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Associations to a contextual cue were contrasted with those of an advertised object when the cognitive resources devoted to message processing were substantial and when the categories to which the contextual cue and the advertised object belonged displayed low overlap. The absence of either of these factors prompted assimilation. A two-factor theory is offered to explain these outcomes.

A Two-Factor Explanation of Assimilation and Contrast Effects

Coyote Joe's is a restaurant near campus that serves southwestern fare. It is the latest in a long series of assorted restaurant types, including a pizzeria, a hamburger place, and a French restaurant, that have opened and quickly closed in a seemingly well-situated retail location. What is paradoxical about this observation is that though each of these restaurants failed, similar restaurants subsequently have opened and apparently succeeded in the same general area.

Observations such as these seem to suggest that consumers may expect the history associated with a retail location to repeat itself; that is, they may anticipate and thus perceive that the presumably unsatisfactory aspects of a previous occupant of a retail space are revisited in future occupants. This phenomenon is an instance of a more general set of outcomes where there is a positive relationship between the value consumers place on a target stimulus and the value they place on the contextual cue that accompanies the target. This phenomenon generally is referred to as assimilation (Martin, Seta, and Crelia 1990).

Assimilation is not the only relationship that can be observed between a target and its context. For example, there are two successful restaurants in the same general area as Coyote Joe's, one a trendy bistro that occupies the site of a former auto body repair shop and the other a popular breakfast spot that inhabits a building that previously housed a funeral parlor. In yet another such instance, a casual clothing store in the area (The Gap) flourishes at a site that previously was inhabited by a rat-infested movie theater. This negative relationship between the value people place on the context and the value they place on the target is referred to as a contrast effect (Martin, Seta, and Crelia 1990).

The pervasiveness with which context effects are likely to occur in marketing settings suggests that an understanding of assimilation and contrast effects is of substantial interest. Indeed, in applied settings the context provided by programming, editorial material, and other advertising is likely to affect the impact of a contiguously presented target ad. Likewise, associations to a brand normally used may influence judgments of alternative brands and vice versa. As a starting point in understanding how such contexts affect the evaluation of a target object, we will briefly review the assimilation-contrast literature.

EXPLAINING ASSIMILATION AND CONTRAST EFFECTS

Sherif and Hovland's (1961) seminal research, which suggests that judgments of objects can be affected by contextual factors, has provided the impetus for exploring the robustness of assimilation and contrast effects. These outcomes have been observed in assessments of people (Herr 1986; Lombardi, Higgins, and Bargh 1987; Manis, Nelson, and Shedler 1988), groups (Wilder and Thompson 1988) and objects (Herr 1989; Herr, Sherman, and Fazio 1983; Shimp, Stuart, and Engle 1991), as well as in self-assessments (Strack, Schwarz, and Gschneidinger 1985).

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Two disparate explanations have been offered to account for assimilation and contrast effects. One view, which has been advanced by Herr (1989), suggests that the extent of feature overlap between a context and a target object determines whether assimilation or contrast is found. The other view, suggested by Martin, Seta, and Crelia (1990) interprets context effects in terms of the cognitive resources devoted to the judgment task. We review these alternative explanations briefly and then offer a way of integrating notions of feature overlap and cognitive resources to provide a more comprehensive account of instances in which assimilation and contrast are likely to occur.

Representative evidence for the feature overlap view is reported in a recent marketing study conducted by Herr (1989). As part of his study, Herr used a priming task to introduce contextual cues to people who were knowledgeable about cars. In the moderate contextual cue condition, the cues were either moderately inexpensive cars (e.g., Tercel) or moderately expensive cars (e.g., Mazda RX-7), whereas in the extreme condition, the contextual cues were either very inexpensive (e.g., Ford Pinto) or very expensive cars (e.g., Mercedes Benz).

Then subjects were asked to make an ostensibly unrelated judgment about the price of a fictitious and thus unfamiliar car. Evidence for assimilation was found in the moderate cue condition: Subjects judged the price of the fictitious target car to be higher when the contextual cues were moderately expensive rather than inexpensive cars. In the extreme condition, a contrast effect was observed, in that subjects judged the fictitious car to be more expensive when the contextual cues were very inexpensive rather than very expensive cars.

In outlining the process thought to underlie such effects, Herr, Sherman, and Fazio (1983) suggest that upon encountering an unfamiliar target object or product, an individual attempts to categorize it conceptually, often by using a category that is most accessible because of its contextual activation. If the features of the contextual cues and the target product share considerable overlap, the product will be categorized as a member of the same category as that activated by the contextual cues. Accordingly, judgments concerning various aspects of the product will be made by assigning them the average level of this category on the dimension in question. Presumably it is this process that accounts for why assimilation has been observed when a target product is unfamiliar and the contextually activated subordinate category is moderately extreme (e.g., the moderately expensive car category), because under such conditions the overlap between the target product and the category is likely to be high.

