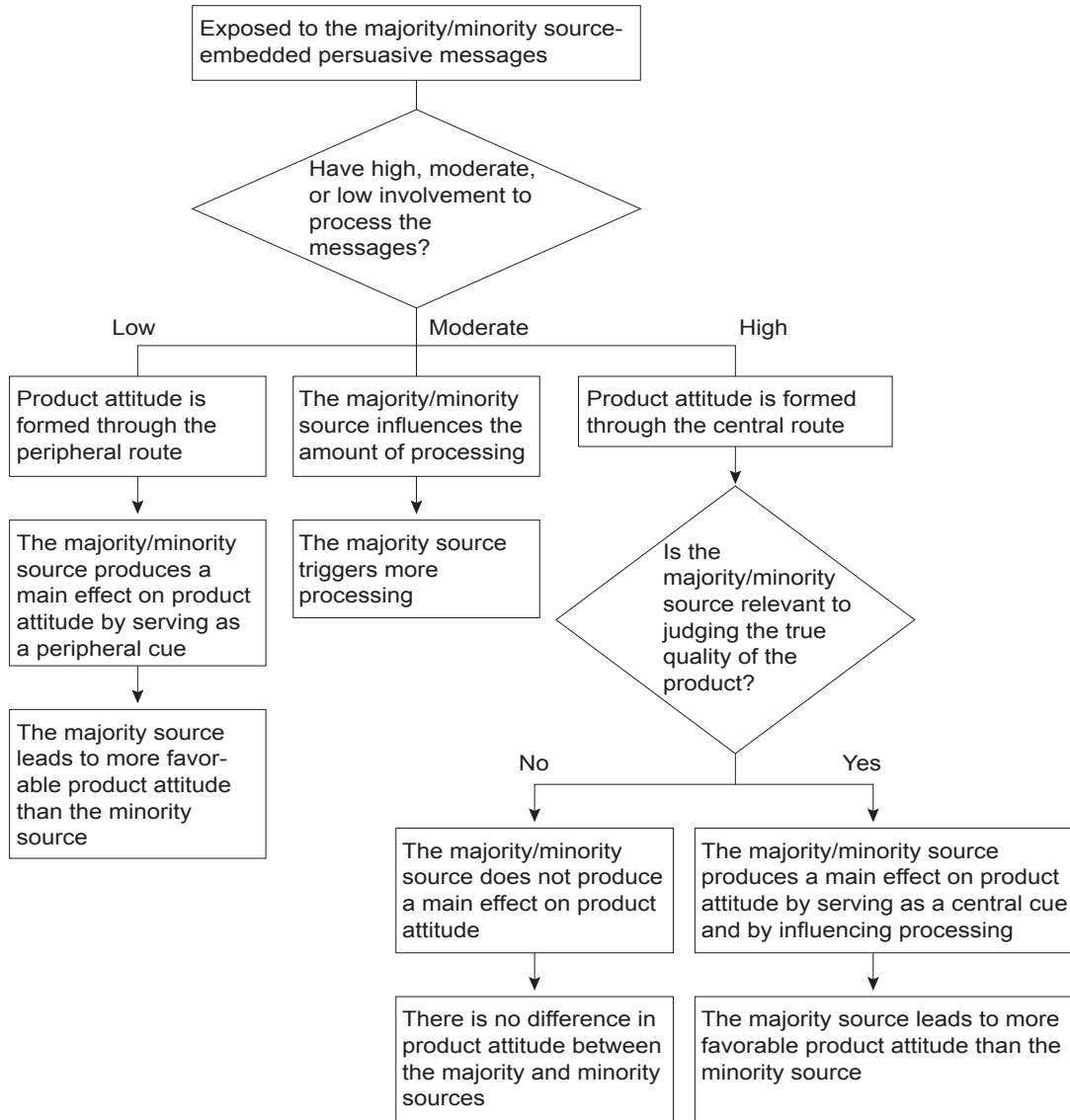


Figure 1 Multiple Effects of Majority/Minority Source on Product Judgments

The current study offers some contributions. First, the current study is the first to provide an integrative view of the majority/minority effects on judgments and examine the moderating roles of involvement and source relevance. Previous studies may have examined

the majority versus minority status as a peripheral cue (Axsom, Yates, & Chaiken, 1987; Mackie, 1987; Maheswaran & Chaiken, 1991), as influencing the amount of message scrutiny (Baker & Petty, 1994; Mackie, 1987; Martin & Hewstone, 2003) or as biasing object-related thoughts (Areni, Ferrell, & Wilcox, 2000; Erb, Bohner, Schmäzle, & Rank, 1998), but none has ever discussed its multiple roles within one study. Our integrated framework may help integrate previous independent, divergent findings and generate new predictions.

