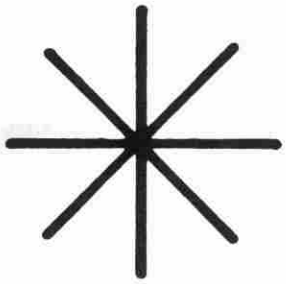

. . . . RESEARCH NOTES AND COMMUNICATIONS

PAMELA M. HOMER*

MacKenzie, Lutz, and Belch have enhanced our understanding of the mediating role of attitude toward the ad (A_{Ad}). The current study replicates and extends the structural equation tests of the four competing models they presented. Two independent datasets are used to examine the role of processing involvement. Consistent with the earlier findings, the dual mediation hypothesis model provides the "best" fit of the data in both experiments. However, the hypothesized causal path between brand cognitions and brand attitudes that emerges for each of the datasets conflicts with the earlier findings. Contrary to expectations, processing involvement does not produce substantial differences in the specification or strength of the causal paths.

The Mediating Role of Attitude Toward the Ad: Some Additional Evidence

Advertising and marketing researchers have directed considerable attention to "attitude toward the ad" (A_{Ad}) as an affective construct and mediating influence on brand attitudes and purchase intentions (e.g., Lutz, MacKenzie, and Belch 1983; MacKenzie, Lutz, and Belch 1986; Mitchell and Olson 1981; Shimp 1981). Recently, MacKenzie, Lutz, and Belch (1986) compared four alternative causal models representing the theoretical links among cognitions, A_{Ad}, brand attitudes, and purchase intentions. They concluded that a dual mediation hypothesis (DMH), which posits that A_{Ad} influences brand attitudes both directly and indirectly through brand cognitions, "best" accounted for the observed relationships under the particular set of conditions in the pretest setting. Contrary to predictions of the DMH, a significant relationship between brand cognitions and brand attitudes did not emerge, motivating speculation about (1) the possibility of a better explanation (i.e., a misspecified model) and/or (2) methodological limitations. Replication of the procedure that includes an additional explanatory factor using a different dataset may lead to resolution of these unanswered questions about the roles of cognitions and A_{Ad} as influencers of brand attitudes (A_B) and purchase intentions (PI).

Limitations in the research design may have biased the results. Immediately after the last commercial for a hy-

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pothetical brand, cognitive responses were collected. This task was followed by a series of scalar-type questions designed to measure the dependent variables of interest (e.g., brand attitudes). This procedure does reduce the number of irrelevant thoughts generated, but failure to intermix filler items in the sequential series of scalar measures probably enhanced subjects' level of awareness of the study's purpose. No mention was made of checks for demand characteristics, which leaves open the question of whether or not subjects responded as they thought they should. Some individuals may have been motivated to generate brand cognitions that really were not present during exposure. In addition, sequential measurement of dependent variables tends to produce correlated error terms that are problematic in structural equation analyses.

The experimental ad's lack of professional quality also is likely to have clued respondents to what was being studied (if we assume other commercials were included in the program segment to simulate a "natural" exposure format). Moreover, as many of the respondents were exposed to the experimental commercial repeatedly, the likelihood of awareness and/or sensitization is increased. Repetition also enables viewers to consider the implications of the message content in an objective manner—that is, it enhances one's ability to process the message (Petty and Cacioppo 1986). The repetition, modality, and two format manipulations that were part of the two experiments yielded different cognitive responses across treatment groups, and as a result the parameter estimates (based on a pooled sample) for the linkages involving brand cognitions (C_B) and ad cognitions (C_{Ad}) may be inaccurate.

In addition, the experimental communication was for a hypothetical brand of toothpaste, "Shield." Some subjects may have been exposed to Shield soap, a product test marketed and launched at the time when the data were being collected. The name could have caused them to become confused and/or to generate brand inferences (i.e., inferential beliefs) based on prior knowledge/perceptions of Shield soap, thereby potentially confounding the cognition and judgment measures for Shield toothpaste. Furthermore, the name "Shield" implies "protection" (also the key attribute claim in Shield soap promotions), which may have motivated viewers to associate related attributes (e.g., cavity protection) with Shield toothpaste.

