Elaborating on Elaboration: The Distinction between Relational and Item-specific Elaboration

JOAN MEYERS-LEVY*

This article examines the distinction between and the effects of two different types of elaboration on various indicators of ad effectiveness. One type of elaboration, known as item-specific processing, emphasizes the distinctive features of each ad claim. A second type, called relational processing, highlights similarities (e.g., common themes) that link various ad claims. This study shows that recall of ad claims is enhanced when manipulations foster both types of elaboration simultaneously. However, recognition and clustered recall are enhanced only when manipulations invite item-specific and relational processing, respectively. Finally, data on product judgments, consumption intentions, and the correspondence between these types of responses suggest that item-specific processing may have more impact on these measures.

Cognitive elaboration, the process of associating new information with knowledge already stored in memory (Greenwald and Leavitt 1984), plays an important role in understanding how consumers respond to advertising messages (Childers and Houston 1984; Kisielius and Sternthal 1986). The prevailing view is that increased elaboration of such information as brand names (Saegert and Young 1983) or ad claims (Calder and Sternthal 1980) results in greater impact of such material, whereas inhibited elaboration weakens the impact (Keller 1987). While few researchers dispute the notion that the quantity of elaboration devoted to message information can affect message impact (MacInnis and Price 1987), this simple view of elaboration can itself benefit from further elaboration. In particular research in the cognitive and psychological literatures suggests that there are two types of elaboration (Einstein and Hunt 1980; Tversky 1977) that facilitate comprehension in alternative ways.

One type of elaboration, known as relational processing, involves focusing on similarities or shared themes among disparate pieces of information. It occurs spontaneously when people receive many similar message cues (Bransford and Franks 1971; Hayes-Roth 1977). To illustrate, consider a recent ad for the Hyundai Sonata automobile that contains a large set of claims implying comfort (e.g., 100 cubic feet of passenger room, comfortable seating for five adults, spacious rear seat that folds to expand cargo room, rich velour reclining bucket seats, six-way adjustable driver's seat). This large set of ad claims, all implying the same benefit, should invite predominantly relational processing that focuses on the claims' shared comfort-related aspects rather than their unique features.

The second type of elaboration, item-specific processing, focuses on properties that are distinctive or unique to a particular claim (Eysenck 1979). Presenting people with message claims that are, in context, largely unrelated to or discrepant with others appears to prompt spontaneous item-specific processing (Hunt and Seta 1984).[1]

In the Hyundai ad, included amid the large set of comfort-related claims was a small set of two claims concerning economy (e.g., a 36-month or 36,000-mile warranty and free motor-club membership). While these economy claims might receive some relational processing, their marked difference from the larger mass of ad claims is likely to have a more potent influence on the type of elaboration they receive, causing them to receive predominantly item-specific processing that focuses on their distinctive aspects (e.g., thoughts about how the generous warranty would eliminate one's current costly repair bills).[2]

*Joan Meyers-Levy is assistant professor, Graduate School of Business, University of Chicago, Chicago, IL 60637. This research was funded by a UCLA research grant awarded to the author while she was at UCLA.

[1]Although a clear distinction is made between relational and item-specific processing, it should be understood that in practice the use of these types of processing is likely to differ more in degree than in any absolute sense. That is, a greater emphasis will be placed on one or the other of these types of processing.

[2]This is not to suggest that "unrelated" cues can never or will never

This analysis assumes that relational and item-specific processing are independent types of elaboration. This article explores that assumption by examining whether relational and item-specific processing operate similarly or dissimilarly in influencing judgments of products and their benefits and such commonly used measures of ad effectiveness as ad claim recall or recognition (Leckenby and Wedding 1982). The article also explores how and whether these two types of elaboration influence the relationship between judgments of product benefits and consumption intentions. In addition, it investigates aspects of ads that might stimulate relational or item-specific processing, asking in particular whether visual images introduced via imaging instructions foster predominantly item-specific elaboration and whether advance organizer cues, which pictorially symbolize the main points or themes of a message (Alesandrini and Sheikh 1983), largely encourage relational elaboration.

THE FUNCTIONS OF RELATIONAL AND ITEM-SPECIFIC PROCESSING

Information encodings that result from relational and item-specific processing are generally thought to serve different processing functions (Einstein and Hunt 1980). Thus, to anticipate how these types of elaboration might differentially affect consumers' responses to various measures of ad effectiveness, one must compare the function served by each type of elaboration with the type of processing required by the response measure.

Relational encodings are believed to serve a generative function during retrieval by delineating the class or category of information from which specific pieces of information can be drawn (Anderson 1983; Bower 1970). It is thought, for example, that when a person attempts to retrieve particular claims from, say, the Hyundai ad, he or she begins by identifying a class of claims concerning a theme (e.g., comfort) and uses this thematic information to aid memory search. Relational encodings presumably facilitate this task because they capture common themes and benefits represented by a group of product claims.

By contrast, item-specific encodings are thought to serve a discriminative function. In situations requiring a highly precise response (e.g., recognition that requires distinguishing between "old" items and "new" yet highly plausible ones), fine discriminations among all the items associated with a theme may be necessary. Item-specific information facilitates this discrimination, for it captures the uniqueness of specific claims (Lockhart, Craik, and Jacoby 1976).

be related to other information in some sense. As Bower (1970, p. 132) has noted, people have "vast capabilities for searching out similarities and differences." Rather, the point is that unrelated cues normally will receive considerably greater amounts of item-specific than relational processing.