Second, this study extends the concept of majority/minority influence to consumption settings. Previous research often uses controversial social issues, such as the legalization of voluntary euthanasia (Gardikiotis, Martin, & Hewstone, 2005; Martin, Gradikiotis, & Hewstone, 2002; Martin & Hewstone, 2003; Martin et al., 2007, 2008), death-penalty debates (Maass & Clark, 1983), and abortion policies (Clark & Maass, 1990), or significant campus issues such as senior comprehensive exams (Kerr, 2002; Trost et al., 1992) and university service programs (Baker & Petty, 1994; Crano & Chen, 1998) as the research objects, but few has examined products as targets. In consumer settings, the majority influence is often adopted as an ad appeal. Especially for some products, the quality of which consumers cannot easily compare and judge before (or even after) real consumptions (such as health products), word-of-mouth is a rather reliable and effective promotion tool. However, word-of-mouth is not always effective; based on the current study's propositions, whether the majority/minority influence is effective depends on involvement and source relevance, and its influencing mechanisms are different across three involvement levels.

3. Study 1

3.1 Participants and Design

By recruiting participants without prior attitudes toward the target product, this study examined the potential moderating roles of involvement and source relevance on the effect of source status. Argument quality was also manipulated in the study for the purpose of examining participants' use of cognitive resources in diligent scrutiny of persuasive messages (Baker & Petty, 1994; Petty & Cacioppo, 1986).

To partially fulfill a course requirement, 446 male and female undergraduate students participated in the study. Participants were randomly assigned to each condition in a 2 (source status: majority vs. minority) \times 2 (source relevance: high vs. low) \times 2 (argument quality: strong vs. weak) \times 3 (involvement: high vs. moderate vs. low) between-participants

factorial design.

3.2 Procedure

Participants received a booklet that consisted of the experimental manipulations (i.e., involvement, source status, source relevance, and argument quality), the description of the fictional target product (Je's shampoo), and the dependent measures. The cover page explained that the purpose of the current study was the investigation of college students' attitudes toward some products. On the second page, a fictitious manufacturer that attempted to launch a new product (i.e., Je's shampoo) was introduced and the involvement manipulation was included in the brief business introduction. Next, participants read a survey report of Je's shampoo based on a marketing research finding. The marketing report served as the disguise of manipulation on majority/minority source status and source relevance. On the following page, participants were exposed to Je's shampoo's key product feature recognized by an independent cosmetic science society. Serving as argument quality, either relatively strong or relatively weak product features were presented. In the end of the section, participants' responses to target attitudes and manipulation checks were collected. Participants were thanked and debriefed after the experiment task was completed.

3.3 Independent Variables

The personal relevance of the target product to the participants and the decision task importance served to manipulate participants' involvement to process the message. Participants in the high-involvement condition were told that the supplier had decided to launch a new shampoo in their local area. And the supplier only investigated a small amount of samples, so their opinions were very important. In contrast, in the low-involvement condition, participants were told that the supplier had decided to launch a new shampoo in another area (not in their city). And, the supplier investigated a large amount of samples so that their responses would be averaged with other respondents. To manipulate the moderate involvement, participants did not receive any of this aforementioned information (Martin et al., 2007). Source relevance was manipulated such that, in the high relevance condition, professional hair designers with at least 10 years experiences had been invited as trial users to test Je's shampoo. In the low relevance condition, high school students were recruited to test Je's shampoo by a convenience sampling. In terms of the manipulation of source status, participants were told that the findings of marketing research showed that either 85% (majority) or 15% (minority) of the trial users (either relevant or irrelevant) favored Je's

shampoo (Baker & Petty, 1994; Crano & Chen, 1998; Martin et al., 2007). Finally, argument quality was manipulated by presenting either five strong or weak arguments in the target ad. The arguments employed in the persuasive messages had been collected in a pretest by another group of 30 undergraduate students. The pretest sample had been asked to evaluate the argument quality of a list of shampoo relevant persuasive statements. Five arguments rated as the most compelling and persuasive (e.g., strengthen hair shafts and reduce split ends, make hair shining and bouncing, keep hair from knotting and easy to manage), and another five arguments rated as the least compelling and persuasive (e.g., brown-colored shampoo looks natural, clean well when used with cold water, many creative bottle shapes) were then included in the persuasive messages serving as strong and weak arguments respectively.

3.4 Dependent Variables

For dependent measures, participants indicated their attitudes toward the target product on three 7-point semantic differential scales: unfavorable/favorable, bad quality/good quality, and negative evaluation/positive evaluation. The average of these responses formed the attitudes index (Cronbach's $\alpha = .83$).

The measure of cognitive responses used a thought-listing technique common to persuasion research (Chaiken & Maheswaran, 1994; Erb et al., 1998; Petty, Schumann, Richman, & Strathman, 1993). Participants listed what they were thinking while reading the product descriptions in eight boxes. After recording their thoughts, they indicated the favorability of each thought with a "+" (in favor of the brand), "-" (against the brand), or "0" (neutral evaluation). Two judges, blind to the experimental purpose, categorized these thoughts as product-related or -unrelated and achieved an inter reliability of .86. The reason for the current research to categorize collected thoughts into product-related and product-unrelated ones is that we would like to particularly use the product-related thoughts, rather than thoughts in general (which include product-unrelated thoughts), in the subsequent examination of the role majority/minority source plays in the mechanism by which product attitudes are formed. That is, capturing product-related thoughts allows us to investigate whether majority/minority source status may exert an impact on product attitudes by means of a central route or a peripheral route. In line with ELM (Petty & Cacioppo, 1984), we suggest when product-related thoughts are able to mediate the impact of majority/minority source status on product attitudes, consumers are presumably undertaking central-route processes. On the contrary, the peripheral route is more likely to be at work when the

product-related thoughts fail to serve as the mediator in the relationship between majority/minority source status and product attitudes. An index of thought valence was computed by subtracting negative product-related thoughts from the positive product-related thoughts (Chaiken & Maheswaran, 1994).

