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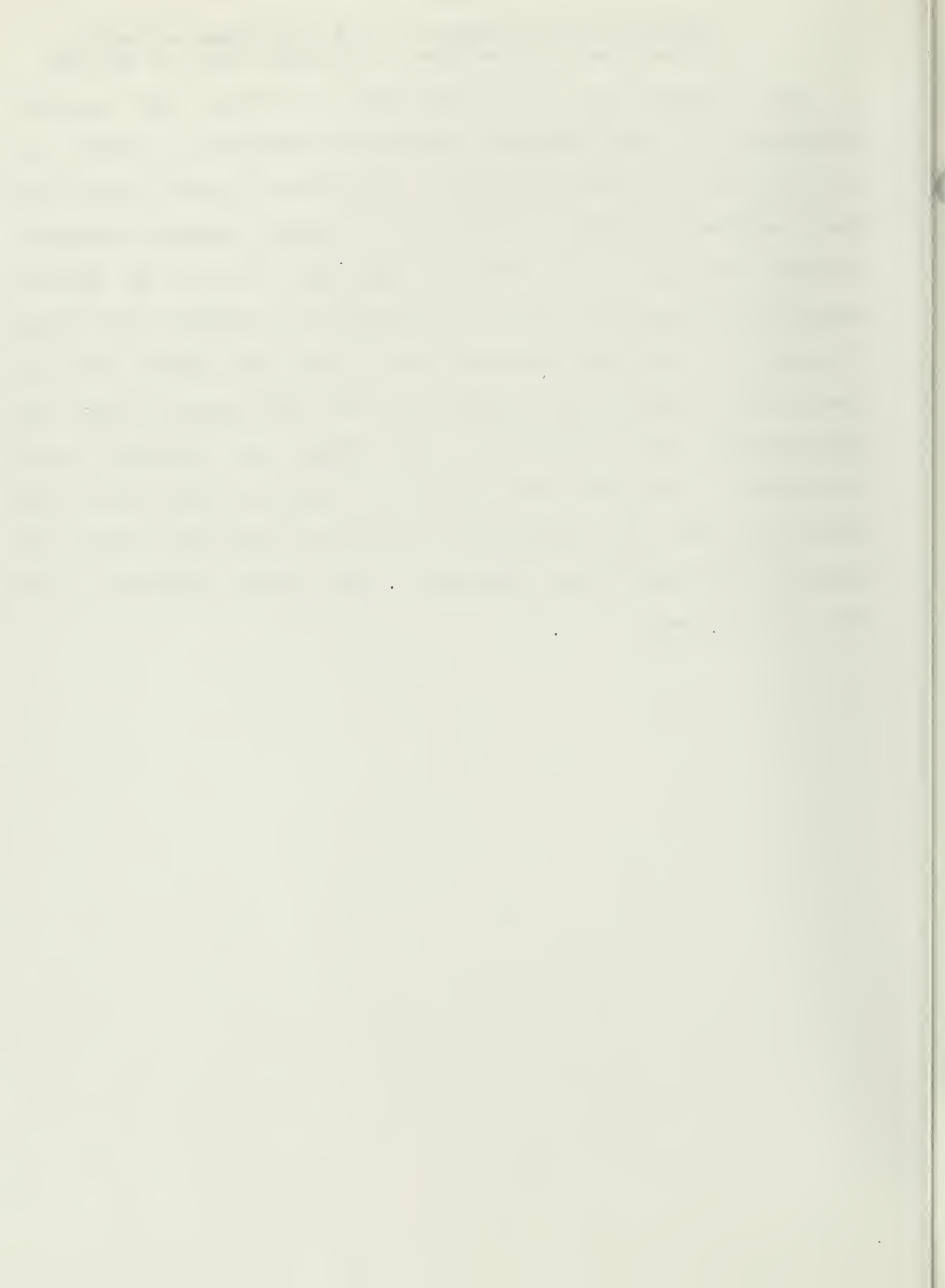