The effects of A_{Ad} on brand attitudes may be mediated by the consumer's processing "set" during exposure to the advertisement (Gardner 1985). The notion of brand evaluation versus nonbrand evaluation (directed toward some other goal) processing sets (e.g., Gardner 1985) closely parallels the elaboration likelihood model's (ELM) central versus peripheral processing. These processing routes are influenced by an individual's motivation and ability to process message information, which Petty and Cacioppo (1986) refer to as involvement. Involvement has been shown repeatedly to affect processing of persuasion cues (see, e.g., Petty and Cacioppo 1986; Petty, Cacioppo, and Schumann 1983). MacKenzie, Lutz, and Belch (1986), however, failed to find support for the hypothesized causal path from C_B to A_B that is consistent with the highly involving central route of the ELM. As suggested previously and elsewhere (Dröge 1989), the pooling across treatments may have contributed to this nonsignificant effect. An earlier study (Lutz, MacKenzie, and Belch 1983) using the same database also showed a nonsignificant relationship between these constructs (C_B and A_B) for both high and low involvement subsamples. A_{Ad} did act as a mediator of brand attitudes for both the low knowledge/low importance and high knowledge/high importance subsamples (Lutz, MacKenzie, and Belch 1983), and similarly for both brand and nonbrand processing sets (Gardner 1985).

The purpose of this article is to compare the four explanatory models presented by MacKenzie, Lutz, and Belch (1986), using two independent datasets that overcome some of the design weaknesses previously mentioned, and to determine which model specification offers the most accurate account of the observed relationships among the constructs for each situation (i.e., for the different levels of processing involvement). Employing print ads in addition to a television commercial should enhance the generalizability of the findings.

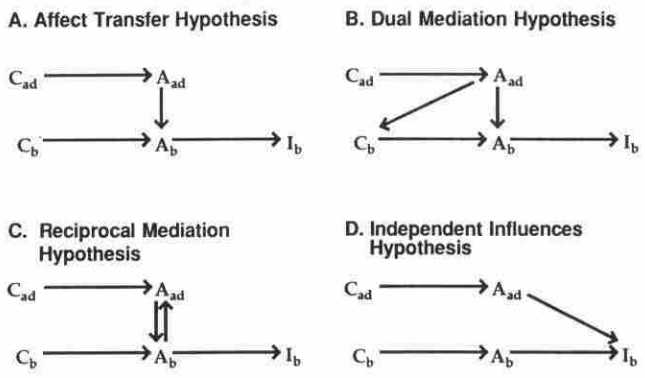
To investigate further the generalizability and accuracy of the model specifications, the role of processing involvement was incorporated in the causal relationships among ad and brand cognitions, A_{Ad}, and brand-related judgments (as an experimental extension) in a final set of analyses. Two conceptualizations were used to influence processing involvement and to test its role in the formation of ad- and brand-related evaluations. First, a brand versus nonbrand processing manipulation (Gardner 1985) defined a pair of processing groups; second, self-report measures of high versus low product knowledge/importance (Lutz, MacKenzie, and Belch 1983) yielded an alternative classification. Involvement is a function of product relevance/importance, which itself is related to product knowledge. With enhanced levels of product importance and knowledge, consumers will be more involved with processing the message's brand-related information. Similarly, by definition, a brand processing strategy indicates more involvement in processing brand-relevant messages.

OVERVIEW OF THE THEORETICAL MODELS

MacKenzie, Lutz, and Belch (1986) identified four causal models (see Figure 1) derived from research investigations of A_{Ad} as a mediating variable: the affect transfer hypothesis (ATH), the dual mediation hypothesis (DMH), the independent influences hypothesis (IIH), and the reciprocal mediation hypothesis (RMH). Each model has received at least partial support in the past, which makes them candidates for further examination.

The affect transfer hypothesis postulates a direct one-way causal flow from A_{Ad} to A_B, which is consistent

Figure 1
FOUR ALTERNATIVE STRUCTURAL SPECIFICATIONS OF THE MEDIATING ROLE OF A_{Ad}



Key:
C_{ad} represents ad cognitions.
C_b represents brand cognitions.
A_{ad} represents attitude toward the ad.
A_b represents attitude toward the brand.
I_b represents intention to purchase the brand.

with the peripheral route in Petty and Cacioppo's (1986) elaboration likelihood model (ELM), as well as the central route link between brand cognitions (C_B) and A_B.