This characterization of the functions served by relational and item-specific processing implies specific predictions about how and when consumers' responses to ads that contain large and small sets of benefit-related ad claims will be enhanced. As detailed next, while recall is likely to be enhanced by both types of processing, relational processing alone should increase the clustered recall of thematically common (e.g., comfort-related) claims, whereas item-specific processing alone should enhance recognition of ad claims, product judgments, and the consistency between product judgments and consumption intentions.

Recall

Recall has been viewed in most traditional recall models as involving both generative and discriminative processes (Brown 1976; Hastie and Carlston 1980). Thus, assuming that prompts that invite either type of elaboration stimulate reasonably high levels of the specified processing type, recall of ad claims is likely to be greater when claims receive a combination of relational and item-specific elaboration rather than one type of elaboration exclusively.[3] More specifically, larger sets of ad claims that imply a single benefit should encourage spontaneous relational processing. Yet once this relational processing has served the requisite generative function, item-specific processing should be more influential than additional relational processing because only it can provoke the needed discrimination. Thus, large sets of ad claims should be better recalled if during encoding a manipulation prompts individuals to add item-specific processing to the relational processing already being performed.

A similar analysis suggests that the recall of small sets of ad claims should be more greatly benefited by manipulations that encourage relational rather than item-specific processing. This follows because the item-specific processing that is presumed to occur spontaneously for small sets of ad claims empowers only the discriminative aspects of recall. Hence, the addition of relational processing, which serves a generative function, may provide a more useful role than additional and possibly superfluous item-specific processing.[4]

[3]Note that in deriving this and all other predictions, it is assumed that both the (extreme) ad-claim set size and processing-focus manipulations used to stimulate either type of elaboration produce reasonably high levels of such processing. This assumption seems reasonable on the basis of previous research (Hunt and Seta 1984) and because both manipulations reported in the study appeared to be relatively strong. Nonetheless, had the manipulations been weaker such that lower levels of item-specific and relational processing were stimulated, predictions would have been more ambiguous. For example, because of the calibration of the manipulations, it could be that, when the two manipulations encouraged a single type of processing, recall might have been benefited as much as when the manipulations stimulated alternative types of processing.

[4]For this and all other measures, no specific predictions are made about how relational and item-specific processing-focus manipulations

H1: Recall of ad claims that are part of a large set of claims that all imply a single benefit will be greater when, during encoding, manipulations encourage item-specific processing rather than relational processing.

H2: Recall of ad claims that are part of a smaller set will be greater when, during encoding, manipulations encourage relational processing rather than item-specific processing.

Recall Clustering

Recall clustering refers to the extent to which ad claims implying a common theme or benefit are recalled in successive order. Such clustering is a useful process measure because it tracks the role that relational processing plays in the retrieval process (cf. Hunt, Ausley, and Schultz 1986).

Recall clustering is thought to be highly dependent on the effective generation of categorical or thematic information and minimally dependent on discrimination (Bower, Lesgold, and Tieman 1969; Hunt and Einstein 1981). Thus, clustering of ad claims should be greatest when the claims receive heightened relational processing because such processing delineates themes. Because large sets of ad claims should invite considerable spontaneous relational processing, substantial clustering of ad claims belonging to large sets should be observed, regardless of the nature of processing-focus manipulations introduced during encoding. However, small sets of ad claims spontaneously induce only item-specific processing, which plays little role in recall clustering. Thus, these small sets should receive relational processing that facilitates clustering only when they are accompanied by manipulations that explicitly encourage relational processing. This suggests that recall clustering of ad claims from large and small sets should be differentially affected by alternative types of processing-focus manipulations.

H3: Clustering of ad claims that are part of large sets will be unaffected by processing-focus manipulations introduced during encoding.

H4: Clustering of ad claims that are part of small sets will be greater when, during encoding, manipulations encourage relational processing rather than item-specific processing.

Recognition

Not only is recognition of ad claims a commonly used indicator of ad effectiveness, it also can serve as a process measure because it tracks the role that item-specific processing plays. During a recognition test, probe or test-ad claims are explicitly presented, thereby eliminating the need for subjects to generate categories or themes of claims. Instead, discriminative functions (i.e., discriminating between "old" and highly plausible "new" test claims) play the dominant role during ad-claim recognition (Anderson and Bower 1974; Bower et al. 1969). Because item-specific processing facilitates such discrimination, it follows that accurate recognition of ad claims should be heightened when conditions encourage item-specific processing. Small sets of ad claims themselves are thought to encourage much item-specific processing, suggesting that recognition of ad claims from small sets should be relatively high regardless of processing-focus manipulations that may be introduced during encoding. However, because ad claims from larger sets are thought to induce only relational processing, accurate recognition of these claims should be substantial only when, during encoding, processing-focus manipulations explicitly encourage item-specific processing. Thus, accurate recognition of ad claims from large and small sets should be differentially influenced by alternative manipulations of processing focus.[5]

H5: At recognition, discrimination between "old" and "new" ad claims that are associated with a large set of claims will be greater when, during encoding, manipulations encourage item-specific processing rather than relational processing.

H6: At recognition, discrimination between "old" and "new" ad claims that are associated with a small set of claims will be unaffected by the processing-focus manipulations introduced during encoding.

Judgments

Finally, we explore how product judgments are affected by relational and item-specific processing. Although the lack of precedence for such an examination makes predictions tentative, some general deductions can be generated from research that has examined the judgment process.