To examine the involvement manipulation, three 7-point semantic differential scales: not concentrated/highly concentrated, not careful/very careful, and not involved/highly involved assessed participants' involvement. The average responses formed one involvement index (Cronbach's $\alpha = .93$). To verify the effectiveness of the majority/minority status manipulation, the questionnaire asked participants to rate the opinion of the majority who tested Je's shampoo on a 7-point scale ranging from strongly favorable to strongly unfavorable (Erb et al., 1998). It also asked participants to write down the percentage of testers in favor of Je's shampoo (Darke, Chaiken, Bohner, Einwiller, Erb, & Hazlewood, 1998). To assess source relevance, two 7-point semantic differential scales (unreliable source/reliable source and irrelevant source/relevant source) formed a single relevance index (Cronbach's $\alpha = .94$). Finally, the verification of the argument quality manipulation asked participants to rate the persuasiveness of arguments contained in the product description on two 7-point semantic differential scales (weakly persuasive/strongly persuasive and not at all important/very important). The averaged responses to these items formed an argument strength index (Cronbach's $\alpha = .92$).

3.5 Results

3.5.1 Manipulation Checks

The composite measures of involvement, source relevance, argument quality, and source status were submitted into the 3 (involvement: high/moderate/low) \times 2 (source status: majority/minority) \times 2 (source relevance: high/low) \times 2 (argument quality: strong/weak) ANOVAs. Involvement check indicated only a significant main effect of involvement manipulation ($F(2, 422) = 51.76, p < .001$). The follow-up Bonferroni post hoc test showed that participants reported they concentrated, were careful, and involved more when processing the target ad in high involvement condition than in moderate involvement condition ($M_s = 5.05$ vs. $4.37, p < .01$), and more in moderate involvement condition than in low involvement condition ($M_s = 4.37$ vs. $3.85, p < .01$). Besides, participants in the majority condition perceived the trial users as more favorable toward Je's shampoo than those in the minority condition ($M_s = 5.04$ vs. $3.54, F(1, 422) = 256.49, p < .001$). Almost all participants (88% in the majority condition and 89% in the minority condition)

successfully recalled the percentages of trial users who were satisfied with Je's shampoo in earlier exposed marketing research finding. Professional hair designers were perceived as more relevant to shampoo products than high school students ($M_s = 5.29$ vs. 3.88 , $F(1, 422) = 208.59$, $p < .001$). Participants also rated strong arguments as more persuasive and compelling than weak arguments ($M_s = 5.07$ vs. 3.62 , $F(1, 422) = 264.35$, $p < .001$). All manipulations were successful.

3.5.2 Attitude Measures

The means of target attitude are presented in Table 1. In the low involvement condition, only a main effect of source status ($F(1, 142) = 64.99$, $p < .001$) and an interaction between source status and source relevance ($F(1, 142) = 4.44$, $p < .05$) were statistically significant. The remaining effects (including main effect of argument quality) did not approach significance ($F_s < 1$). The target evaluations of low involvement participants tended to be positively influenced by source status in that the majority favored product ($M = 4.89$) was better assessed than the minority favored product ($M = 3.83$). The interaction contrast ($F(1, 142) = 4.44$, $p < .05$) indicated that such a main effect of source status was more considerable when the product advocates were from relevant sources ($M_s = 4.99$ vs. 3.65 , $F(1, 142) = 50.96$, $p < .001$) than when they were from sources relatively low in relevance ($M_s = 4.79$ vs. 4.01 , $F(1, 142) = 17.99$, $p < .001$). In support of H1a, irrespective of source relevance and argument quality, low-involvement people were likely to rate the target product more favorably when the majority rather than the minority advocated it in the persuasive communication.

In the moderate involvement condition, the interaction between source status and argument quality was significant ($F(1, 141) = 5.18$, $p < .05$). The simple main effects demonstrated that the impact of argument quality on target attitude was significant only when the product advocates were from the majority source ($M_s = 4.97$ vs. 4.28 , $F(1, 141) = 16.32$, $p < .001$), but it was not significant when they were from the minority source ($M_s = 4.32$ vs. 4.19 , $F(1, 141) = .49$, $p = .48$). In support of H1c, people moderate in involvement were likely to evaluate the target product based on argument quality only when the persuasive messages were from the majority source but not so when they were from the minority source. That is, majority source invoked greater information process than minority source.