Similarly, the $A_{Ad} \rightarrow A_B$ link of the affect transfer hypothesis is present in the dual mediation model. An indirect causal flow from A_{Ad} to A_B through brand cognitions also is included, the rationale being that consumers' affective reactions to ads influence their propensity to accept message content. This model implies that central and peripheral processes are intertwined (MacKenzie, Lutz, and Belch 1986). Petty and Cacioppo (1986, p. 182) support the notion that "some variables have multiple effects on information processing" and that peripheral and central processing may operate simultaneously. Recently it has been argued that A_{Ad} is a global concept, yet the different ad elements (e.g., visual vs. verbal) may be processed differently (centrally vs. peripherally), thus implying that A_{Ad} will influence A_B at all times (Miniard, Bhatla, and Rose 1988). Previously, Mitchell (1986, p. 18) concluded that "attitude towards the advertisement is determined by the entire advertisement, not just the affect-laden photograph." The relatively robust role of A_{Ad} may result because (1) consumers use some factors (e.g., presentation quality) to evaluate both the ad and the brand and/or (2) the use of a brand evaluation set may enhance the role of A_{Ad} by focusing attention on the expected consumption experience (Gardner 1985).

A balance theory (Heider 1946) account of the nature of causality between A_{Ad} and A_B is offered by the reciprocal mediation hypothesis. Specifically, a reciprocal causal flow between the two constructs is designated. The relative strengths of the two paths vary across consumers and situations. For example, the feedback path may have a more dominant role when prior experience and brand attitudes are substantial.

Finally, no causal relationship is assumed between A_{Ad} and A_B in the independent influences hypothesis (IIH); each is assumed to influence purchase intentions independently. This approach follows Howard's (1977) argument of two attitudinal constructs: an "evaluative element" of the brand concept and an "impersonal attitude." Refer to MacKenzie, Lutz, and Belch (1986) for more detailed descriptions of the competing frameworks.

EXPERIMENT 1

The first experiment replicated much of the MacKenzie, Lutz, and Belch (1986) study with a processing set manipulation extension. Special care was taken to overcome some of the design/procedural limitations (e.g., professional commercials for products unknown to the subjects were embedded in an unfamiliar television program and the only manipulated factor was processing set) in an effort to enhance the value of the conclusions.

Method

Subjects. A total of 268 male and female undergraduate communication students volunteered to participate in the study. Each was assigned randomly to one of the levels of the experimental manipulation, brand versus nonbrand evaluation strategy.

Processing manipulation. Gardner's (1985) conception of brand versus nonbrand processing formed the basis of the processing manipulation. Brand processing was stimulated by giving subjects the following instructions: "Please pay close attention to the entire program, including the commercials because you will be asked to evaluate the advertised products and to make a purchase decision for one of them. In other words, please focus on the product information provided when watching the commercials." Two nonbrand processing conditions were created: one group was merely instructed to watch the television program including the commercials and the second group was instructed to watch the program and to evaluate the casting of the characters in the program and in the commercials.

Procedure. The experiment was administered in three large theatre-like settings with each subject sufficiently isolated to prevent awareness of others' behaviors. All treatment conditions were administered at each experimental session with the exception of the third, which was conducted to "equalize" the treatment sizes. The research administrator was blind to the hypotheses and the individual treatment assignments.

Participants first were instructed to read an instruction sheet stating that the purpose of the experiment was "to investigate how consumers respond to television programs, including the content of the programs, network announcements, commercials, etc." The processing ma-

nipulation (i.e., brand or nonbrand processing instructions) was included in this instruction sheet. Respondents then viewed a half-hour situation comedy in which the experimental and filler commercials were embedded. The program was a professionally produced pilot that had never aired on national television and all commercials were professional spots for products unavailable in the administration site's locale. Unfamiliar program content and brand names were used to eliminate influences of prior brand usage experiences and/or prior knowledge and preferences for the brand, commercial, or program. The experimental commercial for an unknown brand of shampoo was positioned at the end of the program. The commercial discussed the shampoo's attributes (e.g., pH balance, control of split ends, and safety for frequent washings) and portrayed a man and woman in a slice-of-life appeal.