A growing stream of research suggests that judgments and recall often exhibit little correspondence because, unlike recall, judgments typically are not based on retrieval of specific message claims (Anderson and Bower 1973; Hastie and Park 1986). Instead, product judgments often occur during message comprehension and are based on inferences about the product that are highly

will affect the moderate-sized set of four ad claims. This is because the set of four ad claims seemed likely to invite moderate levels of spontaneous relational and item-specific processing and, therefore, would make it difficult to determine how much of each processing type was stimulated by the focus manipulations (see n. 3). In reality the set of four ad claims was included in the apartment ad primarily to fill out the text of the ad.

[5]Predictions similar to these would be anticipated for cued recall of ad claims in which individuals are provided with a cue designating a theme or benefit implied by the message. This study examined such cued recall and revealed findings that were analogous to those obtained on recognition.

accessible (Mackie and Asuncion 1990; Ostrom et al. 1980). While either relational or item-specific processing could give rise to these highly accessible inferences, there is reason to suspect that inferences fostered by item-specific processing often may be more accessible and thus play a more important role in determining product judgments.

Along these lines, more and more research suggests that aspects of products that are distinctive invite more extensive elaboration than those that are common to a general theme (cf. Lockhart et al. 1976; Meyers-Levy and Tybout 1989). Moreover, as suggested earlier, such distinctive information should receive item-specific processing, while common material should receive relational processing. Taken together, this implies that inferences fostered by item-specific processing should be based on more extensive processing. Yet, evidence also indicates that increased amounts of processing heighten accessibility (Wyer and Carlston 1979), suggesting that inferences fostered by item-specific processing may be more accessible and thus more influential in determining judgments.

This line of reasoning provides a basis for two deductions. First, product judgments are likely to be more favorable if a message receives item-specific rather than relational processing, provided that the claims contained in an ad are relatively favorable. Second, because inferences derived from item-specific as opposed to relational processing should receive more extensive processing and be more highly accessible, they are more likely to be used across judgments and result in heightened consistency between judgments of product benefits and consumption intentions (cf. Fazio, Powell, and Williams 1989).

H7: Manipulations that encourage item-specific processing rather than relational processing should enhance the favorableness of judgments and foster increased consistency between product judgments and consumption intentions.

This study tested these hypotheses. Subjects received an ad promoting an apartment complex that contained large, moderate, and small sets of claims concerning different apartment benefits. Some subjects' processing of the ad was varied by a manipulation of processing focus that independently encouraged either relational or item-specific processing of the claims. Other subjects were assigned to a control condition that did not explicitly encourage either type of processing. The control group was included to permit inferences about the predominant type of elaboration that people would employ when their manner of processing the ad was left to their own discretion.

METHOD

Procedure and Stimuli

Fifty-five students in a marketing class participated in the study. They were told that the purpose of the study was to examine how people make housing decisions.

All subjects received an ad describing an apartment complex. This ad contained 14 claims specifying particular features of the apartment that implied a safety, aesthetic, or convenience benefit. For example, "enclosed and attended parking" and "a 24-hour doorman secures the entry" were among the ad claims that implied safety, "a gracefully landscaped exterior" and "building designed by an award-winning architect" were among those that implied aesthetic benefits, and "a store on premises with drug and sundry items" and "a sundeck available for all residents" implied convenience. All ad claims were generated by subjects in a focus group who were asked to identify features of an apartment that would connote safety, aesthetics, and convenience.

Although an ad containing claims that implied each of these three benefits was randomly distributed to all subjects, the number of ad claims that implied each benefit varied. Thus, the size of the three sets of ad claims was manipulated within subjects such that one set was large in size, one was moderate, and one was small. In addition, two different versions of the apartment ad were prepared such that benefits were partially counterbalanced with ad-claim set size.[6] The first ad version contained eight ad claims that implied the safety benefit, four claims that implied the aesthetic benefit, and two claims that implied the convenience benefit; the second version contained eight ad claims implying the aesthetic benefit, four claims implying the convenience benefit, and two claims implying the safety benefit. A structure adapted from an actual apartment ad was used in the stimulus ad. As such, in both versions the ad claims were listed and they were positioned such that, with the exception of a single instance, consecutive claims pertained to different benefits.[7]

Subjects also were assigned randomly to one of three processing-focus conditions. Subjects in the item-specific processing-focus condition were encouraged to richly image the apartment's features as they read the ad. Specifically, they were asked to "try to form a picture in your mind of each of the specific features of the apartment." For subjects in the relational processing-focus condition, pictorial organizer cues were inserted in the ad. These organizer cues consisted of small, simple line drawings of a key, a pot of flowers, or a pair of footsteps that were appropriately placed before each of the ad claims to imply that the claims offered a safety, aesthetic, or convenience benefit, respectively. As Alesandrini and Sheikh (1983) have noted, such thematic

[6]Partial counterbalancing was employed to limit the possibility that any treatment effects were due to the specific content represented by the sets of ad claims.

[7]Had the ad claims been grouped by product benefit, it is likely that each set of claims would have stimulated considerable spontaneous relational processing. This manipulation might represent an alternative way of promoting relational processing that could be examined in future research.

advance organizer cues are used often in ads to cue the reader to the main point of the material to be presented. The remaining subjects were assigned to a control condition in which processing focus was not manipulated. The type(s) of processing these subjects employed was left to their discretion.

The logic underlying the two active manipulations was twofold. The imagery manipulation would seem to isolate and focus attention on distinctive aspects of features. Thus, it should encourage item-specific processing. By contrast, the pictorial advance organizer cue manipulation, which organizes the ad claims into themes, should draw attention to shared aspects of the ad claims, thereby encouraging relational processing.