When the category activated by the contextual cues and the unfamiliar target product share little or no overlap in features, as is likely to occur when an extreme conceptual subcategory is considered (e.g., very expensive cars), contrast occurs. This is explained by noting that, while the product is unlikely to be categorized as a member of the category activated by the contextual cues, the value of that category on the dimension in question is likely to be employed as a relevant end point on an individual's subjective rating scale for that dimension. Hence, because the extreme category associated with the contextual cues is likely to serve as an anchor or standard of comparison when judging the product, judgments of the unfamiliar target product are likely to be displaced from that category or product, resulting in a contrast effect.

Herr's findings and those cited earlier provide impressive evidence documenting the existence of context effects, and his notion of overlap seems to offer a reasonable account of the process by which these effects might occur. However, recent evidence indicates that assimilation and contrast can occur in the absence of variations in contextual cue-target object overlap (Martin 1986; Martin, Seta, and Crelia 1990). This research suggests that the level of cognitive resources or the effort people expend in making a judgment also plays an important role in determining the nature of the resulting context effect.

Along these lines, Martin, Seta, and Crelia (1990) used people's need for cognition as an indicator of effort and examined how it influenced the type of judgments made. People with a high need for cognition were found to exhibit a contrast effect, whereas people with a low need for cognition engaged in assimilation. These outcomes were explained by suggesting that only those with a high need for cognition expended the effort necessary to suppress associations to the contextual cues and to interpret the target object in terms of alternate and antithetic associations, thereby encouraging a contrast effect. People with a low need for cognition apparently used the less taxing assimilation strategy of simply applying the associations prompted by the context to the target object.

OVERVIEW OF THE STUDY

In the present research, we attempt to extend the current analysis of context effects in two ways. One theoretical extension entails reconciling Martin's notion of cognitive effort expended during processing and Herr's idea of contextual cue-target object overlap by incorporating both of these concepts in a two-factor theory of assimilation-contrast. We suggest that contrast will occur when two conditions are met: (1) the cognitive resources available at judgment are substantial and (2) there is little overlap between the contextual cue(s) and the target object. In the absence of either of these conditions, assimilation is expected. Support for these predictions would imply that two-factor theory offers a more parsimonious explanation than do currently available alternatives.

A second extension is directed toward exploring the robustness of assimilation-contrast investigations in marketing settings. Typically, assimilation and contrast effects are achieved by using a priming task to present multiple contextual cues, all implying a common theme,

prior to and separate from the target object information. These demonstrations are of limited marketing interest, because in applied settings it is seldom possible to control all of the environmental cues in which an appeal is presented. Assimilation and contrast research would be of greater practical importance if these phenomena were shown to emerge when a single contextual cue was presented as part of the target object message, because it would suggest that context effects could be subject to strategic control by careful selection of message content. In the present experiment, a single contextual cue is presented within a message describing a target object to ascertain whether assimilation and contrast can occur in this situation.

Also of practical concern is the robustness of assimilation and contrast effects when the type of contextual cue employed is more in keeping with strategic concerns than has been the case in previous investigations. In those studies, the contextual cues used have shared membership in the same basic level category as the target object (e.g., all were brands of cars). Yet in applied settings, it may be undesirable or inappropriate to link a target product with its potential direct competitors. This raises the question of whether context effects will occur when the contextual cue holds membership in a different basic level category from the target object. For example, would the assessment of a target car be influenced by a contextual cue that represented a clothing store?

While empirical work is needed to resolve this issue, two outcomes seem plausible. One possibility is that consumers will view as irrelevant a contextual cue that holds membership in a different basic level category from the target product. In this case, neither assimilation nor contrast effects should occur on judgments. Alternatively, the contextual cue might operate in the same manner as has been found previously when there is little overlap between the associations to the contextual cue and the target object (e.g., Herr 1989). In this event, a contrast effect might emerge, provided that the consumer devotes sufficient resources to the low overlap. We investigate these alternative possibilities in the present research.

Operationally, this issue was examined by presenting subjects with an advertising message for a new restaurant that they would later evaluate. The message described various features of the restaurant. In addition, it specified the previous occupant of the building that currently housed the new restaurant. This information represented the contextual cue, which served as one independent variable.

Contextual cues that possessed different types of associations were used to enable assimilation and contrast effects to be detected. Specifically, the contextual cues we selected varied according to whether they represented a casual or an elegant establishment. The influence of the cues' casual or elegant implications on the new restaurant judgments was assessed on several establishment judgment scales. The contextual cues also differed in how favorably they were perceived. Pretest subjects indicated that the more casual establishment was regarded less favorably than the elegant one. The impact of this difference in contextual cue favorableness on new restaurant judgments was assessed by administering several overall evaluation measures. Evidence for assimilation would occur if establishment judgments and overall evaluations reflected more elegant/positive associations when the contextual cue was elegant rather than casual, whereas the reverse outcome would imply contrast.