As in the MacKenzie, Lutz, and Belch (1986) study, immediately after viewing the program, subjects were given two minutes to respond to the statement:

> In the spaces below, please write down the thoughts that went through your mind while watching the commercial for the shampoo. Please list the thoughts (not the mere content of the ad) that occurred to you about the product and your reaction during the commercial to what was being said about the product by the advertiser. Also, feel free to mention any other thoughts that occurred to you while viewing the commercial. Remember, list the thoughts that occurred to you during the commercial. Do not worry about spelling and punctuation.

As in the 1986 study, brand cognitions (C_B) first were coded as counterarguments (CA) or as support arguments (SA) and then were combined into a single index (calculated as SA-CA). Ad cognitions also were converted into a single index from positive ad execution (PAD) and negative ad execution (NAD) statements (calculated as PAD-NAD).[1] Source derogations were essentially absent and did not make a reliable contribution to the causal analyses. Two judges independently coded the responses (97% agreement). Any discrepancies were resolved by discussion.

The remaining questionnaire items included 9-point scalar assessments of A_{Ad} (positive/negative, favorable/unfavorable, and interesting/uninteresting), brand attitudes (like/dislike, favorable/unfavorable, and good/bad), purchase intentions (likely/unlikely and probable/not probable), and product knowledge and importance, as well as bogus questions designed to disguise the intent of the experiment. The bogus items were intermixed with the analyzed measures and referred to the filler commercials, the actors in the programs and commercials, and program content (i.e., consistent with the purpose statement). At the conclusion, subjects were asked to complete questions to determine whether they knew the purpose of the experiment (Page 1971, 1973). Anyone judged to be aware of the manipulation and/or guiding hypotheses by two independent judges was eliminated from further analyses (three subjects were eliminated). After the experiment, all subjects were debriefed and thanked for their cooperation.

Manipulation Pretest

A pretest was conducted to ascertain whether the processing set instructions would yield results similar to those reported by Gardner (1985). Before exposure to a series of print ads, an independent sample read either the nonbrand or brand processing manipulation statement. Brand processing was stimulated by giving subjects the instructions: "Please pay close attention to the ads and the product information provided because you will be asked to evaluate the advertised products and to make a purchase decision for one of them. In other words, please focus on the product information provided when looking at the ads." In the nonbrand processing condition, individuals were asked to focus on the typestyle and endorsers in the ads because they would be asked to evaluate their relevance to the ad. As in Gardner's (1985) procedure, the brand processing group (mean = 3.1) had a greater relative presence of brand-related material in memory ($F(1,182) = 9.88$, $p = .002$) than the nonbrand processors (mean = 1.6).

Results and Discussion

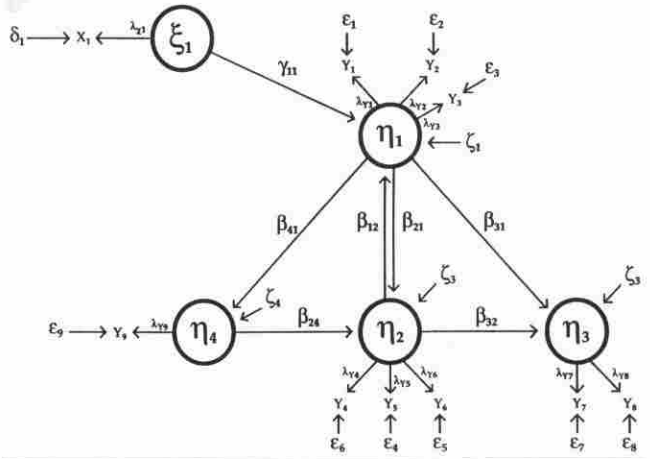
In the main experiment, responses of the two nonbrand processing samples did not differ for any of the dependent variables. Therefore they were pooled for all subsequent analyses, resulting in a brand evaluation subsample of 128 subjects and a nonbrand processing subsample of 136 subjects. Verification that the manipulations induced the desired effects was supported by analyses of brand-related recall. As expected, subjects in the brand evaluation treatment (mean = 1.8) had greater brand-related recall ($F(1,262) = 10.13$, $p = .001$) than the nonbrand evaluators (mean = 1.3).