Evidence that these manipulations induced the intended processing focus was obtained in a pretest of 62 subjects. These subjects received the apartment ad accompanied by either the relational or item-specific processing manipulations. Then, in a nonleading, open-ended question, subjects indicated the strategy they used in comprehending the apartment features. The strategies subjects employed differed by treatment ($\chi^2 = 36.13$, $p < .001$). To understand the manipulations, subjects who reported forming an image of specific apartment features during processing were coded 1 and those who employed a different strategy were coded 0. Relative to subjects who received the ad accompanied by the pictorial organizer cues, subjects who received the imaging manipulation reported that they focused more on developing a distinctive image of the features ($\bar{X} = .23$ and $.75$; $\chi^2 = 17.36$, $p < .001$). Next, subjects who reported that they related features into groups during processing were coded 1, and those who employed a different strategy were coded 0. Results showed that subjects who received the organizer cues as opposed to the imaging manipulation focused largely on relating features into groups ($\bar{X} = .60$ and $.09$; $\chi^2 = 19.09$, $p < .001$).[8]

Dependent Measures

Immediately after reading the ad, subjects were asked several general questions concerning their current housing situation. These filler items were included to limit short-term memory effects. A free recall task followed in which subjects were asked to record as much of the apartment description as was possible.

Then, after completing several filler questions, judgments of the apartment benefits were assessed on 12 seven-point scales consisting of four items pertaining to each of the three implied benefits. To evaluate safety, subjects judged the extent to which the apartment was safe, made one feel secure, allowed one to enjoy peace of mind, and made one feel protected. Aesthetic judgments involved assessing the degree to which the apartment was attractive, well maintained, pleasing to look at, and visually desirable. Finally, convenience was assessed by asking subjects to what degree the apartment would make life easier, allow more time to enjoy life, make life convenient, and allow more time to relax. Because the items pertaining to each of the three benefits loaded together and formed reliable scales (Cronbach alphas ranged between .71 and .84), subjects' judgments of the apartment for each of the three implied benefits were determined by computing the average of the four items that pertained to each benefit.

At this point subjects completed a cued recall (see n. 5 for a discussion of this) and an additional filler task and then indicated how likely it was that they would rent an apartment in the advertised building, assuming location and price were not at issue. Subjects' consumption (rental) intentions were measured on a seven-point scale labeled "extremely unlikely" to "extremely likely."

Finally, recognition of the ad claims was examined by presenting subjects with 24 probe phrases. Separate sets of probes were developed for the two ad versions. For each probe subjects were asked to indicate whether the phrase had been included in the apartment ad. Subjects were alerted that some of these phrases might be foils that had not appeared in the ad. Of the 24 phrases presented to subjects, 12 were verbatim claim phrases taken from the ad. Six of these were from claims that implied the benefit represented by the large set of eight ad claims, four were from claims that implied the benefit represented by the moderate set of four ad claims, and two were from claims that implied the benefit represented by the small set of two ad claims. The remaining 12 phrases were foils, four of which related to each of the three benefits represented in the ad. Four foils per benefit were employed as this number was thought to be ample to provide a reasonably stable and sensitive indicator of false alarms.

RESULTS

Inclusion of ad version as a factor in the design yielded no significant effects ($p > .16$ in all cases). Thus, the data were collapsed across ad versions and analyzed as a 3 (ad-claim set size large, eight-claim set; moderate, four-claim set; small, two-claim set) $\times$ 3 (processing-focus manipulation: relational processing, advance organizer cue; item-specific processing, imagery; and control condition) mixed factorial design. Ad-claim set size was a repeated measure, and processing-focus manipulation was a between-subjects variable. Treatment means for all measures appear in Table 1.

[8]These imaging and organizer cue manipulations were also chosen in part because they represent devices often used by advertisers (cf. Alesandrini and Sheikh 1983; Wright 1979). For example, an ad for Grecian Formula, a men's hair-coloring product, prompts imaging by imploring the viewer to "Picture yourself with a little less gray, a lot less gray, or none at all."

TABLE 1

TREATMENT MEANS FOR MEMORY AND PRODUCT-BENEFIT JUDGMENTS

	Ad-claim set size		
Dependent measures	Large (eight-item)	Moderate (four-item)	Small (two-item)
Recall:			
Proportion of items recalled per claim set:			
Image (item-specific) condition	.72 (.16)	.63 (.15)	.58 (.38)
Organizer cue (relational) condition	.61 (.16)	.57 (.22)	.83 (.24)
Control condition	.64 (.19)	.51 (.30)	.50 (.38)
Category clustering scores:			
Image (item-specific) condition	.52 (.20)	.26 (.39)	.05 (.23)
Organizer cue (relational) condition	.64 (.32)	.34 (.46)	.39 (.50)
Control condition	.68 (.35)	.30 (.39)	.00 (.00)
Recognition:			
Signal detection scores:			
Image (item-specific) condition	.96 (.06)	.95 (.05)	.99 (.03)
Organizer cue (relational) condition	.87 (.12)	.87 (.16)	.98 (.05)
Control condition	.94 (.05)	.95 (.05)	.96 (.12)
Hits:			
Image (item-specific) condition	.89 (.14)	.89 (.15)	.97 (.12)
Organizer cue (relational) condition	.72 (.24)	.82 (.21)	.92 (.19)
Control condition	.82 (.18)	.89 (.15)	.89 (.27)
False alarms:			
Image (item-specific) condition	.03 (.08)	.07 (.14)	.01 (.06)
Organizer cue (relational) condition	.11 (.15)	.15 (.21)	.00 (.00)
Control condition	.11 (.21)	.11 (.20)	.01 (.06)
Product-benefit judgments:			
Image (item-specific) condition	5.75 (.72)	4.79 (.90)	4.21 (.88)
Organizer cue (relational) condition	5.62 (.97)	4.57 (1.47)	4.13 (1.30)
Control condition	6.00 (.85)	5.37 (1.14)	4.81 (.94)

NOTE.—SDs are indicated in parentheses.