Finally, in high involvement condition, the main effect of argument quality ($F(1, 139) = 18.75$, $p < .001$) was significant. High involvement people exposed to strong arguments

rated the target product more favorably ($M = 4.69$) than their counterparts viewing weak arguments ($M = 4.15$). In addition, the interaction between source relevance and source status approached significant ($F(1, 139) = 3.16, p = .08$). The analysis of simple main effects indicated that the effect of source status on target evaluations was significant when the source was highly relevant ($M_s = 4.88$ vs. $4.16, F(1, 139) = 17.37, p < .001$), but the effect of source status was not significant when the source was relatively low in relevance ($M_s = 4.46$ vs. $4.19, F(1, 139) = 2.19, p = .14$). In support of H1b, high involvement people were likely to base their target assessments on source status only when the source was highly relevant to the central merits of the judged target, but the effect of source status was annulled when the source was relatively irrelevant.

Table 1 Cell Means in Study 1

Involvement	High Relevance				Low Relevance			
	Majority		Minority		Majority		Minority	
	Strong	Weak	Strong	Weak	Strong	Weak	Strong	Weak
High	4.98	4.77	4.35	3.96	4.88	4.04	4.56	3.82
Moderate	5.02	4.33	4.13	4.10	4.93	4.22	4.50	4.27
Low	5.08	4.89	3.63	3.67	4.78	4.80	4.05	3.97

3.5.3 Path Analyses

A set of path analyses explored the potential mediating role of product related thoughts on the relationship between source status and target evaluations. Specifically, the path analyses examined the mediation effect of thought valence across various levels of involvement and source relevance. The standardized beta coefficient in each path was presented in Figure 2.

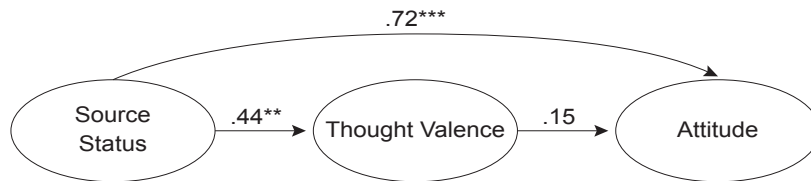
In the low involvement condition, the target evaluations were directly influenced by source status, and the mediation role of thought valence was not significant. Consistent with ELM, source status served as a peripheral cue and positively affected the formation of target judgment when people were low in involvement. The cognitive response (as reflected by the thought valence) in the low involvement condition was not able to significantly account for target assessments, even though some product related thoughts were retrievable when the persuasive message consisted of highly relevant sources.

In the moderate involvement condition, the effect of source status on target favorability was significant only when the source is highly relevant, but not so when the source is relatively irrelevant. When the source is highly relevant, the path of source status to thought

valence was partially significant ($p = .08$). Therefore, when people moderate in involvement encountered highly relevant source in the persuasive communication, source status was likely to serve as a relevant cue to either directly explain attitude ratings or indirectly influence target evaluations via the mediation of thought valence (though significant partially). However, when source was relatively irrelevant, people moderate in involvement did not significantly process source status as cues as in the peripheral route, nor as central arguments as in the central route.

In the high involvement condition, the target favorability was significantly influenced by thought valence, irrespective of source valence, which indicates that high-involvement participants' attitudes are influenced through a central route. However, the mediation role of thought valence was significant only when the source in the persuasive message was highly relevant, and it was not so when the source was relatively low in relevance. Consistent with the notion of multiple role in ELM, when the source was highly relevant, source status was likely to serve as a central argument to either directly account for the attitude formation or exert an influence to prompt product related thoughts which in turn influenced the favorability of target product. However, when the source was relatively irrelevant, people high in involvement were not likely to consider source status as a central argument, neither would source status be used to prompt thoughts or interpret target attitudes.

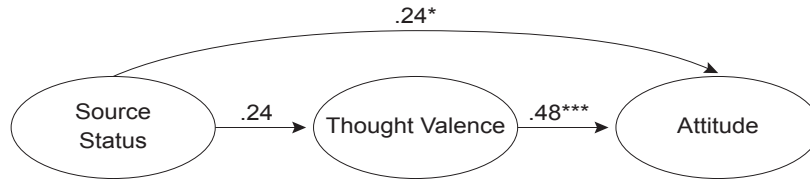
(a) Low Involvement- High Relevance



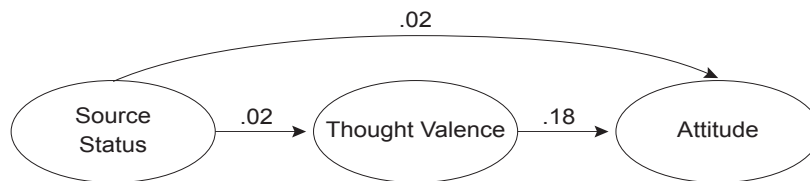
(b) Low Involvement-Low Relevance



(c) Moderate Involvement-High Relevance



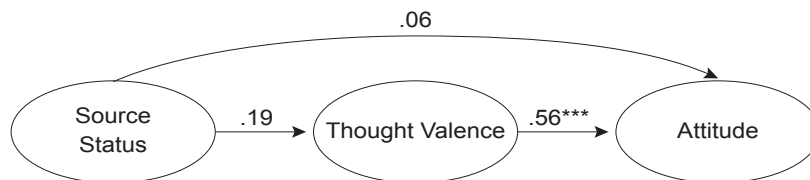
(d) Moderate Involvement-Low Relevance



(e) High Involvement-High Relevance



(f) High Involvement-Low Relevance



Note: Source status was coded as 1 for majority and 0 for minority; * is for $p < .05$, ** is for $p < .01$, *** is for $p < .001$.