The four alternative models were assessed for the total sample, the brand processing subsample, and the nonbrand processing subsample with the aid of LISREL VI (Jöreskog and Sörbom 1984). As performed by MacKenzie, Lutz, and Belch (1986), comparisons were made on goodness-of-fit indices and strengths of the path coefficients for the hypothesized causal linkages (see Figure 2 and Table 1). To conserve space and for parsimony, the measurement statistics are omitted from Table 1 and findings for only the "better" fitting dual mediation hypothesis models are reported. All brand and ad evaluation constructs are reliable (coefficient alpha = .91, .85, and .83 for A_{Ad}, brand attitudes, and purchase intentions, respectively).

In comparison with the common paths model, all four proposed models do produce a substantial reduction in

[1]Neutral thoughts were not included in the analyses because there were no theoretical prior expectations about their role and therefore they were deemed irrelevant.

Figure 2
THEORETICAL CONSTRUCTS AND THEIR INTERRELATIONSHIPS



chi square for each of the samples. As reported by MacKenzie, Lutz, and Belch (1986), the dual mediation hypothesis model does "fit" the data better than the other three causal specifications in terms of chi square and Bentler and Bonett's (1980) goodness-of-fit index (GFI/BB). MacKenzie, Lutz, and Belch allowed highly correlated error terms to covary in an effort to improve the fit of the data. This approach produces interpretational difficulties and has been debated (Gerbing and Anderson 1984). Therefore, all models reported here specify independent error terms.

Examination of the standardized path coefficients (Table 1) reveals both similarities and discrepancies with MacKenzie, Lutz, and Belch's findings. Their reportedly low (nonsignificant) coefficient for the $C_B \rightarrow A_B$ (β_{24}) path does reach statistical significance in the present study across all models. They found the nonsignificant $C_B \rightarrow A_B$ path "disturbing," but suggest it may be largely dependent on the quality of the C_B measure. This discrepancy between the studies may be due to the previously discussed C_B effects across treatments in the 1986 study, differences in the experimental environment, and/or coding accuracy (e.g., an average of 4% of the cognitive responses in the 1986 study were omitted because of coder disagreement).

The measurement parameters in the two processing subsample models were compared by first estimating the model simultaneously for the two processing subgroups. The chi square for this simultaneous model (=134.62, d.f. = 64) then was compared with the chi square of the model obtained by constraining the measurement factor structures to be equal in the two groups (χ^2 (69) = 138.44). The change in chi square (=3.82, d.f. = 5) is not significant, indicating that the measurement structures are essentially equivalent.

Examination of the structural estimates suggested that the path between C_B and A_B may differ between the two processing groups. To test for this difference, the model constraining this parameter to be equal in the two groups was compared with the solution in which the parameters are estimated independently. This analysis demonstrated

Table 1
SUMMARY OF STRUCTURAL ESTIMATES AND GOODNESS-OF-FIT INDICES[a]

Standardized path estimates	*Total sample*	*Brand evaluation subsample*	*Nonbrand evaluation subsample*	*High knowledge/importance subsample*	*Low knowledge/importance subsample*
Experiment 1					
β_{21}	.89	.91	.86	.90	.87
β_{24}	.17	.14	.19	.17	.15
β_{32}	.67	.66	.66	.60	.65
β_{41}	.24	.24	.25	.21	.31
γ_{11}	.50	.59	.42	.56	.33
χ^2	84.79	52.01	82.61	38.09	55.58
d.f.	32	32	32	32	32
p	.001	.01	.001	.21	.01
GFI/BB	.95	.94	.90	.93	.89
Experiment 2					
β_{21}	.55	.55	.53	.55	.68
β_{24}	.29	.21	.36	.31	.19
β_{32}	.79	.87	.69	.80	.66
β_{41}	.45	.45	.43	.40	.40
γ_{11}	.59	.58	.63	.55	.60
χ^2	52.57	52.52	27.00	37.63	48.66
d.f.	32	32	32	32	32
p	.01	.01	.72	.23	.03
GFI/BB	.95	.92	.94	.93	.88

[a]All parameter estimates are significant ($p < .05$).

that the two paths are not different between the two subgroups (change in $\chi^2 = .29$, d.f. = 1). In summary, the magnitudes of the path coefficients and the goodness-of-fit statistics for the two processing subsample models do not vary.