The second independent variable represented the extent to which there was overlap between the category in which the contextual cue held membership and that of the new restaurant. In the high category overlap condition, another restaurant that was likely to be perceived as either elegant and favorable or casual and relatively unfavorable was identified as the prior occupant of the space. In the low overlap condition, the prior occupant was a clothing store that varied in how elegant and favorable people were likely to perceive it. Thus, evidence for assimilation would occur if judgments of the target restaurant were positively related to the associations of the prior occupant. A negative relation would imply contrast.[1]

The third independent variable was introduced to examine how variations in cognitive resources affect the incidence of assimilation and contrast. For this purpose, a cognitive style measure was administered, because this type of measure is thought to capture the level of processing effort that individuals are likely to devote to tasks involving discrepant elements, such as those represented by low category overlap conditions (Kelman and Cohler 1959).

Some people, called *clarifiers*, have been found to react to such discrepancy or incongruity by effortfully reexamining their beliefs and performing processing that helps clarify the situation (Cox 1967). Thus, clarifiers are prone to expend considerable cognitive resources to address discrepancies. On the other hand, *simplifiers* appear to expend little cognitive effort in such situations. Instead, these individuals prefer to simplify discrepancies and keep out incongruous elements by avoiding, denying, or perhaps distorting them.

Simplifiers' and clarifiers' responses to variations in contextual cue overlap were examined on several measures. Included in these were the establishment judgment

[1]As is normal practice, we assessed whether and which context effects occurred by examining whether associations to the contextual cue and subjects' responses to the dependent measures were positively (assimilation) or negatively (contrast) related. Theoretically, context effects also could be identified if subjects' responses to the target restaurant were assessed in the absence of any contextual cue. If in relation to these "context-free" responses, subjects' context-dependent responses moved toward (away from) the contextual cue ratings, an assimilation (contrast) effect would be implied. However, because subjects may invoke a mental context when making their "context-free" responses that renders these responses context-dependent, this procedure is infeasible operationally.

and overall evaluation measures mentioned earlier. Subjects' thoughts also were measured using the procedure developed by Greenwald (1968), which was intended to provide additional insight into the nature of the associations that prompt assimilation and contrast.

PREDICTIONS

Several predictions were made on the basis of two-factor theory. We anticipated that only clarifiers would devote sufficient cognitive resources to the message and judgment tasks so that they alone would be sensitive to and assess variations in contextual cue-target object overlap. Specifically, when the target object and the contextual cue were both restaurants and thus shared high overlap, clarifiers were expected to exhibit an assimilation effect. This was expected to occur because clarifiers should appreciate the high overlap, and as a result, their thoughts about the contextual cue would likely become associated with the target restaurant. Therefore, the inclusion of an elegant and more positively regarded contextual cue in the message should foster evaluations of the target restaurant that reflect such elegant/favorable associations as well as stimulate the production of more positive thoughts and fewer negative thoughts than the inclusion of a relatively negative contextual cue. Moreover, assimilation of the contextual cue and target object under such high overlap conditions should lead subjects to perceive similarities between these two objects, resulting in their generation of more (fewer) thoughts concerning the elegant (casual) nature of the target restaurant when the contextual cue represents an elegant rather than casual establishment.

When the target object and contextual cue belonged to different basic level categories and thus shared low overlap, clarifiers were expected to expend the resources necessary to seize on the low contextual cue-target object overlap and make an effort to use the associations prompted by the contextual cue as a reference point or scale anchor in rendering judgments. Hence, upon exposure to a more elegant, favorably regarded contextual cue, we anticipated that clarifiers would exhibit a contrast effect, judging the target restaurant to be less elegant/favorable and producing fewer positive and more negative thoughts. This contrast effect also should be reflected in subjects' inferences about the target restaurant, so that clarifiers should produce more (fewer) thoughts about the elegant (causal) nature of the restaurant when the contextual cue represents a casual rather than an elegant establishment.

On the other hand, it seemed unlikely that simplifiers would activate sufficient cognitive resources to attend to or assess the degree of overlap between the target object and the contextual cue and engage in a more effortful, contrastive judgment process. Accordingly, they were expected to engage in a less effortful assimilation process, producing judgments that reflected superficial similarities between the target object and contextual cue (e.g., common overall favorableness), regardless of whether overlap was high or low. Accordingly, they should produce the same pattern of responses as do clarifiers under high category overlap conditions.

METHOD

Stimuli Development

An ad for a restaurant was developed by drawing on restaurant ads and magazine reviews. The ad described the decor, service, location, and type of food offered by the restaurant (see the Appendix). In designing the ad, it was important that the description not prompt extreme evaluations, because very favorable or very unfavorable evaluations of the restaurant would be likely to limit the extent to which the effect of context could be manifested. As a result, superlatives and other extreme claims were avoided in the ad. This feature of the ad did not compromise its representativeness, because our analysis of actual restaurant ads revealed that they often contained simple and general characterizations of the establishment's food and ambiance (e.g., classic California cuisine).