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Effects of Involvement on the Processes Mediating
On-Line Brand Evaluations: A Stronger Test of the ELM

The Elaboration Likelihood Model explains and predicts differences in the processes mediating persuasion effects for involved and uninvolved audiences -- but only in those situations where persuasion occurs on-line, i.e., during message exposure. However, previous tests of the ELM have failed to provide compelling evidence for on-line persuasion, and hence have failed to create the strongest possible test for the ELM. Such a test was created in an advertising experiment that replicated typical ELM manipulations and procedures, but where all subjects were instructed to evaluate the advertised brands while they were viewing the ads. The results were entirely consistent with, and supported ELM predictions. Implication for future research on the ELM are discussed.



Effects of Involvement on the Processes Mediating On-Line Brand Evaluations: A Stronger Test of ELM

The effects of issue involvement (e.g., involvement with an advertised brand) on the processes mediating issue evaluation have been of enduring interest to social psychologists as well as consumer researchers. A particularly influential and well accepted model in this area is the Elaboration Likelihood Model (ELM) proposed by Petty and Cacioppo (1983, 1986a, 1986b; Cacioppo and Petty 1984; Chaiken 1980). Briefly stated, the ELM suggests that brand involvement (defined as degree of perceived personal relevance of the advertised brand) is one of the key determinants of the way in which audiences process an ad message for the brand. High brand involvement leads to a "central route" to persuasion in that the ad recipients carefully examine and process those ad message elements that they believe are central to a meaningful and logical evaluation of the brand (e.g., brand attribute information). By contrast, low brand involvement induces a "peripheral route" to persuasion whereby recipients evaluate the brand based on superficial analysis of readily available and salient cues in the ad regardless of whether these cues are meaningfully related to the brand (e.g., background music). These ELM predictions have received support in several studies (see Petty and Cacioppo 1986a, 1986b; MacInnis and Jaworsky 1987 for extensive reviews). Also, several recently proposed models of advertising effects have suggested processing differences between high and low involvement audiences similar to

the ELM (Batra and Ray 1985; Burnkrant and Sawyer 1983; Greenwald and Leavitt 1984; Mitchell 1986).

An Implicit Assumption in the ELM

Extensive critiques of the ELM on conceptual as well as methodological grounds have been reported in the persuasion literature (MacInnis and Jaworsky 1987; Areni and Lutz 1988; Miniard and Dickson 1988; Andrews 1988). However, to the best of our knowledge, one implicit but important assumption that forms the basis of the ELM framework has been virtually overlooked by researchers in this area. Specifically, it is assumed in the ELM that all audiences, be they involved or uninvolved with an advertised brand, form brand evaluations on-line, i.e., while they are exposed to the ad message. Stated differently, the ELM hypothesizes different routes to persuasion for involved versus uninvolved audiences, but implicitly assumes that persuasion occurs during ad exposure.

We should note here that we do not view the assumption of on-line persuasion as a general limitation of the ELM model. Rather, the assumption limits the persuasion contexts in which predictions based on the ELM can be reasonably expected to hold. The ELM says nothing about persuasion processes that occur sometime after exposure to stimulus information, nor does it predict differences in on-line versus delayed (i.e., memory-based) persuasion. Predictions based on the ELM are only germane to situations where audiences form brand evaluations during exposure to advertising messages.