Product knowledge and importance. Following Lutz, MacKenzie, and Belch (1983), analyses were performed with a product knowledge and importance conceptualization of involvement. The sample was divided into four separate groups according to whether their self-report measures of product knowledge and importance were below or above the variable's median. Consistent with the findings of Lutz, MacKenzie, and Belch (1983), the product knowledge and importance group assignments are associated strongly ($\chi^2(1) = 20.77$, $p < .0001$). Hence only the high knowledge/high importance ($n = 75$) and low knowledge/low importance ($n = 94$) groups are included in the subsequent analyses.

In general, the results replicate those for the brand versus nonbrand evaluation analyses and are summarized in Table 1. Simultaneous analyses revealed that the measurement structures and structural parameter estimates of the high and low product knowledge/importance subsamples are essentially equivalent.

Absolute fit of the DMH model. After assessing the relative merits of the four competing models, MacKenzie, Lutz, and Belch (1986) focused on the DMH model's fit in an absolute sense. They systematically relaxed sets of overidentifying restrictions to determine whether another model could account more accurately for the relationships in the data. This process led to the conclusion that the DMH model was superior in a relative and an absolute sense. In the present study, a similar procedure replicated these conclusions.

Several questions remain about the relationships among brand cognitions, A_{Ad}, brand attitudes, and purchase intentions, as well as the roles of advertising media and processing set. A second experiment that incorporated the same processing set manipulation and the same measures as those in experiment 1, but with a print advertisement, was performed as an additional test of the robustness of the conclusions.

EXPERIMENT 2

Method

Subjects. A total of 144 male and female undergraduate business and communication students volunteered to participate in the study.

Processing manipulation. As in experiment 1, Gardner's (1985) conception of brand versus nonbrand processing was the basis of the processing manipulation. Brand and nonbrand processing were stimulated by giving subjects the same set of instructions as those used in the pretest. The processing groups were approximately equal in size.

Procedure. The experiment was administered in small groups (6 to 10 per session) with subjects isolated by partitioned walls to prevent awareness of others' behaviors. Subjects viewed a booklet of five professional color advertisements, one of which was the ad of interest (i.e., an ad for a phone service). The first page of the booklet included the processing set inducement and a statement that claimed the purpose of the experiment was to evaluate magazine advertisements. The experimental ad was positioned at the end of the booklet in an effort to collect reliable cognitive responses.

The layout for the phone service print ad was in an illustration-headline-body copy format. The pictorial image presented an employee of the company and occupied approximately half of the full-page ad. The employee's endorsement discussed attributes in the verbal copy. Specifically, these statements focused on the convenience, reliability, and dependability of the service; the experienced personnel; and the availability of 24-hour assistance. Identical ads were seen by all subjects. As in experiment 1, the brand/nonbrand evaluation manipulations were external to the ad.

After viewing the ad booklet, respondents completed the second booklet containing the dependent measures of interest. Brand and ad cognitions were elicited in response to an open-ended question that was essentially equivalent to that used by MacKenzie, Lutz, and Belch (1986) and in the first experiment except for the reference to the specific ad of interest (i.e., a telephone service print ad vs. a shampoo television commercial). Brand and ad cognition coding was similar to that in the previous experiment. There was 95% agreement between two independent judges and any differences were resolved by discussion. The individual indicators for brand attitudes ($\alpha = .91$), attitudes toward the ad ($\alpha = .90$), and purchase likelihood ($\alpha = .91$) were identical to those in experiment 1. As in the first experiment, these research questions were intermixed with the bogus items and items consistent with the statement of purpose. The concluding items assessed subject knowledge of the purpose of the study. No one was judged to be aware of the experimental manipulation or guiding hypotheses by either of the two independent judges. After the experiment, all subjects were debriefed and thanked for their cooperation.

All treatment conditions were administered at each session to avoid confounding the effects of the independent variables. The administrator was blind to the individual treatment assignments.

Results and Discussion

Following Gardner (1985), a recall-based measure was used to verify that the manipulations induced brand versus nonbrand processing sets. As desired, a main effect emerged ($F(1,142) = 7.637$, $p = .006$), indicating a higher relative amount of brand-related material in memory for the brand processing group (mean = 3.2) than for subjects in the nonbrand processing condition (mean = 2.4).