The ad had an important purpose beyond conveying information about the restaurant. It served to introduce a contextual cue, which was the name of the previous occupant of the restaurant's location. To be useful in detecting assimilation and contrast, the contextual cue had to be one of several businesses that varied qualitatively in the nature of its merchandise, ambiance, and patrons. To test our hypotheses, it also was necessary that the contextual establishments were familiar to subjects and that they shared membership in the restaurant category or were from a category other than restaurants.

A pretest was conducted to check people's perceptions of the restaurant description. Sixteen subjects rated the target restaurant description on five 7-point scales anchored with adjectives such as casual/intimate, lively/subdued, friendly/unfriendly, etc. (These same scales were employed in the main study.) Higher ratings represented characteristics that were more consistent with elegant establishments than with casual ones. Results revealed that, as desired, the restaurant described in the ad was not perceived in an extremely favorable or unfavorable manner ($\bar{X} = 4.02$).

An additional study was conducted to help select the contextual cues. Forty-nine subjects were given the names of a variety of establishments. Some of these establishments were restaurants that might serve as contextual cues in the high category overlap condition. The remaining establishments were clothing stores that might be used as cues that had little overlap with the target restaurant. Respondents rated the restaurants and clothing stores on the same adjective rating scales as were used before.

Based on the subjects' responses, four contextual cues were selected—two from the restaurant category, McDonalds and Le Francais, and two from the clothing store category, The Gap and Gucci. Overall, McDonald's ($\bar{X} = 3.00$) and Le Francais ($\bar{X} = 5.04$) were

perceived differently on the dimensions examined ($t(48) = -17.14$, $p < .001$). The same was true of The Gap ($\bar{X} = 3.40$) and Gucci ($\bar{X} = 5.17$; $t(48) = -13.01$, $p < .001$). More specifically, compared to Le Francais and Gucci, McDonald's and The Gap were perceived as more casual, lively, friendly, etc. The ratings of Le Francais and Gucci were similar to each other on these dimensions, as were those of McDonald's and The Gap ($ps > .15$).[2]

Procedure

One hundred forty-nine subjects were recruited for the study by placing signs around campus. Subjects received $5 for their participation. A booklet containing an ad for the target restaurant was randomly distributed to the research participants. The cover page of the booklet explained that participants' candid opinions were sought about a new venture that would be described in an ad that followed. Then subjects read the ad, which included a phrase containing a contextual cue. The previous occupant of the establishment's location served as the contextual cue. One of two restaurants (McDonald's or Le Francais) or one of two clothing stores (The Gap or Gucci) was used for this purpose.

After reading the ad, subjects completed several judgment measures on 7-point scales. First, their views about the nature of the establishment were examined on five items anchored by casual/intimate ambience, lively/subdued decor, wide/narrow assortment, lax/attentive service, and friendly/unfriendly service. Then, five items were administered to assess subjects' overall evaluations of the target restaurant. These items were anchored by bad/good, a place I'd dislike/like, inferior/superior, unenjoyable/enjoyable, and a place I would not try/might try. Because each of these sets of five items formed reliable scales, each set was averaged to form separate establishment judgment ($\alpha = .71$) and overall evaluation ($\alpha = .92$) indices. These measures were followed by a cognitive response task in which subjects were asked to spend up to 3 minutes listing all thoughts that occurred to them concerning the stimulus restaurant.

Several other measures were administered next. One was a recall task in which subjects were asked to write down everything they remembered from the ad. The number of restaurant features recalled from the ad were counted and served as a dependent measure. Subjects also were asked to indicate whether or not they agreed with twelve "personal preference statements," which constituted the cognitive style measure (Cox 1967).[3]

Using a median split, subjects were classified as simplifiers or clarifiers. The scores of these two groups differed significantly ($t(142) = -16.23$, $p < .001$). To interpret whether subjects' affect toward the contextual cues was assimilated or contrasted with the target restaurant on overall evaluations, subjects rated their favorableness toward each of the contextual cues on 7-point scales anchored by extremely unfavorable and extremely favorable. Finally, subjects completed several demographic measures and were asked what they felt was the purpose of the study. No one guessed the study's true purpose.

RESULTS

The experimental procedures yielded a three-factor design that included category overlap (low, high), contextual cue (casual/unfavorable, elegant/favorable) and cognitive style (simplifiers, clarifiers). In analyzing the effects of these treatments, the adequacy of the manipulations was checked first. Then the effect of the experimental conditions on subjects' evaluations and cognitive responses was examined.