Figure 2 Path Analyses for Study 1

3.6 Conclusion and Discussion

The results of Study 1 confirm H1a, H1b, and H1c. Under high involvement, the majority/minority source influences product attitudes by serving as a central argument in the scrutiny of information when the source is of high-relevance. But, the majority/minority effects disappear when the source is low-relevance. With low involvement, the majority/minority serves as a peripheral cue and directly influences participants' attitudes, irrespective of source relevance. When involvement is moderate, the majority source induces greater message processing than does the minority source, regardless of source relevance. Our path

analysis further confirms that the underlying mechanisms are different under different involvement levels.

Another interesting question arising here is whether or not the majority/minority influence on product attitudes will still operate in the same way consistent with our above predictions, when consumers have prior product attitudes which may be either congruent or incongruent with the source's advocated position? In marketing communications, consumers often encounter the persuasive messages for existing products toward which they have already hold prior attitudes. According to the study by Baker and Petty (1994), when people's involvement is not constrained to be high or low, the majority/minority source can enhance message scrutiny if the source-message position pairing contradicts respondents' false consensus expectations. When such expectations get violated, message recipients are surprised, which causes them to scrutinize the message content. It seems that the majority source will not always trigger more processing when prior attitudes are considered. We conduct Study 2 to test whether product attitudes and processing motivation will be different from our previous predictions if consumers have prior attitudes.

4. Study 2

Study 2 is conducted under the condition in which consumers have prior attitudes. Also, to simplify the study, we only examine the relevant source conditions in the current study since we predict that effects of the irrelevant source will be identical to what have been tested in Study 1. It is because, when people are under low involvement, they have no ability and no willingness to process, so that the source is treated as a peripheral cue directly influence product attitudes irrespective of the source's relevance and prior attitude. Thus, the result for the irrelevant source will be consistent with Study 1. Under high involvement, people have ability and motivation to process, so that they will consider all the information and form their attitudes based on only the relevant information. Thus, the irrelevant source will not produce any effect on attitudes, consistent with Study 1 results. Under moderate involvement, according to Study 1 results, the majority source will trigger more processing than the minority source, irrespective of the source relevance. That is, the irrelevant source should produce similar effects with the relevance source. Based on the above explanations, we omit testing the irrelevant source in Study 2.

The followings are our hypotheses for Study 2 (when the source is relevant). Under low involvement, since consumers lack ability and motivation to process information, they tend

to use simple cues to form product attitudes. The relevant majority/minority source will play as a peripheral cue directly influencing product attitudes, irrespective of congruency of prior attitude. Under high involvement, consumers tend to exert cognitive resources to process all the information and form their attitudes based on the product-relevant information. So, the relevant majority/minority information will be considered as a central argument and will influence processing of other arguments, irrespective of congruency of prior attitude. The hypotheses under low and high involvements are:

- H2a: For consumers with low involvement and prior attitude, the relevant majority source status advocating products' positive features is likely to lead to more favorable product judgments than does the minority source status.
- H2b: For consumers with high involvement and prior attitude, the relevant majority source status advocating products' positive features is likely to lead to more favorable product judgments than does the minority source status.

Under moderate involvement, we suggest whether the majority source or minority source can invoke more processing depends on whether it is congruent or incongruent with prior attitudes. The majority source can trigger more processing than the minority source, when the source's position is incongruent with prior attitudes, since the counter-attitudinal message advocated by the majority is more surprising (Baker & Petty, 1994). However, when the source's position is congruent with prior attitudes, the minority source tends to trigger more processing than the majority source, since the pro-attitudinal message advocated by the minority creates more surprise (Baker & Petty, 1994). Following is the hypothesis under moderate involvement.

- H2c: For consumers with moderate involvement and prior attitude, the relevant majority source status advocating products' positive features is likely to lead to greater message elaboration than does the minority source status, if prior attitude is incongruent with the source's position. However, the minority source is likely to lead to greater message elaboration, if prior attitude is congruent with the source's position.

4.1 Participants and Design

To partially fulfill a course requirement, 429 male and female undergraduate students participated in the study. Participants were randomly assigned into a 2 (source status: majority vs. minority) \times 2 (prior attitude: congruent vs. incongruent) \times 2 (argument quality: strong vs. weak) \times 3 (involvement: high vs. moderate vs. low) between-participant factorial design.