Recall of Ad Claims

Two judges who were blind to the treatments coded ad recall in terms of the proportion of ad claims recalled that pertained to each of the three apartment benefits. Interjudge reliability was .97. Proportions were examined to adjust for differences in the base size of ad-claim sets, and these proportions were subjected to arcsine transformations to stabilize variance.

Analysis of the proportion of ad claims recalled that pertained to each of the three benefits revealed a main effect of ad-claim set size ($F(2,51) = 3.32$, $p < .04$) and a significant interaction of ad-claim set size by processing-focus manipulation ($F(4,104) = 2.57$, $p < .04$). No other effects were significant. The main-effect finding that, overall, recall of ad claims from the eight-claim and two-claim sets was greater than that from the four-claim set appears to be related to the interaction, which revealed that, consistent with Hypotheses 1 and 2, recall of the larger set of ad claims was heightened substantially by the item-specific processing manipulation, whereas recall of the small set of ad claims was benefited greatly by the relational processing manipulation. These manipulations had less effect on recall of the moderate-sized (four) ad-claim set.

More specifically, examination of the interaction revealed that recall of ad claims from the large eight-claim set was greater among subjects asked to image the apartment features (item-specific processing focus) than among subjects in the organizer cue condition (relational processing focus; $t(35) = 2.01$, $p < .05$) or in the control condition ($t(35) = 2.45$, $p < .02$). However, recall of ad claims from the small two-claim set was greater among subjects who received the advance organizer cues (relational processing) than among those who imaged the features (item-specific processing; $t(35) = -2.22$, $p < .03$) or were in the control condition ($t(34) = -2.93$, $p < .01$). Recall of ad claims from the four-claim set was invariant regardless of the processing-focus manipulation ($p > .61$ in all cases).

Recall Clustering

To measure the extent to which ad claims implying each benefit were clustered, a recall clustering index devised by Bower et al. (1969) was employed. This index entails summing the number of pairs of ad claims from each set that were recalled in consecutive order and dividing this sum by the total number of ad claims recalled pertaining to that set less one. More sophisticated measures could not be used because they result in mathematically undefined scores when clustering scores are computed for the separate sets of ad claims. The hypotheses concerning category clustering, Hypotheses

3 and 4, were based on the premise that performance on the clustering measure would be enhanced by conditions fostering relational processing (e.g., large ad-claim set regardless of processing-focus manipulations). Higher scores on the index indicate greater ad-claim clustering.

Consistent with this expectation, clustering scores revealed a main effect of ad-claim set size ($F(2,51) = 47.40$, $p < .001$) such that recall clustering was greater as the size of the set of ad claims increased. Also significant was the interaction of ad-claim set size by processing-focus manipulation ($F(4,104) = 3.04$, $p < .02$).

Follow-up analysis of this interaction offered support for Hypotheses 3 and 4, which predicted that, while clustering of the large set of ad claims would be unaffected by the processing-focus manipulations, clustering of ad claims recalled from the small set would be enhanced when manipulations encouraged relational rather than item-specific processing. Specifically, clustering in recall of ad claims from the eight-claim set revealed no significant effect of the processing-focus manipulations ($p > .19$ in all cases). But clustering in the two-claim set was greater among subjects who received the advance organizer cue manipulation (relational processing focus) than among subjects in the imaging condition (item-specific processing focus; $t(35) = -2.65$, $p < .01$) or in the control condition ($t(34) = -3.29$, $p < .01$). Clustering of ad claims from the four-claim set was uniform across all processing-focus conditions ($p > .57$ in all cases).

These findings are consistent with the view that clustering is greatest under conditions that encourage relational processing. Presumably because large sets of ad claims themselves spontaneously induce relational processing, such claims uniformly reveal high degrees of clustering regardless of processing-focus manipulations. But because small sets of ad claims do not spontaneously invite relational processing, clustering of ad claims from these sets is enhanced when organizer cue manipulations encourage such processing. Moreover, the observation that clustering among subjects in the control group was similar to that of subjects in the imaging condition (item-specific processing focus) suggests that, left to their own devices, subjects in the control condition naturally gravitated toward greater item-specific processing.

Recognition of Ad Claims

Recognition of the ad claims was analyzed through signal-detection analysis, which disentangles item discrimination from guessing. Signal-detection (A') scores as well as hits (correct acceptance of ad claims) and false alarms (false acceptance of foil claims) are reported in Table 1. Accurate and inaccurate recognition responses were coded as 1 and 0, respectively, for the hits and signal-detection analysis; this coding was reversed for analysis of false alarms so that higher numbers indicate greater incidence of false alarms. Signal-detection A' scores were computed according to Grier (1971), whereby a .50 score represents perfect indiscrimination between ad and foil claims and a score of 1 indicates perfect discrimination.