Manipulation Checks

Subjects' favorableness toward the contextual cues was assessed to help interpret the meaning of the overall evaluations. As might be expected, Le Francais restaurant was rated more favorably than McDonald's ($\bar{X} = 5.17$ vs. 2.93; $t(140) = 12.46$, $p < .001$, $\omega^2 = .06$), and the Gucci clothing store was viewed more favorably than The Gap ($\bar{X} = 5.80$ vs. 4.57; $t(140) = 8.16$, $p < .001$, $\omega^2 = .06$). Both of these differences held for simplifiers ($\bar{X} = 5.24$ vs. 3.05; $\bar{X} = 5.87$ vs. 4.49) as well as clarifiers ($\bar{X} = 5.04$ vs. 2.84; $\bar{X} = 5.77$ vs. 4.68) and each was significant at the $p < .001$ level. This implies that evidence for assimilation would be obtained if subjects' overall evaluations of the target restaurant were more favorable upon exposure to the Le Francais or Gucci contextual cue rather than the McDonald's or The Gap contextual cue. The opposite outcome would imply contrast.

Next, we examined subjects' recall of the restaurant description, because this measure should indicate the ex-

[2]We might note that we conducted a preliminary study in which the influence of our contextual cue establishments (e.g., McDonald's or The Gap) on judgments of either a same basic level category stimulus establishment (a restaurant or a clothing store) or a different basic level category stimulus establishment (a clothing store or a restaurant) was assessed, but the influence of variations in cognitive effort was not examined. As might be expected, subjects assimilated their associations to the contextual cue establishments with those of the stimulus establishment when both businesses were members of the same basic level category. For example, they judged patrons of the stimulus restaurant (clothing store) to be less formal when the contextual cue was McDonald's (The Gap) rather than Le Francais (Gucci). However, judgments of the stimulus establishment were unaffected by the contextual cue establishments when both of the establishments were members of different basic level categories. Presumably, contrast effects were not observed in this low category overlap condition because the judgments of subjects who devoted high cognitive effort to the task (i.e., those likely to exhibit contrast effects) were aggregated with those of assimilation-prone cognitively conservative subjects.

[3]The cognitive style measure assessed whether or not subjects agreed with statements such as "there is more than one right way to do anything," "nobody can have feelings of love and hate toward the same person," etc.

tent to which the cognitive style measure captured variations in subjects' expenditure of cognitive resources. Because relative to simplifiers, clarifiers are thought to expend greater cognitive resources, we anticipated that clarifiers would recall more information about the target restaurant. Consistent with this expectation, cognitive style had a significant effect on recall ($F(1,135) = 4.62, p < .03, \omega^2 = .03$), indicating that clarifiers' recall ($\bar{X} = 7.71$) was higher than that of simplifiers ($\bar{X} = 6.94$).

Evaluations

Treatment means for the evaluation and all other measures are presented in Table 1. Furthermore, Table 2 reports two types of mean difference ratings that assist interpretation of the outcomes. The first ratings are contextual cue association difference scores. These scores represent the differences between the responses that subjects produced under varying overlap conditions when the contextual cues possessed elegant/positive associations (Le Francais or Gucci) versus casual/negative associations (McDonald's or The Gap). For both of the evaluation measures and for the proportions of thoughts produced concerning either positive or elegant aspects of the target restaurant, a positive difference score implies evidence of assimilation, whereas a negative difference score indicates a contrast effect. The reverse is true for the proportions of thoughts concerning either negative or casual aspects of the target restaurant.

Table 2 also reports the category overlap difference scores. These scores represent the differences between the responses that subjects produced to the varying contextual cues under high overlap (Le Francais or McDonald's) versus low overlap (Gucci or The Gap) conditions. For this analysis, the absolute size of the difference score provides an indication of the magnitude of the context effects produced, with larger absolute values representing stronger effects.

A MANOVA performed on the establishment judgment and overall evaluation indices revealed a three-way interaction of category overlap, contextual cue type, and cognitive style ($F(2,130) = 4.57, p < .01$).[4] This interaction was significant for both the former ($F(1,131) = 3.82, p < .05, \omega^2 = .08$) and the latter index ($F(1,131) = 8.38, p < .01, \omega^2 = .09$).

Planned contrasts performed on these interactions indicated that clarifiers exhibited the anticipated assimilation effect when the stimulus restaurant and the contextual cue displayed high overlap. That is, when both the establishment described in the stimulus and that which previously occupied its location were restaurants (high category overlap), clarifiers rated the establishment more favorably overall ($F(1,133) = 6.92, p < .01$) and more intimate ($F(1,133) = 3.95, p < .05$) when the contextual cue was the more favorable/elegant Le Francais rather than the less favorable/casual McDonald's. But when there was little overlap between the target restaurant and the contextual cues, clarifiers exhibited a contrast effect on both the overall evaluation and establishment judgments. Specifically, clarifiers rated the establishment more favorably overall ($F(1,133) = 7.08, p < .01$) and more intimate ($F(1,133) = 5.52, p < .02$) when the contextual cue was the less favorable/casual The Gap rather than the more favorable/elegant Gucci.