Consistent with the findings of MacKenzie, Lutz, and

Belch (1986), the DMH model is superior to the three alternative theoretical propositions (IIH, ATH, and RMH) for the total sample and each of the processing subsamples. It is encouraging to find the statistically significant path coefficient for the proposed link involving brand cognitions and brand attitudes for the total sample and each processing subsample. This relationship suggests that the DMH model is a feasible explanation of the roles of A_{Ad} and C_B as influencers of A_B and PI within the context of an unfamiliar print advertisement. It also serves as additional evidence for the hypothesis that the disappointingly low coefficient for the $C_B \rightarrow A_B$ path reported by MacKenzie, Lutz, and Belch was due to a measurement or procedural limitation, not a theoretical misspecification. Because brand and ad cognitions were collected by a thought-listing task and the other ad- and brand-related measures were assessments on 9-point objective scales, the remaining paths among the similarly measured constructs (A_{Ad}, A_B, and PI) may have been inflated as a result of common methods covariation. In comparison, the $C_B \rightarrow A_B$ path linking noncommon measures is low. It may be possible to improve the strength of this path by measuring brand beliefs and evaluations rather than the more global A_B assessments employed by MacKenzie, Lutz, and Belch and in the studies reported here.

The analyses testing the equivalence between the measurement factor structures of the brand and nonbrand processing groups parallel those reported for experiment 1. The simultaneous model specifying that the factor structures are the same does not vary from the independence model (change in $\chi^2 = 4.33$, d.f. = 5). The test of differences for the $C_B \rightarrow A_B$ path also supports the finding that the two structural parameter estimates are equivalent (change in $\chi^2 = 1.14$, d.f. = 1), as are all other structural parameter estimates in the brand versus nonbrand models.

Product knowledge and importance. High product knowledge/high importance and low product knowledge/low importance groups were created as in the preceding experiment. Product knowledge and importance are highly related ($\chi^2(1) = 44.74$, $p < .0001$), thereby suggesting that only the high/high ($n = 57$) and low/low ($n = 56$) groups be included. The underlying factor structures are equivalent when analyzed simultaneously (change in $\chi^2 = .60$, d.f. = 5) and the only structural path that appears to vary between the two groups (i.e., the $C_B \rightarrow A_B$) is not significant (change in $\chi^2 = .68$, d.f. = 1). In summary, the two processing subsamples' path coefficients do not differ for either the brand/nonbrand processing strategy manipulation or the self-report product knowledge/importance categorization in this experiment.

SUMMARY AND DISCUSSION

MacKenzie, Lutz, and Belch (1986) should be commended for their contribution enhancing our knowledge and understanding of the theoretical relationships among A_{Ad}, brand cognitions, attitudes, and purchase intentions. They present rather compelling evidence that A_{Ad} affects brand attitudes directly and indirectly through C_B for a television commercial pretest. An experiment using a television commercial and a procedure similar to that of MacKenzie, Lutz, and Belch that also manipulated processing set led to similar conclusions. The findings also generalize to the print advertising experiment reported here. The notion of brand versus nonbrand evaluation does not result in varying specifications or strengths among the causal links in the models, nor does high versus low level of product knowledge and importance. The structural patterns also do not differ substantially between the television and print advertisements.

Though relatively little testing of the superiority of the DMH model has appeared since the 1986 study, the model's relationships are supported by other research efforts. The notion that both cognitive (i.e., brand attribute beliefs) and affective (i.e., A_{Ad}) factors influence brand attitudes is presented in Mitchell's (1986) dual component model (DCM). The DCM also specifies that evaluations of the verbal and visual components precede A_{Ad} and brand attribute beliefs. In contrast to the 1986 study and the current study, Mitchell (1986) did not test the relationships in the model simultaneously. Consistent with the DMH, the use of affect-laden photographs in advertisements did affect A_{Ad} when individuals executed a brand processing strategy.