Analysis of A' signal-detection scores revealed main effects of ad-claim set size ($F(2,49) = 10.17$, $p < .001$) and processing-focus manipulation ($F(2,50) = 4.54$, $p < .02$). In general, discrimination between ad and foil claims was greater for the small two-ad-claim set than for the moderate four-claim set or large eight-claim set, and discrimination was superior among subjects who received the imaging manipulation (item-specific processing) or control condition than among those who received the advance organizer cue manipulation (relational processing focus). These effects were qualified, however, by a significant interaction of ad-claim set size and processing-focus manipulation ($F(4,100) = 2.45$, $p < .05$) predicted by Hypotheses 5 and 6. These hypotheses were based on the view that item-specific processing is of focal importance in enhancing recognition. Thus, while recognition of ad claims from small sets (which spontaneously encourage item-specific processing) should be unaffected by the processing-focus manipulations, recognition of ad claims from large sets should be greater when the processing-focus manipulation encouraged item-specific rather than relational processing.

Follow-up examination of the interaction revealed that discrimination of ad claims from the large-claim set and, to a lesser extent, from the moderate-claim set, was greater when subjects received the imaging manipulation (item-specific processing) than when they received the advance organizer cue (relational processing focus) manipulation (for the eight-claim set $t(34) = 2.80$, $p < .01$; for the four-claim set $t(34) = 1.98$, $p < .06$). However subjects' discrimination of ad claims from the small-claim set was high and equivalent regardless of the processing-focus manipulations ($p > .45$ in all cases).

Subjects in the control condition revealed a pattern of ad-claim discrimination that was similar to that of subjects in the image condition (item-specific processing focus); that is, for the large eight-ad-claim set, subjects in the control condition showed superior discrimination of ad claims than did those who received the organizer cue manipulation (relational processing focus; $t(34) = 2.01$, $p < .05$), but for the four-claim and two-claim sets their ad-claim discrimination was generally high and equivalent to subjects in the image condition (item-specific processing focus; $p > .13$ in all cases). Thus, as in recall clustering performance, it appears that subjects in the control condition naturally favored the use of greater item-specific processing.

Hit and false-alarm data (i.e., proportion of correct acceptance of "old" ad claims and proportion of false acceptance of "new" foil claims) suggest that the effects obtained on the A' measure are primarily due to differ-

ences on these indices for the eight-claim set. Recognition of ad claims associated with the eight-claim set revealed both a higher hit rate and a lower rate of false alarms among subjects who received the image (item-specific) rather than the advance organizer cue (relational) processing-focus manipulation (hit rate: $t(34) = 2.52, p < .02$; false-alarm rate: $t(34) = -2.03, p < .05$). However, hit and false-alarm rates for the four-claim and two-claim sets were invariant regardless of the processing-focus manipulations ($p > .18$ in all cases). Hit and false-alarm rates among control-group subjects did not significantly differ from those of subjects in either of the active treatments ($p > .13$ in all cases).

Taken together, these findings are quite consistent with Hypotheses 5 and 6, which rest on the view that superior discrimination between ad and foil claims will occur under conditions that encourage distinctive item-specific processing. Because small sets of ad claims induce spontaneous item-specific processing, they allow uniformly good discrimination between ad and foil claims regardless of processing-focus manipulations. But because larger sets of ad claims do not prompt spontaneous item-specific processing, discrimination of claims associated with these sets is improved by the imaging manipulation that encourages item-specific processing.

Judgments of Apartment Benefits and Rental Intentions

Analyses conducted on subjects' judgments about the three implied benefits of the apartment revealed an unpredicted main effect of ad-claim set size ($F(2,49) = 40.54, p < .001$), which indicated that the favorableness of subjects' judgments concerning each of the apartment benefits was positively related to the number of ad claims presented that implied that benefit. Thus, judgments concerning the four-ad-claim set were less favorable than those concerning the eight-claim set ($t(53) = 6.27, p < .01$) but more favorable than those concerning the two-claim set ($t(53) = 3.81, p < .01$). This finding will be addressed in the Discussion.

Subjects' judgments of the apartment benefits also revealed a marginally significant main effect of processing-focus manipulation ($F(2,50) = 2.70, p < .07$), which indicated that subjects tended to judge the apartment benefits more favorably in the control ($\bar{X} = 5.39$) and the image (item-specific processing focus) condition ($\bar{X} = 4.92$) than the advance organizer cue (relational processing focus) condition ($\bar{X} = 4.77$). Moreover, a similar pattern of outcomes also emerged on subjects' intentions of renting an apartment in the advertised complex, although the overall main effect of processing-focus manipulation only approached significance ($F(2,52) = 2.37, p < .10$). Nonetheless, rental intentions were significantly greater among subjects who received the image manipulation (item-specific processing focus; $\bar{X} = 5.37$) than among those who received the advance organizer cue manipulation (relational processing focus; $\bar{X} = 4.11$; $F(1.52) = 14.61, p < .05$) while subjects' intentions in the control condition were moderate ($\bar{X} = 4.33$). No other effects emerged on rental intentions. Viewed together, these findings suggest that item-specific processing produces more favorable judgments than does relational processing and exerts more influence on consumption (rental) intentions. Thus, these data appear to be consistent with Hypothesis 7.

Next, analysis examined the additional prediction in Hypothesis 7 that the correspondence between subjects' judgments of apartment benefits and their consumption (rental) intentions would be enhanced more by item-specific than by relational processing. This entailed computing the correlations between these measures in each of the processing-focus conditions. It was found that subjects' judgments of the apartment benefits and their intentions to rent an apartment were significantly correlated in the item-specific imaging condition ($r = .77, p < .001$) but not in the advance organizer cue (relational processing focus; $r = .30, p > .13$) or control conditions ($r = .09, p < .37$). Moreover, the correlations between these judgments and rental intentions were significantly higher in the imaging condition than in the advance organizer cue ($p < .05$) or control ($p < .05$) conditions while correlations in these latter two conditions were not significantly different. These data provide additional support for Hypothesis 7, suggesting that, relative to relational processing, item-specific processing is likely to enhance not only subjects' product-benefit judgments and consumption intentions, but such processing can produce greater consistency between these responses.