Also, as anticipated, simplifiers exhibited an assimilation effect across the high and low overlap conditions. The restaurant was rated as marginally more favorable overall ($F(1,133) = 2.75, p < .10$) and significantly more intimate ($F(1,133) = 3.98, p < .05$) when the contextual cue was associated with more positively viewed, elegant offerings (Le Francais or Gucci) rather than less favorably regarded casual ones (McDonald's or The Gap).

Cognitive Responses

Subjects' thoughts were coded as positive, negative, or neutral by two judges who were blind to the treatments. These data were analyzed as proportions and

[4]To simplify our findings, we report only the most encompassing higher order effects observed on this and all other measures.

Table 1
TREATMENT MEANS FOR EVALUATIONS AND MEMORY MEASURES

	Simplifiers				*Clarifiers*			
	High Overlap		*Low Overlap*		*High Overlap*		*Low Overlap*	
	Elegant	*Casual*	*Elegant*	*Casual*	*Elegant*	*Casual*	*Elegant*	*Casual*
Establishment Judgment Index	5.01	4.60	5.22	4.92	5.32	4.95	4.67	5.29
Overall Evaluation Index	5.38	5.09	5.55	5.11	5.48	4.57	4.44	5.41
Proportion of Positive Thoughts	.56	.16	.37	.20	.35	.18	.09	.19
Proportion of Negative Thoughts	.06	.28	.07	.32	.16	.37	.40	.13
Proportion of Neutral Thoughts	.62	.86	.80	.63	.64	.72	.72	.91
Proportion of Casual Thoughts	.10	.28	.01	.14	.11	.23	.28	.12
Proportion of Elegant Thoughts	.11	.09	.26	.18	.34	.05	.04	.30
Recall of Message	6.63	7.00	6.50	7.65	7.56	7.41	7.56	8.31

Table 2
CONTEXTUAL CUE ASSOCIATION AND CATEGORY OVERLAP DIFFERENCE SCORES

	*Contextual Cue Association Difference Scores**			
	Simplifiers		*Clarifiers*	
	High Overlap	*Low Overlap*	*High Overlap*	*Low Overlap*
Establishment Judgment Index	.41	.30	.37	−.62
Overall Evaluation Index	.29	.44	.91	−.97
Proportion of Positive Thoughts	.40	.17	.17	−.10
Proportion of Negative Thoughts	−.22	−.25	−.21	.27
Proportion of Casual Thoughts	−.18	−.13	−.12	−.16
Proportion of Elegant Thoughts	.02	.08	.29	−.26
	*Category Overlap Differences Scores***			
	Simplifiers		*Clarifiers*	
	Elegant Cue	*Casual Cue*	*Elegant Cue*	*Casual Cue*
Establishment Judgment Index	−.21	−.32	.65	−.34
Overall Evaluation Index	−.17	−.02	1.04	−.84
Proportion of Positive Thoughts	.19	−.04	.26	−.01
Proportion of Negative Thoughts	−.01	−.04	−.24	.24
Proportion of Casual Thoughts	.09	.14	−.17	.11
Proportion of Elegant Thoughts	−.15	−.09	.30	−.25

*Differences between cell means in the elegant/positive and casual/negative contextual cue conditions
**Differences between cell means in the high and low overlap conditions.

therefore subjected to arc sin transformations.[5] In addition, thoughts that specifically mentioned or elaborated on the casual (e.g., "it's sort of a relaxed family dining place") or the elegant nature of the restaurant (e.g., "sounds like a haute cuisine restaurant") were recorded.

A MANOVA performed on the proportions of positive and negative thoughts revealed that the three-way interaction of category overlap, contextual cue type, and cognitive style approached significance ($F(2,135) = 2.44$, $p < .09$). Apparently, this occurred because the interaction was significant for the proportion of negative thoughts ($F(1,136) = 4.78$, $p < .03$, $\omega^2 = .08$) but not positive thoughts ($F < 1$). As predicted, when the target restaurant and the contextual cue displayed high overlap, clarifiers' negative thoughts reflected assimilation in such a way that more of these thoughts were elicited when the contextual cue reflected less favorable/casual (McDonald's) offerings rather than more favorable/elegant (Le Francais) ones ($F(1,136) = 3.73$, $p < .055$). Yet when the target restaurant and contextual cue displayed low overlap, clarifiers' thoughts reflected a contrast effect, whereby more negative thoughts were generated when the contextual cue was associated with the more favorably regarded elegant rather than less favorably viewed causal offerings ($F(1,136) = 5.01$, $p < .03$). On the other hand, simplifiers uniformly exhibited an assimilation effect. Regardless of category overlap, they generated a greater proportion of negative thoughts when the contextual cue implied less favorable/casual offerings rather than more favorable/elegant ones ($F(1,136) = 7.92$, $p < .01$).