Implications for Empirical Tests of the ELM

The above discussion suggests that a compelling test of ELM predictions can only be conducted in contexts where on-line brand evaluation processes are occurring. This can be achieved in a laboratory study simply by giving subjects a brand-evaluation goal, i.e., requiring them to evaluate the advertised brand on-line. Such a procedure would ensure that effects due to manipulated variables on brand evaluation occurred during ad exposure. However, a careful examination of the processing goals and/or orienting instructions given to subjects in ELM studies shows that a brand evaluation goal is almost never explicitly given. Goals typically given subjects include evaluating the sound quality of audio messages (Petty, Cacioppo and Goldman 1981; Petty and Cacioppo 1981), evaluating or forming an impression of the speaker (Chaiken 1980, experiment #2; Petty and Cacioppo 1984), evaluating the ad (Petty, Cacioppo, and Schumann 1983), viewing the ads in a natural manner (Celsi and Olson 1988), general comprehension (Chaiken 1980, experiment #1), evaluating the background program (Batra and Ray 1985) etc. The intent of these instructions is likely to mask the true purpose of the study. However, an undesirable side effect of such instructions may be to inhibit or even discourage subjects from engaging in brand evaluation processing during message exposure. Furthermore, these studies do not provide any (post-hoc) evidence to suggest that the obtained persuasion effects occurred on-line, and therefore can be used to properly test the ELM.

Failure to enforce a brand evaluation goal or otherwise provide evidence supporting on-line brand evaluation clearly opens the possibility that the quality of empirical tests of the ELM may be compromised. Furthermore, we believe that this may be a particularly serious problem for predictions concerning uninvolved audiences. An individual who is involved with an advertised brand will likely spontaneously evaluate the brand on-line because forming a brand evaluation is relevant to either his short-term goals (imminent purchase in the product category) or long-term goals (ego-involvement with the brand/product category). However, uninvolved audiences do not see the brand as personally relevant, and may therefore refrain from evaluating the brand because such an evaluation serves no objective. Indeed, there is considerable evidence in the literature on memory-based judgment and evaluation which shows that individuals who do not have a brand evaluation objective when they are exposed to stimulus information do not spontaneously form brand evaluations on-line (Hastie and Park 1986; Lichtenstein and Srull 1985, 1987; Wyer and Srull 1989).

The preceding discussion suggests an alternative explanation for effects due to peripheral ad cues (e.g., an attractive source) on brand evaluation for uninvolved audiences that are obtained in empirical tests of the ELM. Rather than a peripheral cue serving as a convenient, low effort heuristic for brand evaluation on-line, the cue may influence brand evaluation later (when the evaluation is measured) in a memory-based manner. Since

peripheral cues used in ELM studies are usually salient and vivid (e.g., pictures of celebrities in Petty, Cacioppo, and Schumann 1983), these cues are likely more accessible in long term memory than are brand message arguments, and hence influence memory-based evaluations. As a consequence, peripheral cues would have strong effects on uninvolved audiences regardless of whether these effects were on-line or memory based. Thus, peripheral cue effects for uninvolved audiences do not constitute a compelling test of the ELM since they potentially confound on-line and memory-based persuasion processes.

Research Purpose

A key prediction of the ELM is that "central" message cues (e.g., message quality) have a stronger effect on involved audiences, while "peripheral" cues (e.g., source credibility) are more impactful on uninvolved audiences. We tested these predictions in an experiment in which all subjects were given explicit instructions to evaluate the advertised brands while they processed ad messages. Results consistent with the ELM prediction should provide stronger evidence for the ELM than has been achieved in previous tests. Contrary evidence would suggest the possibility (among others) that the ELM predictions do not hold under on-line brand evaluation processing, and that past evidence supporting the ELM may have confounded on-line and memory-based effects.

METHOD

Subjects and Design

A total of 144 male and female undergraduate students participated in the experiment for course credit. Of these, 138 provided usable responses. The design was a 2 (high/low brand involvement) by 2 (strong/weak ad message) by 2 (high/moderate source credibility) factorial. Subjects were run in large groups (of 10 to 30).

Procedure

Upon arrival, subjects were randomly assigned to one of the eight experimental conditions. All subjects received a folder containing three booklets: (a) an introduction booklet, which described the general purpose of the study, experimental tasks, and lottery procedures designed to manipulate involvement, (b) an ad booklet, which contained eight mock ads including an ad for a running shoe brand (target ad), and (c) a questionnaire booklet which measured the dependent variables.