Gardner (1985) and Lutz, MacKenzie, and Belch (1983) respectively demonstrated that A_{Ad} acts as a mediator of brand attitudes for brand evaluation and high product knowledge/high importance situations. In conjunction with Mitchell's findings, these results imply that we can expect a direct link between A_{Ad} and A_B to emerge consistently. All models (under both brand and nonbrand evaluation sets and high and low knowledge/importance) in the present study show a strong relationship between these two constructs. Taken in conjunction with the pervasive presence of the indirect influence (i.e., $A_{Ad} \rightarrow C_B \rightarrow A_B$) associated with deeper elaboration, these findings provide additional support that "A_{Ad} and A_B may form through both central and peripheral mechanisms" (MacKenzie and Lutz 1989, p. 51) and that central and peripheral processing can occur concurrently. A pretest setting may create artificial ad distinctiveness, resulting in a more "central" process of A_{Ad} formation (MacKenzie and Lutz 1989). Concurrent processing may be especially apparent when elaboration is more "moderate," as opposed to the extreme low and high levels that define the endpoints of the ELM's elaboration continuum. For these extremes, one would expect either the peripheral or central processing route to dominate. Perhaps the successful manipulation checks and the absence of significant treatment effects indicate that the two resultant processing sets were actually different moderate levels and not low and high as defined by the elaboration

continuum endpoints. Though these extremes may exist theoretically, in reality (and experimental environments) they are at best rare.

As pointed out by Gardner (1985), the effects of C_B in the nonbrand set may be due to the particular nonbrand set involved (i.e., ad evaluation with full attention). Most recently, Dröge (1989) tested the hypothesis that comparative ads tend to be processed centrally whereas noncomparative appeals generate peripheral processing. The relationship between brand cognition and A_B predicted for persons exposed to a comparative ad also emerged in the noncomparative ad exposure condition. In their most current related effort, MacKenzie and Lutz (1989) incorporated antecedents to A_{Ad} in the test model and omitted the final causal construct, purchase intentions. The $C_B \rightarrow A_B$ path did not reach significance but, as in the 1986 study, the model was tested on data pooled across eight conditions (repetition, concreteness of copy, and picture relevance were manipulated) that generated varying cognitions.

The impact of A_{Ad} across the processing strategy and product knowledge/importance levels created here highlights the importance of designing well-liked advertisements even when a marketer/advertiser expects consumers to use a brand evaluation strategy (Gardner 1985). Mere concentration on conveying sufficient brand-related information without regard to the executional aspects may reduce an ad's effectiveness even when information-seeking consumers process an informational ad. This strategy receives practitioner support. A study conducted at the Ogilvy Center for Research & Development that examined responses to 73 diverse prime-time commercials from 895 viewers showed that "people who enjoy a commercial are twice as likely to be convinced that the advertised brand is best" (Alsop 1986, p. 27).

Insight can be gained from a more rigorous focus on the A_{Ad} construct. A_{Ad} is a global measure of affect and the evaluation of the various visual and verbal components of an advertisement may not equate with that global assessment. For example, an individual may evaluate the visual components of an ad positively, the verbal copy negatively, and still retain an overall positive image of the ad and the advertised brand. Or, one may like some aspect of a visual component and not another. In some instances, a consumer may be completely turned off by an ad because of a single element.

Mitchell (1986) examined the individual effects of verbal and visual ad components, but his research warrants extension. Examining the individual elements of an advertisement should lead to better understanding of the mediating role of A_{Ad}. Hopefully, this research challenge will close some of the gaps left by the present study's focus on the role of processing involvement.

It is fully acknowledged that the findings reported here and by most A_{Ad} researchers are based on reactions to a new brand in an experimental situation. MacKenzie, Lutz, and Belch (1986, p. 140) provide evidence for their argument that

> the extent to which an ad is able to engender an attitudinal response on its own merit appears to govern the likelihood that the response pattern observed in a pretest laboratory represents the "real-world" response to the ad. The DMH model, in other words, may represent the structure of the response processes at work when consumers are confronted with an enjoyable ad for a new brand in a typical packaged good product category.

The shampoo commercial was embedded in program content and the phone service ad was viewed with other ads in an effort to approximate naturalistic settings. Generalizations to the real-world situation faced by marketers of mature brands may not be justifiable, however. Though the previously mentioned study by the Ogilvy Center for Research & Development provides some supportive evidence, further empirical investigation is advised before more encompassing conclusions are drawn.

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