The MANOVA also revealed two other effects that were significant for the proportions of positive as well as negative thoughts. The type of contextual cue interacted with category overlap ($F(2,135) = 3.37$, $p < .04$). This effect was significant for positive ($F(1,136) = 4.40$, $p < .04$, $\omega^2 = .06$) and negative thoughts ($F(1,136) = 3.93$, $p < .05$, $\omega^2 = .05$). High overlap produced an assimilation effect on positive ($F(1,136) = 11.58$, $p < .001$) and negative thoughts ($F(1,136) = 7.82$, $p < .01$), whereas low overlap produced no effects ($Fs < 1$).

Similarly, contextual cue type interacted with cogni-

[5]No treatment effects on the proportion of neutral thoughts were predicted or significant.

tive style ($F(2,135) = 3.81$, $p < .03$)—an effect that was significant for both positive ($F(1,136) = 4.36$, $p < .04$, $\omega^2 = .06$) and negative thoughts ($F(1,136) = 5.06$, $p < .03$, $\omega^2 = .07$). Simplifiers exhibited an assimilation effect for positive ($F(1,136) = 10.52$, $p < .001$) and negative thoughts ($F(1,136) = 7.92$, $p < .01$), while clarifiers were unaffected by the contextual cues ($Fs < 1$). Thus, while the overall pattern of subjects' positive thoughts mimicked that of evaluations (see Table 1), only the assimilation effects achieved significance. This may have occurred because all the subjects felt obliged to produce substantial positive thoughts, which weakened evidence of a contrast effect.

Next, a MANOVA was performed on subjects' thoughts that pertained to either the casual or the elegant nature of the target restaurant, revealing a significant three-way interaction of category overlap, contextual cue type, and cognitive style ($F(2,135) = 7.39$, $p < .001$). This interaction was significant for elegant thoughts ($F(1,136) = 14.31$, $p < .001$, $\omega^2 = .09$), and it approached significance for casual thoughts ($F(1,136) = 2.57$, $p < .12$, $\omega^2 = .08$).

Planned contrasts performed on these measures revealed the expected pattern of effects. When the contextual cue and the stimulus restaurant displayed high overlap, clarifiers exhibited an assimilation effect, generating more thoughts about the restaurant's casual nature ($F(1,136) = 6.51$, $p < .01$) and fewer ones about its elegant nature ($F(1,136) = 13.86$, $p < .001$) when the contextual cue establishment implied casual offerings rather than elegant ones. However, when overlap between these items was low, clarifiers exhibited a contrast effect. They generated more thoughts about the restaurant's casual nature ($F(1,136) = 4.63$, $p < .03$) and fewer thoughts about its elegant nature ($F(1,135) = 9.33$, $p < .01$) when the contextual cue was associated with elegant rather than casual offerings. At the same time, simplifiers generally exhibited an assimilation effect regardless of the contextual cue-target restaurant overlap. They generated more thoughts about the casual elements of the restaurant ($\bar{X}s = .21$ vs. $.06$; $F(1,136) = 8.97$, $p < .01$) and nonsignificantly fewer thoughts about the restaurant's elegant elements ($\bar{X}s = .13$ vs. $.18$; $F < 1$) when the contextual cue exemplified a casual rather than an elegant establishment.

Meditation Analysis

Regression analysis examined the extent to which various types of subjects' thoughts mediated their evaluations. A composite evaluation measure, which reflected the MANOVA centroids derived from the establishment judgment and overall evaluation indices, served as the criterion measure. The proportions of positive and negative thoughts, as well as thoughts concerning the casual and the elegant nature of the target restaurant, were the predictor variables. This analysis revealed that positive ($\beta = .20$, $t = 2.94$, $p < .01$), negative ($\beta = -.50$, $t = -6.94$, $p < .001$), and elegant ($\beta = .17$, $t = 2.45$, $p < .02$) thoughts were significant predictors of evaluations, whereas casual thoughts were not ($\beta = -.01$, $t < 1$).

DISCUSSION

The present research suggests that a two-factor theory can account for the assimilation and contrast effects reported here and in the literature. As Herr's (1989) analysis suggests, exposure to a contextual cue is likely to activate associations that can influence people's thoughts about and judgments of a target object. The degree of overlap between the contextual cue and target object is one factor that can play an important role in determining whether elaboration about the target object focuses on its similarities or its differences with the contextual cue.

However, the extent to which this overlap influences the type of elaboration that occurs appears to be dependent on a second factor, namely the level of cognitive resources people devote to the judgment task (Martin, Seta, and Crelia 1990). The emerging view is that people are likely to engage in the elaboration of differences and enact more effortful, contrastive judgment processes only when there is both low contextual cue-target object overlap and when people devote substantial resources to the task. When the resources applied to the task are limited, and/or when overlap is high, people are more likely to elaborate on similarities and engage in the less effortful judgment process of assimilation.