The introduction booklet informed subjects that their task was to examine several product ads, and to form an overall evaluation of each of the advertised brands. In addition, subjects were asked to indicate this overall evaluation on response scales that were provided on a separate sheet. Thus, all subjects were given a brand evaluation goal, and these evaluations were measured on-line, i.e., while the pertinent ads were in front of the subjects.

Subjects were allowed to examine and evaluate the brands in

the ad booklet at their own pace. They next performed an irrelevant (distracting) task for about five minutes. Finally, subjects were asked to complete the dependent measure questionnaire. The entire experimental procedure took about 30 minutes, and concluded with debriefing of subjects.

Independent Variables

Involvement: Brand involvement was manipulated through the use of lotteries (see Celsi and Olson 1988 for a similar approach). The introduction booklet informed subjects that several lotteries, each for a different product category, would be run as a compensation for their participation, and that they had been randomly assigned to one of these lotteries. Subjects in the high involvement condition were told that they would participate in a lottery for the target product (running shoes). In contrast, subjects in the low involvement condition were informed that they would participate in a lottery for another product (boombox). All subjects were told that lottery winners would be chosen at random after the experiment, and would be allowed to select their preferred brand from among those available within the product category. To bolster the involvement manipulation, subjects were told that they would see an ad for one brand of the lottery product category during the study, and that this brand would be one of those available in the lottery.

Message quality: A variety of message arguments for running shoes were pretested in terms of their convincingness and persuasive strength. The results of the pretest were used to

create a strong and a weak version of the running shoe ad. Both versions contained eight arguments, and were approximately equal in length. However, the strong ad version contained relatively compelling and persuasive claims about the advertised brand, while the weak ad version contained relatively unconvincing and vacuous brand claims.

Source credibility: The running shoe ad contained a headline featuring a personal testimonial for the advertised brand. In the high credibility condition, the endorser was described as special columnist for RUNNER'S WORLD Magazine. In the moderate credibility condition, the endorser was introduced as a political consultant from Dallas, Texas.

Dependent Measures

The primary dependent measure was subjects' evaluation of the running shoe brand. This was measured on two 9-point scales (not at all- very likable; very unsatisfactory- very satisfactory). Since the intercorrelation between these two measures was very high ($r = 0.81$), responses were averaged to assess a general positive or negative valence of brand evaluation.

Other dependent variables included subjects' ratings of message argument quality and source credibility, unaided recall of ad message content, self-reported levels of involvement with the advertised brand, and (enduring) product category involvement. As an instruction check, subjects were asked to recall the product lottery to which they had been assigned.

RESULTS

Manipulation Checks

To assess the effectiveness of the message quality manipulation, subjects were asked to rate the brand information in the running shoe ad on two nine-point scales (not at all- very convincing; very weak- very strong). A three-way ANOVA on the average of these ratings (which were highly correlated, $r=.86$) yielded only a significant main effect for the message quality manipulation ($F= 44.82$, $p<0.001$). As expected, subjects who had received the strong version of the ad rated the message quality stronger ($M= 5.79$) than those who had received the weak version ($M= 3.46$).

As a check on the source credibility manipulation, subjects were asked to rate the person who recommended the running shoe brand on two nine-point scales (not at all- very credible; not at all- very knowledgeable). A three-way ANOVA on the average of these ratings (which were highly correlated, $r=.87$) yielded significant main effects for the source credibility manipulation ($F= 72.92$, $p<0.001$) as well as the message quality manipulation ($F= 10.17$, $p<0.01$). As expected, subjects in the high credibility condition rated the source more credible than those in the low credibility condition ($M= 5.79$ versus $M= 3.50$). Also, subjects who had received the strong version of the ad rated the source more credible than those who had received the weak version ($M= 5.34$ versus $M= 4.30$). Importantly, none of the interactions were statistically significant. In short, the source credibility

manipulation was successful.