DISCUSSION

The findings appear to extend and amplify the prevailing view, which holds that advertising effectiveness is increased when consumers elaborate on ad claims. The data imply that whether such elaboration will enhance ad effectiveness depends on both the predominant type of elaboration fostered by the ad and the particular measure used to assess ad effectiveness. This is true because relational and item-specific elaboration seem to play unique and noninterchangeable roles in affecting various memory and judgment responses.

When ad effectiveness is measured in terms of recall of ad claims, both relational and item-specific elaboration appear to enhance performance. Presumably, relational elaboration aids recall by cueing retrieval schemes (e.g., categories of ad claims) while item-specific elaboration benefits recall by facilitating discrimination between actual ad claims and plausible yet bogus claims. When ad effectiveness is measured by recognition, a situation in which the provision of ad-claim probes makes the generation of (relational) retrieval schemes unnecessary, item-specific elaboration alone appears to enhance performance, presumably because

only this type of elaboration facilitates discrimination between actual and bogus probes.

Finally, it appears that, as with recognition, product judgments, consumption intentions, and the consistency between these measures are more sensitive to item-specific than to relational elaboration. Presumably this occurs because responses of these types tend to be based on readily accessible inferences formed during ad processing (Hastie and Park 1986; Ostrom et al. 1980), and item-specific elaboration of ad claims is likely to foster inferences that are more extensively processed and thus more highly accessible (cf. Srull 1981).

If the different effects of relational and item-specific processing on recall and judgments are compared, an important deduction emerges. When product-related judgments are based on consumers' recollection of ad information, as might occur during an unplanned product purchase, both relational and item-specific elaboration are likely to play important roles in shaping consumers' judgments and purchase intentions because such responses may be mediated by recall of ad claims. However, when consumers' product judgments and purchase intentions are determined near the time of message exposure, as is likely when purchases are planned, item-specific processing may play a more important role in influencing these responses because it may give rise to more accessible product-related inferences. Research is needed that formally examines this deduction.

One unpredicted finding from this study merits consideration. It was found that subjects' judgments of the product benefits were positively related to the sheer number of ad claims that implied each benefit, regardless of whether subjects received the imaging, advance organizer cue, or control manipulation. Thus, subjects judged the apartment to be safer (or more aesthetically appealing) when a larger number of ad claims implied that benefit. In retrospect, this observation does not seem surprising. It has, in fact, been observed in previous research (Alba and Marmorstein 1987; Petty and Cacioppo 1984). What it suggests is that strong relational processing, which can be fostered by a large quantity of ad claims that imply a single benefit, may give rise to inferences that can be used in determining judgments. Yet, as observed in the current study, such relationally processed inferences may not be sufficiently accessible to be used across judgments and thus yield heightened consistency between product judgments and consumption intentions. Of course, the extent to which this latter observation holds in other situations must await future research.

The current research also suggests fertile avenues for future research. Studies that examine the impact of relational and item-specific processing on various consumption decisions (e.g., judgments, intentions, choices) could better clarify the role of such processing on these and other important responses. Other useful extensions might include examining people's cognitive responses to ad claims, investigating other ways of stimulating relational and item-specific processing, and examining the effects of these different types of processing when messages concern high- versus low-involvement products (e.g., automobiles rather than detergents) or when people's involvement with a product varies for other reasons (e.g., differing product knowledge or immediate vs. distant need for the product). For example, because novices possess limited product knowledge, given low as opposed to high levels of involvement, they may be inclined to process ads using mostly relational (categorical) rather than item-specific (distinctive) elaboration. Thus, given low involvement, they may fail to appreciate characteristics that distinguish one product from another. On the other hand, experts may be more likely to spontaneously engage in both types of elaboration even under relatively low-involvement conditions.

Finally, in this research, manipulations that encouraged a type of processing other than that spontaneously prompted by the ad-claim set size showed no evidence of disrupting processing or performance. Nonetheless, future research might explore whether and when such disruption or interference might occur.

[*Received September 1990. Revised January 1990.*]

REFERENCES

Alba, Joseph W. and Howard Marmorstein (1987), "The Effects of Frequency Knowledge on Consumer Decision Making," *Journal of Consumer Research,* 14 (June), 14–25.

Alesandrini, Kathryn Lutz and Anees A. Sheikh (1983), "Research on Imagery: Implications for Advertising," in *Imagery: Current Theory, Research, and Application,* ed. Anees A. Sheikh, New York: Wiley, 535–556.

Anderson, John R. (1983), "A Spreading Activation Theory of Memory," *Journal of Verbal Learning and Verbal Behavior,* 22 (June), 261–295.

——— and Gordon H. Bower (1973), *Human Associative Memory,* Hillsdale, NJ: Erlbaum.

——— and Gordon H. Bower (1974), "A Propositional Theory of Recognition Memory," *Memory and Cognition,* 2 (July), 406–412.

Bower, Gordon H. (1970), "Organizational Factors in Memory," *Cognitive Psychology,* 1 (January), 18–46.

———, Alan M. Lesgold, and David Tieman (1969), "Grouping Operations in Free Recall," *Journal of Verbal Learning and Verbal Behavior,* 8 (August), 481–493.

Bransford, John D. and Jeffery J. Franks (1971), "The Abstraction of Linguistic Ideas," *Cognitive Psychology,* 2 (October), 331–350.