Our research represents theoretical progress by showing that context effects may be better explained when Herr's notion of overlap and Martin's concept of cognitive effort are integrated in a two-factor theory than when either of these notions is considered in isolation. The context effects we report not only are more parsimoniously explained by two-factor theory than other substantive views, they also are not susceptible to methodological accounts such as a response language-based explanation (Lynch, Chakravarti, and Mitra 1991). If our evaluation results were to be accounted for in terms of how subjects used the response scales, the observation that simplifiers engaged in assimilation and clarifiers engaged in contrast under conditions of low overlap would have to be explained in terms of differences in how these individuals used the evaluation scales. This assertion seems implausible, given that both simplifiers and clarifiers appeared to use the scale in the same way when overlap was high. Moreover, the observation of assimilation and contrast effects on the freely elicited cognitive response measures offers additional testimony for the implausibility of response language in explaining our data.

Our findings and two-factor theory also suggest some implications that are of considerable practical significance. They imply that ads featuring a product in the context of exceptional same-product category members are likely to be effective regardless of how much effort people expend on processing the ad message. An example of such an ad is one for a $28 Parker pen that

mentions Parker's $2500 pure gold pen. The high overlap between the focal and contextual products in this ad should encourage all viewers to focus on similarities between the products and foster a judgment-enhancing assimilation effect.

More suspect are ads that contain a positively regarded low category overlap contextual cue. For example, a series of ads for the Lincoln Town Car refer to it as "out of the ordinary" and illustrate this concept by using contextual objects from different categories (e.g., caviar, a Faberge egg). Assuming these contextual objects are favorably regarded, our findings suggest that these low overlap ads may enhance the evaluations of cognitively conservative viewers who should assimilate the objects. However, they are likely to undermine the judgments of effortful processors, such as prospective car buyers, by encouraging differences elaboration and a contrast effect.

Our data also offer a rationale for the otherwise difficult to explain strategy of presenting negative information in ads that seemingly is unrelated to the product. For example, Maidenform recently ran a print ad that mocked the use of sexist language by showing objects used to refer demeaningly to women (e.g., chick). Further, Benetton has a highly controversial print campaign in which victims of AIDS, crime, and brutal treatment are pictured. Our research suggests that such distressing scenes, which may provoke much attention and processing but have little overlap with the focal product, are likely to foster contrast effects and thus produce favorable evaluations. Future research should investigate these predictions.

Our data also suggest a number of other potentially fruitful avenues for future research. For example, the robustness of the two-factor view might be further tested by introducing alternative means of varying the cognitive resources devoted to information processing and by manipulating whether focus centers on how the contextual cue and target object are similar or different. Along these lines, information repetition might be used to vary cognitive resources, and the nature of the judgment task could be varied to emphasize a product's uniqueness or similarity to existing products. If two-factor theory is correct, contrast will be observed only when, because of repetition, cognitive resources are substantial and differences are focal; otherwise, assimilation is anticipated.

Future research also might explore two pragmatic guidelines for selecting contextual cues that are implied by our findings. One concerns the strength of the relationship between the contextual cue and the target object. In previous research where the presentation of the contextual cue and target object were separated in time and therefore weakly linked, multiple contextual cues/presentations have been used to produce context effects (e.g., Herr 1989). Yet, in our research, where the contextual cue and target object presumably were more strongly linked because the cue was presented within an appeal for the target object, the presence of a single contextual cue was sufficient to produce context effects. This may imply that when the link between these two items is relatively weak, a more potent presentation of the contextual cue may be needed to produce a context effect. This deduction should be tested by simultaneously varying the number of contextual cues presented and whether or not the cues are presented separate from the message for the target object.

A second practical deduction suggested by our data is that in contexts that elicit effortful processing, contrast effects can be produced without identifying offerings that are directly competitive with a target object. As our data show, contrast effects can occur when a contextual cue and a target object hold membership in such disparate categories as restaurants and clothing stores. This outcome may have obtained because people readily conjured up a commonality between these objects that facilitated the use of a clothing store as a referent for judging a restaurant (e.g., both are retail establishments). This line of reasoning would gain greater credibility if the demonstration of a contrast effect was shown to depend on whether the accessibility of the relationship between a contextual cue and target object was enhanced or impeded.

APPENDIX
EVEYLON'S RESTAURANT

If you enjoy good food and a pleasant environment, Eveylon's may be in order. Eveylon's restaurant offers an appetizing assortment of beef, poultry, and seafood. These favorites are consistently fresh, flavorful, and tastefully prepared. In addition, the restaurant serves a variety of tasty desserts including pies, cakes, pastries, and ice cream. You will dine at neatly arranged tables and booths in a room that highlights the restaurant's aqua and gray tones. The experience is enhanced by the mix of classical and contemporary music that is played softly through the room and by the opportunity to select from among Eveylon's broad assortment of wines. Service is prompt and pleasant. So for those who desire pleasant dining, Eveylon's will be a good choice. New to the city, Eveylon's is in a building that was formerly occupied by (contextual cue). Eveylon's is open for dinners and Sunday brunch. Reservations can be made, and free parking is available. Eveylon's honors major credit cards.

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