4.2 Procedure

Participants received a booklet that contained the experimental manipulations (i.e., involvement, source status, prior attitude, and argument quality), the description of the fictional target product (Je's shampoo), and the dependent measures. The cover page described that the study was designed to investigate college students' general attitudes toward products. On the second page, a business introduction of a fictitious corporate was followed to induce participants' initial impressions toward its products. After reading the corporate introduction, participants expressed their initial favorability toward its product (as a manipulation check on prior attitudes) on two 7-point semantic differential scales (bad quality/good quality and unfavorable/favorable). The responses to these items formed one prior attitudes-valence index (Cronbach's $\alpha = .88$). In the subsequent section, involvement, majority/minority source status and argument quality were manipulated as in Study 1. Then, product attitudes and manipulation checks (along with their gender, age, and subjective product knowledge) were collected. After completing the survey, participants were thanked and debriefed.

4.3 Independent and Dependent Variables

Study 2 included four independent variables of which the manipulation of involvement, source status, and argument quality were identical as in Study 1. Besides, the dependent measures in target attitude, thought listing, and manipulation checks remained the same as in Study 1.

For the manipulation of the congruency between the advocating position of source and participants' prior attitudes, participants received a positive business introduction in the congruent condition but a negative business introduction in the incongruent condition. That is, in the congruent condition, participants were exposed to a positive business introduction and received the marketing research report that either 85% or 15% of professional hair designers were in favor of the target product. On the other hand, in the incongruent condition, participants viewing the negative business introduction received the same marketing research report.

In the condition of positive prior attitude, the business introduction featured a fictitious Vilance Corporation from Europe, which was established in 1974 and employed more than 3,000 people. Its main product lines consisted of cosmetics, skin care, and hair care products. Last year, its sales reached a market share of 33%, ranked first in the industry, and industrial analysts rated Vilance as the best among their competitors. The industry specialists also

pointed out that Vilance would continue to grow at a rate of 5%.

In the condition of negative prior attitude, the business introduction explicated that Vilance Corporation from Europe was established in 2000 and had less than 100 employees. Due mainly to increasingly serious market competition, its sales performance in recent years did not reach its anticipated target level. Last year, it was ranked tenth in the industry. In an industrial report, a specialist rated Vilance as performing worse than its competitors.

4.4 Results

4.4.1 Manipulation Checks

The composite indexes of involvement (Cronbach's $\alpha = .95$), prior attitude (Cronbach's $\alpha = .88$), argument quality (Cronbach's $\alpha = .93$), and source status were submitted into the 3 (involvement: high vs. moderate vs. low) \times 2 (source status: majority vs. minority) \times 2 (prior attitude: congruent vs. incongruent) \times 2 (argument quality: strong vs. weak) ANOVAs. Involvement check showed that only a main effect of involvement is significant ($F(2, 400) = 113.58, p < .001$). Similar to Study 1, the follow-up Bonferroni post hoc test indicated that participants reported they involved more when processing the target ad in high involvement condition than in moderate involvement condition ($M_s = 5.56$ vs. $4.38, p < .01$), and more in moderate involvement condition than in low involvement condition ($M_s = 4.38$ vs. $3.96, p < .01$). Furthermore, participants in the majority condition perceived the trial users as more favorable toward the target product than their counterparts in the minority condition ($M_s = 5.03$ vs. $3.57, F(1, 400) = 247.08, p < .001$). 88% participants in each of majority and minority conditions precisely recalled the percentages of trial users who were satisfied with the target product in the marketing research reports. Participants reported that the target ad consisting of strong arguments was rated as more persuasive and compelling than that advocating weak arguments ($M_s = 5.14$ vs. $3.50, F(1, 400) = 352.79, p < .001$). After viewing the positive business introduction, participants revealed greater favorability toward the corporate brand than their counterparts exposed to the negative business introduction ($M_s = 5.62$ vs. $3.74, F(1, 400) = 520.89, p < .001$). Participants also reported that professional hair designers were highly relevant to target product category (in relation to 4; $M = 5.20, t(423) = 23.79, p < .001$). All manipulations were therefore successful.

4.4.2 Attitude Measures

The means of participants' target assessments were listed in Table 2. In the low involvement condition, only a main effect of source status was significant ($F(1, 130) =$

32.91, $p < .001$). Consistent with H2a, participants low in involvement were more favorable toward the target product when the majority ($M = 4.76$) advocated the target than when the minority ($M = 3.97$) did so.

In the moderate involvement, the interaction among prior attitude, source status, and argument quality approached partially significant ($F(1, 127) = 2.95$, $p = .09$). Supporting H2c, the simple main effects showed that when participants' prior attitudes were congruent with the advocacy of source, the impact of argument quality on target assessments was significant only in the minority condition ($M_s = 4.96$ vs. 4.04 , $F(1, 127) = 7.80$, $p < .01$), but not in the majority condition ($M_s = 4.90$ vs. 5.02 , $F(1, 127) = .13$, $p = .72$). In contrast, when participants' prior attitudes were incongruent with the advocacy of source, the influence of argument quality on target evaluations was significant in the majority condition ($M_s = 4.83$ vs. 4.16 , $F(1, 127) = 4.71$, $p < .05$), but such an effect of argument quality diminished to a partially significant level in the minority condition ($M_s = 4.22$ vs. 3.62 , $F(1, 127) = 3.14$, $p = .08$).