The effectiveness of the involvement manipulation was assessed in two ways. First, we examined whether or not subjects correctly recalled the product lottery to which they had been assigned. Only one subject incorrectly recalled the lottery. This suggests that the lottery manipulation successfully influenced personal relevance (i.e., subjects knew whether or not they would be making a short term decision regarding the running shoe brand). Note, however, that the ultimate goal of this manipulation was to influence the degree to which subjects actually felt involved with the brand message during exposure to the ad. Therefore, as a more direct check, we examined the effects of the lottery manipulation on three nine-point scales designed to measure how involved subjects actually felt, and how attentively and carefully subjects processed the running shoe brand message (paying a little- paying a lot of attention, not at all carefully- very carefully read, not at all- very involved). The average of these scales (average $r = .66$) served as a composite measure of "felt" involvement (see Celsi and Olson 1988). A three-way ANOVA on this measure did not yield any significant main or interactive effects. Contrary to expectations, the main effect due to the involvement manipulation was not significant ($M = 5.63$ versus $M = 5.23$, $F = 2.04$, $p > 0.10$), although the means were in the expected direction. Thus, subjects in the high involvement condition did seem to recognize the personal relevance of the advertised running shoe, but did not

actually feel more involved, or process brand message information more intensely than did subjects in the low involvement condition.

Tests of the ELM

Failure to successfully manipulate brand involvement limits our ability to conduct strong tests of the ELM. Since subjects in the high/low involvement conditions did not differ on intensity and degree of brand message processing, we would not expect differential effects of the message quality and source credibility manipulations on these subjects. This proved to be the case. A three-way ANOVA (Involvement by Message Quality by Source Credibility) on our composite measure of brand evaluation revealed significant main effects due to the source credibility manipulation ($F= 8.16$, $p<0.01$) and the message quality manipulation ($F= 52.71$, $p<0.001$), but no significant interactions. The high credibility source led to more positive evaluations than the moderate credibility source ($M= 5.47$ versus 4.59), while the strong quality message led to more positive brand evaluations than the weak quality message ($M =6.19$ versus 3.89). More importantly, neither the Involvement by Source Credibility interaction nor the Involvement by Message Quality interaction was significant ($F= 1.73$, $p>0.19$, and $F= 0.02$, $p>0.88$, respectively). Note that these results are consistent with the ELM, but do not provide compelling support for the ELM since they require the acceptance of null hypotheses.

Two sets of analysis were done in an attempt to create

somewhat stronger tests for the ELM than those reported above. First, a median split on our measure of felt involvement (based on involvement manipulation check measures) was used to create two groups that differed significantly on actual levels of brand involvement experienced during the ad viewing episode, and all analyses were conducted using this blocking factor. Second, a median split on our measure of product class involvement (i.e., involvement with running shoes in general) was used in all analyses. These two approaches generated similar results. To conserve space, we report only on the results based on the felt involvement blocking factor. As a result of the median split, 69 (68) subjects were assigned to the high (low) felt involvement conditions. These groups differed significantly on reported felt involvement ($M = 6.75$ versus 3.98 , $F = 323.99$, $p < .0001$)

A three-way ANOVA on brand evaluation with felt involvement (blocking factor), message quality, and source credibility as the independent variables revealed significant main effects for the source credibility and message quality manipulations ($F = 8.99$, $p < 0.005$; $F = 55.45$, $p < 0.0001$). More importantly, and as hypothesized in the ELM, these effects were qualified by significant Involvement x Source Credibility and Involvement x Message Quality interactions. The Involvement x Source Credibility interaction ($F = 7.76$, $p < 0.01$) indicated that source credibility effects on brand evaluation were different across the two felt involvement conditions (see Table 1).

