

Context Effects in Diverse-Category Brand Environments: The Influence of Target Product Positioning and Consumers' Processing Mind-Set

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We investigate the apparent rarity of contrast effects in diverse-category contextual and target product settings. Three studies show that the direction of context effects depends on (a) whether target product positioning is abstract or concrete, (b) consumers' adoption of an item-specific, similarity-focused relational or dissimilarity-focused relational processing mind-set, and (c) the magnitude of resources allocated to processing. We find that contrast effects emerge when an ambiguous target product is positioned concretely, not abstractly, and consumers employ relational, not item-specific, processing. A framework clarifies how and when each of the aforementioned factors shapes context effects, often in ways never before seen.

Whether in supermarkets teeming with assorted foods and home products, during commercial breaks filled with pools of ads, or in stadiums plastered with the signage of numerous sponsors, consumers frequently evaluate target products in contexts inhabited by goods from many different product categories. Not only do these categories typically differ from each other, but they also often differ from that of the target product. To exemplify, consider a trip to an upscale store where you might browse branded products from diverse categories, say, a Sony TV, Godiva candy, a Rolex watch, Aveda shampoo, and so on. Suppose that you then encountered a promotional appeal for an unknown vacation resort. Would your evaluation of the ambiguous target resort differ if the earlier-examined multicategory products

were all high quality, favorably regarded goods, such as those listed above, versus lower quality, less appealing ones (e.g., a Sanyo TV, Tootsie Roll candy, a Casio watch, Suave shampoo, etc.)?

Although such diverse-product/category settings are ubiquitous in the marketplace, research on context effects has rarely investigated them. Of the few studies that have incorporated at least some aspect of these settings (e.g., contextual and target products from different categories), most have observed assimilation effects. For example, Raghunathan and Irwin (2001) found that evaluations of a target product, a car identified sketchily by only its model name, were positively related to the favorableness of the contextual goods (e.g., 26 earlier-viewed vacation spots). Similarly, Stapel, Koomen, and Velthuisen (1998) observed an assimilation effect after presenting people with data about a target and several contextual products that belonged to different retail establishment categories. Further, Poncin, Pieters, and Ambaye (2006) found that assimilation of the affect spawned by an initial (i.e., contextual) ad on a subsequent neutral one was actually greater when the two ads belonged to a different rather than the same category. Ultimately, we found only one study conducted in an approximated diverse category setting that reported a contrast effect (Meyers-Levy and Sternthal 1993). It showed that when people devoted a high (but not a low) level of resources to their task, their evaluations of a new target restaurant, described quite precisely in an elaborate review, were negatively related to the

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favorableness of a contextual good (e.g., a high or low status clothing brand).

Prevailing theory holds that assimilation effects generally occur during target product encoding when a contextually activated concept is incorporated with the target product representation. However, contrast effects may transpire during a subsequent judgment stage that involves a crucial comparison process. In it, the target product is compared with and perceived to differ considerably from the contextually primed concept (Schwarz and Bless 2006).

The apparent rarity of contrast effects in diverse-product/category settings struck us as surprising, particularly because one might expect that consumers' contextual exposure to multiple products from disparate categories would sensitize them in general to dissimilarities (vs. similarities) between items and thereby heighten the likelihood of observing a contrast effect. This prompted us to consider more carefully the comparison process thought to produce contrast effects, with the goal of uncovering currently unrecognized factors that might shape context effects but also influence whether the crucial comparison process should occur. Our analysis led us to two key factors that are investigated in this research.

The first factor is whether an ambiguous target product is positioned or described precisely using concrete language, which should lead people to mentally represent the good in a fairly well-defined and well-bounded manner, versus using abstract language that should spawn a rather malleable, poorly defined representation. Given that contrast effects purportedly arise from a meaningful comparison of the target product vis-à-vis a contextually primed concept, contrast effects should plausibly occur only if the product representation is sufficiently precise and well bounded (i.e., supported by concrete positioning) to enable effective between-item discrimination and comparison, not if the representation is so amorphous and porously bounded that it is likely to be viewed as overlapping with virtually any concept. The second factor of inquiry is the type of processing that consumers use, which commonly varies depending on the consumer's mind-set. If, as is widely believed, contrast effects result from the comparison of the proposed entities (i.e., the target and a contextually activated concept), it would seem that they should occur only if consumers engage in some form of relational processing, which entails viewing disparate pieces of data in a comparative manner by actively considering either similarities or dissimilarities among them (Hunt and Einstein 1981). That is, they are unlikely to occur if consumers use item-specific processing, for the latter entails treating each piece of data in an absolute (i.e., independent or nonrelative) manner and considering its specific features.

The present research investigates these novel consumer-relevant factors, shedding light on how they can affect the direction of context effects in settings marked by both multiple products and disparate categories. We also examine a third factor: the magnitude of resources that people allocate to tasks. However, we defer exposition of this factor until

experiment 2, when it plays a crucial role in a matter whose importance will become apparent later, namely, whether consumers who rely on relational processing in such settings adopt a similarity or a dissimilarity focus.