Brown, John (1976), "An Analysis of Recognition and Recall and of Problems in Their Comparison," in *Recall and Recognition,* ed. John Brown, London: Wiley, 1–35.

Calder, Bobby J. and Brian Sternthal (1980), "Television Commercial Wearout: An Information Processing View," *Journal of Marketing Research,* 17 (May), 173–186.

Childers, Terry L. and Michael J. Houston (1984), "Conditions for a Picture-Superiority Effect on Consumer

Memory," *Journal of Consumer Research,* 11 (September), 643–654.

Einstein, Gilles O. and R. Reed Hunt (1980), "Levels of Processing and Organization: Additive Effects of Individual-Item and Relational Processing, *Journal of Experimental Psychology: Human Learning and Memory,* 6 (September), 588–598.

Eysenck, Michael W. (1979), "Depth, Elaboration, and Distinctiveness," in *Levels of Processing in Human Memory,* ed. Laird S. Cermak and Fergus I. M. Craik, Hillsdale, NJ: Erlbaum, 89–118.

Fazio, Russell H., Martha C. Powell, and Carol J. Williams (1989), "The Role of Attitude Accessibility in the Attitude-to-Behavior Process," *Journal of Consumer Research,* 16 (December), 280–288.

Greenwald, Anthony G. and Clark Leavitt (1984), "Audience Involvement in Advertising: Four Levels," *Journal of Consumer Research,* 11 (June), 581–592.

Grier, J. Brown (1971), "Nonparametric Indexes for Sensitivity and Bias: Computing Formulas," *Psychological Bulletin,* 75 (May), 424–429.

Hastie, Reid and Donal Carlston (1980), "Theoretical Issues in Person Memory," in *Person Memory: The Cognitive Basis of Social Perception,* ed. Reid Hastie et al., Hillsdale, NJ: Erlbaum, 1–53.

——— and Bernadette Park (1986), "The Relationship between Memory and Judgment Depends on Whether the Judgment Task Is Memory-based or On-Line, *Psychological Review,* 93 (July), 258–268.

Hayes-Roth, Barbara (1977), "Evolution of Cognitive Structures and Processes," *Psychological Review,* 84 (May), 260–278.

Hunt, R. Reed, Jayne Ann Ausley, and E. Eugene Schultz, Jr. (1986), "Shared and Item-specific Information in Memory for Event Descriptions," *Memory and Cognition,* 14 (January), 49–54.

——— and Gilles O. Einstein (1981), "Relational and Item-specific Information in Memory," *Journal of Verbal Learning and Verbal Behavior,* 20 (October), 497–514.

——— and Catherine E. Seta (1984), "Category Size Effects in Recall: The Roles of Relational and Individual Item Information," *Journal of Experimental Psychology: Learning Memory and Cognition,* 10 (July), 454–464.

Keller, Kevin Lane (1987), "Memory Factors in Advertising: The Effect of Advertising Retrieval Cues on Brand Evaluations," *Journal of Consumer Research,* 14 (December), 316–333.

Kisielius, Jolita and Brian Sternthal (1986), "Examining the Vividness Controversy: An Availability-Valence Interpretation," *Journal of Consumer Research,* 12 (March), 418–431.

Leckenby, John D. and Nugent Wedding (1982), *Advertising Management,* Columbus, OH: Grid.

Lockhart, Robert S., Fergus I. M. Craik, and Larry L. Jacoby, (1976), "Depth of Processing, Recognition, and Recall: Some Aspects of a General Memory System," in *Recall and Recognition,* ed. John Brown, London: Wiley, 75–102.

MacInnis, Deborah J. and Linda L. Price (1987), "The Role of Imagery in Information Processing: Review and Extensions," *Journal of Consumer Research,* 13 (March), 473–491.

Mackie, Diane M. and Arlene G. Asuncion (1990), "On-Line and Memory-based Modification of Attitudes: Determinants of Message Recall-Attitude Change Correspondence," *Journal of Personality and Social Psychology,* 59 (July), 5–16.

Meyers-Levy, Joan and Alice M. Tybout (1989), "Schema Congruity as a Basis for Product Evaluation," *Journal of Consumer Research,* 16 (June), 39–54.

Ostrom, Thomas M., John H. Lingle, John B. Pryor, and Nehemia Geva (1980), "Cognitive Organization of Social Impressions," in *Person Memory: The Cognitive Basis of Social Perception,* ed. Reid Hastie et al., Hillsdale, NJ: Erlbaum, 55–88.

Petty, Richard E. and John T. Cacioppo (1984), "The Effects of Involvement on Responses to Argument Quantity and Quality: Central and Peripheral Routes to Persuasion," *Journal of Personality and Social Psychology,* 46 (January), 69–81.

Saegert, Joel and Robert K. Young (1983), "Levels of Processing and Memory for Advertisements," in *Advertising and Consumer Psychology,* ed. Larry Percy and Arch Woodside, Lexington, MA: Lexington, 117–131.

Srull, Thomas K. (1981), "Person Memory: Some Tests of Associative Storage and Retrieval Models," *Journal of Experimental Psychology,* 110 (December), 440–463.

Tversky, Amos (1977), "Features of Similarity," *Psychological Review,* 84 (July), 327–352.

Wright, Peter (1979), "Concrete Action Plans in TV Messages to Increase Reading of Drug Warnings," *Journal of Consumer Research,* 6 (December), 256–269.

Wyer, Robert S. and Donald E. Carlston (1979), *Social Cognition, Inference, and Attribution,* Hillsdale, NJ: Erlbaum.