TABLE 1

CELL MEANS OF BRAND EVALUATIONS AS A FUNCTION OF
FELT INVOLVEMENT AND SOURCE CREDIBILITY

SOURCE CREDIBILITY	FELT INVOLVEMENT	
	Low	High
Moderate	4.19 (n=35)	4.99 (n=36)
High	6.03 (n=33)	4.91 (n=33)

A planned comparison test revealed that the highly credible source produced more positive brand evaluations than did the source of moderate credibility when felt involvement was low ($F=20.89$, $p<0.0001$) but not when it was high ($F=0.02$, $p>0.88$). This result is consistent with the ELM.

The Involvement x Message Quality interaction ($F=6.14$, $p<0.02$) indicated that message quality effects on brand evaluation also differed across the two felt involvement conditions (see Table 2).

TABLE 2

CELL MEANS OF BRAND EVALUATIONS AS A FUNCTION OF
FELT INVOLVEMENT AND MESSAGE QUALITY

MESSAGE QUALITY	FELT INVOLVEMENT	
	Low	High
Weak	4.27 (n=32)	3.57 (n=38)
Strong	5.81 (n=36)	6.65 (n=31)

A planned comparison test revealed that although the message

quality manipulation affected brand evaluation in both the high involvement ($F= 41.56, p<0.0001$) and low involvement conditions ($F= 15.29, p<0.001$), the impact of message quality was much greater in the high involvement condition ($R^2= 0.39$) than in the low involvement condition ($R^2= 0.15$). This result is also consistent with the ELM. In sum, as hypothesized, involvement with the brand message influenced the process by which stimulus-based brand evaluations were formed in the present study.

DISCUSSION

The Elaboration Likelihood Model predicts the process mediators of persuasion only in on-line persuasion contexts. Unfortunately, previous tests of the ELM have failed to provide compelling evidence for on-line persuasion, and hence have failed to generate the strongest possible test of the ELM. We sought to achieve such a test by replicating experimental design and analysis procedures typically used in ELM studies, but giving all our subjects clear instructions to engage in on-line brand evaluations. Also, we measured these evaluations as they were formed (rather than after subjects had viewed all our ads) to ensure that subjects followed our instructions. Our results provide consistent support for the ELM. Specifically, the attitude deliberation processes for involved subjects were more influenced by the quality of brand message arguments, while those for uninvolved subjects were more influenced by the credibility of the endorser.

There is, of course, one important caveat to our results, and that concerns our failure to manipulate brand involvement. We used a (lottery) procedure similar to one that has been successfully used in past research (Celsi and Olson 1988). Our subjects seemed to recognize the implications of the lottery, but did not process brand message information with differential intensities as a result.

There are several possible explanations for why our involvement manipulation failed. One possibility is that subjects' involvement with the product class (running shoes) had a strong impact on how involved they felt with the running shoe ad (felt involvement), and overpowered our lottery manipulation. This argument is bolstered by the fact that our measures of product class involvement and felt involvement showed a moderate but significant correlation ($r = .45$), and both measures yielded similar results when introduced as blocking variables in our analyses. Interestingly, Celsi and Olson (1988) also found that the lottery manipulation produced much weaker (although significant) effects on felt involvement than did product class involvement in their study.

It is also possible that the strongly worded brand evaluation instructions we gave subjects may have weakened our lottery manipulation. A brand evaluation goal may cause all subjects to engage in some (modest) baseline amount of brand-message elaboration regardless of their level of brand involvement. A very strong manipulation of personal relevance

(such as giving each subjects a guaranteed choice in the target product category) may thus be necessary to move subjects substantially beyond this baseline level.

In sum, our results provide consistent support for the ELM. However, they do not provide unambiguous evidence for the causal influence of brand involvement on on-line brand evaluation processes. At the same time, this is an important theoretical issue that has not been recognized in the literature, and that deserves future research attention. Also, future research should examine the effects of brand involvement on the processing goals subjects adopt during ad exposure (e.g., whether or not brand evaluations are formed on-line). Finally, the effects of "central" and "peripheral" cues on persuasion that is on-line versus memory-based, and the mediators of these effects are important and unresolved issues that should be investigated.

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