In the high involvement condition, in addition to the significant main effect of argument quality (consistent with ELM, $M_s = 4.96$ vs. 4.23 , $F(1, 143) = 23.70$, $p < .001$), the main effect of source status was significant ($M_s = 5.06$ vs. 4.12 , $F(1, 143) = 39.30$, $p < .001$). Disregarding congruency between prior attitude and source advocacy, participants high in involvement evaluated the target more favorably when the target was advocated from a majority (and relevant) source than when it was advocated from a minority (and relevant) source, supporting H2b.

Table 2 Cell Means in Study 2

Involvement	Congruent				Incongruent			
	Majority		Minority		Majority		Minority	
	Strong	Weak	Strong	Weak	Strong	Weak	Strong	Weak
High	5.51	5.15	4.77	3.35	4.92	4.67	4.63	3.75
Moderate	4.90	5.02	4.96	4.04	4.83	4.16	4.22	3.62
Low	4.81	4.80	4.08	3.95	4.69	4.77	4.02	3.84

4.5 Conclusion

The findings in Study 2 demonstrate that when the source is relevant, the majority source produces higher attitude ratings than does the minority source, irrespective of involvement and prior attitude congruency. These findings also support Study 1. More importantly, when people are moderate in involvement, the effect of source status on target attitudes is moderated by congruency between prior attitude and the advocacy of source in the persuasive communication. That is, for people encountering the product advocacy incongruent with their earlier formed attitudes, the degree to which product arguments are scrutinized is likely to be heightened when the product advocacy is from a majority source. However, for those receiving the product advocacy congruent with their prior product impressions, the extent to which people engage in careful information process is likely to be escalated when a minority source advocates the product.

5. General Discussion

This study uses the multiple-roles perspective of ELM to demonstrate that majority/minority source status can influence persuasion through different processes at different levels of involvement. The consistent results of two experiments support the hypotheses. In particular, in the high-involvement condition, majority/minority source status influences attitudes by serving as an argument and affecting the direction of product-relevant information process, only when the source is perceived as relevant (i.e., from an expert source). Source status has no effect on attitudes if the source is perceived as irrelevant (i.e., from a non-expert source). In the moderate involvement condition, when participants are exposed to a new product without prior attitudes (Study 1), the majority source induces greater message processing than does the minority source, whereas when participants have prior attitudes (Study 2), both the minority and majority sources can induce greater message scrutiny, depending on whether the source's position is congruent or incongruent with prior attitudes. When the source's position is incongruent with participants' prior attitudes, the majority source induces greater message processing; when the source's position is congruent with participants' prior attitudes, the minority source instead induces greater message processing. Finally, in the low involvement condition, the majority/minority source status serves as a peripheral cue, producing a direct effect on product judgments, regardless of source relevance. The findings support the multiple role hypotheses and offer an integrated framework for explaining the majority/minority effects on product judgments under three

different involvement levels.

The current findings may also offer some important implications for marketers. When employing the majority influence to enhance consumers' product perceptions, marketers should consider consumers' involvement level and the majority source's relevance. Marketers should first identify consumer groups in terms of their involvement with the product, since different majority strategies should be adopted for different groups. For low-involvement customers, using the majority or word-of-mouth strategy will always be effective, regardless of source relevance. For high-involvement customers, however, marketers should employ only the high-relevance majority source (e.g., expert or credible sources) in order for the positive majority effects to occur. The irrelevant source does not produce any effects. For moderate-involvement consumers, marketers should adopt different strategies depending on whether the product is new or familiar. If the product is associated with a new company/brand, toward which consumers do not have prior attitudes, the majority source is more likely to motivate consumers to process more product information. But, if the product is from a familiar company/brand toward which most consumers hold negative prior attitudes, a positive marketing-test report (e.g., for one product line under the brand) from a majority source will create surprise to customers, leading to more information processing. If most customers hold positive prior attitudes, a positive marketing-test result for the brand from a majority source, however, will not trigger more processing on the product information.

To manipulate moderate involvement, this study provides no information about varied personal relevance or decision task importance. However, participants may have widely varying motivations to process information and list their thoughts. Further research should consider more precise ways to manipulate moderate involvement. According to the ELM, elaboration likelihood depends on a person's motivation (e.g., personal relevance, need for cognition) and ability (e.g., distraction, knowledge level) to process. This study mainly manipulates the motivation to process, whereas additional research could examine whether the ability to process influences attitudes differently. Furthermore, others' product opinions should have greater impact on novice consumers than on experts, because experts already own abundant product knowledge and understand the product, which gives them confidence in their product judgments (Biswas & Sherrell, 1993; Huneke, Cole, & Levin, 2004). In addition, future research might examine the different effects of majority/minority status on attitudes according to accuracy versus defense motivations. Accuracy motivations pertain to own attitudes, which mean these consumers are more likely to be open-minded, process

product-relevant information, and accept others' opinions. A defense motivation, in contrast, attempts to preserve and protect existing attitudes, so these consumers may selectively process information and derogate the effect of a message that is incongruent with their attitudes.

Even though the results of manipulation checks show that all of our manipulations are successful, it is likely that the manipulation of personal relevance can be not at work. So, why would the manipulation of personal relevance by changing different extent of proximity in location and time be not working? Several scenarios may contribute the annulled effect of manipulation in personal relevance. For example, one may reasonably argue that when the focal product under study is really rarely used or never consumed by experiment participants, the manipulation of location or time proximity may not make any difference to invoke active cognitive responses. In the current research, shampoo is the target product category and participants are likely to encounter shampoo on a daily base. Therefore, the manipulation of personal relevance is likely to activate meaningful sense to the experiment participants. Another potential factor which may dilute the effectiveness of manipulation in personal relevance (or manipulations in general) is the confounding of uncontrolled stimuli. These uncontrolled factors could be either situational or intrinsic in nature. The recent earthquake in Japan may induce higher attention on issues related to energy policy and environmental protection. If the focal target under study is pertaining to what has been generally concerned by public (such as energy and environment related products or issues), the control of personal relevance may not be as effective as when the focal target is not as intensively focused by public. As for the intrinsic factors, need for cognition (NFC) is a renowned exemplar and has been under extensive examination. Finally, another potential factor is related to the relative difference between levels in the manipulation of personal relevance (or manipulations in general). It is likely that when the relative difference between levels of manipulation is not sufficiently large, the effectiveness of manipulation may not be observed. For example, when the proximity of location is too close (e.g., between two nearby cities), the manipulation of personal relevance is less likely to be significant than when the proximity of location is relatively distant (e.g., between two distant countries). In the current research, the proximity of location we employ is between different countries. This partly explains why the results of manipulation checks in the current research are consistent with the experimental controls.

Some potential limitation and future research might be further identified and developed. For instance, it is likely that thought valence used in the current research might not be able to

fully capture the quality of cognitive responses and discern the difference between the scenario in which a lot of positive and a lot of negative thoughts are available and that in which only few positive and few negative thoughts are crossing in mind. Still, such a measurement of cognitive response has been well adopted by cognitive and social psychologists (e.g., Cacioppo & Petty, 1981; Chaiken & Maheswaran, 1994). One underlying explanation of why valence of thought is an important manifest of cognitive response is from the view that attitudes for people who engage in thoughtful processing are likely to be influenced by the overall evaluation of positive and negative thoughts. When positive thoughts prevail over negative thoughts, attitudes tend to be more favorable. And attitudes tend to be negatively adjusted when negative thoughts prevail. Consistent with the operational definition of argument quality in the classic ELM paradigm, strong arguments represent what can induce dominantly favorable thoughts, while weak arguments generally result in formation of dominantly negative thoughts. In these views, the total amount of thoughts plays a less critical role in the interpretation of cognitive responses than the extent to which one polar of thoughts is above and beyond the other polar of thoughts. As mentioned earlier, this potential role of thought valence in the interpretation of argument quality and then subsequently in the guidance of attitude formation has implicitly underlain the theoretical conception of ELM to fully justify why attitudes formed by people involving in diligent consideration of information are invariably influenced by argument quality. The current research follows the similar stream of theoretical foundation to examine the role of thought valence in cognitive responses.

Even so, the potential limitation of thought valence has not been totally ruled out. It is likely to identify and develop a more comprehensive surrogate to capture the quality of cognitive responses. For example, to take the total amount of thoughts into consideration, the thought valence may be adjusted to represent the ratio of dominant thoughts. When there are 100 positive thoughts and 99 negative thoughts, the thought valence will be encoded as 1 positive thought which is identical to the scenario in which only 2 positive thoughts and 1 negative thought are at work. The “adjusted thought valence” may capture the total amount of thoughts by calculating the ratio of amount of subtracted thoughts to total amount of thought. In the former case, the “adjusted thought valence” will be $1/100$ which can be successfully differentiated from the ratio measured in the latter case, $1/2$. The development of a new measurement to represent cognitive responses is likely to be further explored in the future research.

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作者簡介

* 簡怡雯

國立臺灣大學商學研究所助理教授，國立台灣大學國際貿易學系學士，美國卡內基美隆大學企業管理碩士，美國普渡大學消費者行為博士。其論文刊登於 *Journal of Consumer Research*。目前研究興趣為影響態度改變與形成的內部與外部因素、態度的偏誤修正以及情境因素對產品判斷的影響方向與程度。

蕭中強

國立台灣師範大學管理研究所副教授，國立台灣大學國際貿易學系學士，美國卡內基美隆大學企業管理碩士，美國普渡大學消費者行為博士。其論文刊登於 *Journal of Consumer Research*。目前研究興趣為消費者資訊處理、情境效果、偏誤修正與涉入干擾下的態度形成。

邱玉葉

健行科技大學行銷與流通管理系助理教授，國立台灣大學商學研究所行銷博士。目前主要研究領域與議題是消費者資訊處理與消費者行為。

* E-mail: ychien@ntu.edu.tw

多數 / 少數效果對產品判斷的影響：涉入與資訊來源相關性的干擾效果