In the end, our research contributes to extant context-effect theory in a number of important ways. Specifically, it illuminates the detailed workings and requirements of the process believed to underlie contrast effects, namely, the necessity of a reasonably precise, well-defined representation of an ambiguous target product (i.e., one supported by concrete, not abstract, positioning) and consumers' use of relational, not item-specific, processing. In addition, it rigorously tests the tenets of the two-stage model of context effects by assessing how both processes that are claimed to underlie context effects (i.e., encoding and judgment) operate and eventuate under a wide range of conditions, all assessed in a typical but rarely studied consumer setting inhabited by multiple contextual products from categories that differ both from each other and from that of the target product. It is noteworthy that our results show that at times some paradoxical, currently undocumented outcomes can emerge, such as contrast effects during encoding and assimilation effects at the judgment stage. Yet, the direction of context effects that ultimately result always align conceptually with those anticipated by the two-stage model, attesting to its power.

We begin by reviewing the two-stage model, which describes two processes (i.e., at encoding and judgment) that are widely agreed to underlie virtually all context effects. Next, we consider how target product positioning may alter the processes that occur during these two stages. We then explicate and test how consumers' use of particular processing mind-sets may further moderate how concepts activated by the contextual data are employed during the product encoding and judgment stages, thereby shaping the context effects on target product evaluations.

THE TWO-STAGE MODEL OF CONTEXT EFFECTS

Although various terms have been used to describe the processes that spawn context effects (e.g., interpretation vs. comparison [Stapel and Koomen 2001], categorization vs. judgment [Herr 1986], and inclusion vs. exclusion [Schwarz and Bless 1992]), virtually all models of context effects agree that two stages and processes are involved (Schwarz and Bless 2006). The first process occurs during the encoding stage. During this phase, an ambiguous target product is categorized and interpreted, enabling people to form a mental representation and initial impression of it. This stage typically is marked by assimilation effects whereby concepts primed or rendered highly accessible by contextual data guide the encoding of the target representation and are included in it (Schwarz and Bless 2006). Hence, the more positive (negative) the primed data, the more favorable (unfavorable) are the target product evaluations.

The second, subsequent process takes place during the

judgment stage, at which time the target product may be compared to a standard of reference. This standard is routinely constructed on the spot, such that it too may be affected by the primed (e.g., contextual) data. Indeed, the general finding is that, due to its high accessibility, the concept activated by the contextual data is employed as the comparison standard. Moreover, this comparison process generally gives rise to a contrast effect because the comparison of a target with the contextually primed standard, which commonly is prototypical and somewhat extreme, highlights the disparity between the two representations (Schwarz and Bless 2006). Hence, the target is evaluated more favorably when the standard (i.e., primed concept) is negative, and vice versa when the standard is positive.

This two-stage model, which outlines these two pivotal mechanisms that shape context effects, is informative, and it is likely to apply to situations involving diverse products where a contextually primed concept must be inferred from multiple items (i.e., brands) that belong to heterogeneous categories. Pertinent to this, related research has shown that when individuals are exposed to many exemplars of other people's behaviors that occur across disparate categories of settings, they reliably infer the behaviorally implied concept or trait (e.g., kindness; Srull and Wyer 1979, 1980). This suggests that upon exposure to numerous diverse-category brands belonging to either a high or low quality tier, consumers can be expected to experience heightened accessibility of the implied high or low quality concept and in some fashion make use of this concept during their encoding and possibly judgment of the target product. Nevertheless, it is known that whether and exactly how this concept is used at each of the assessment stages (i.e., encoding and judgment) often varies as a function of other factors (Schwarz and Bless 2006).

Along these lines, when people possess little data about a target product such that it is ambiguous, the contextually activated concept typically exerts an influence during encoding but not during the subsequent judgment stage (Schwarz and Bless 2006). This occurs because, given people's ambiguity about the target product, their mental representation of it is nonelaborate and exhibits sketchy, poorly defined boundaries. That enables the contextually activated concept to guide people's interpretation of the product during the encoding stage, producing an initial assimilation effect. Yet, at the judgment stage, a comparison process involving the target product and the contextually activated concept that may serve as a comparison standard fails to take place because the ambiguous product's impoverished representation and vague boundaries render it too amorphous to be meaningfully compared with and discriminated from any standard (Schwarz and Bless 2006). Hence, people's evaluations of the ambiguous product simply exhibit the encoding-engendered assimilation effect.

The preceding analysis is informative, for it suggests that an ambiguous target product's positioning might moderate the preceding effect by influencing whether a comparison process ensues during the judgment stage. Specifically, de-

spite people's limited knowledge and ambiguity concerning the target product, if the product is positioned or described in a way that provides people with some amount of precise concrete data, the definition of the boundaries of the product's representation may be somewhat strengthened. Thus, while the encoding-based assimilation effect might still occur, the comparison process could now also ensue at the judgment stage. To illustrate, suppose that consumers' knowledge of a target product is limited (e.g., the product is a fictitious, hence, ambiguous vacation resort), but the product is positioned on either a general, indistinct abstract benefit (e.g., "a dream vacation") or a precise, clearly calibrated (e.g., quantified) concrete benefit (e.g., "a \$1,095 all-inclusive vacation"). If the product's positioning is abstract, the boundaries of the target product should remain ill defined, such that the same outcomes outlined earlier should persist (i.e., only an encoding-based assimilation effect). However, if the target product is positioned fairly precisely on a concrete benefit, the definition or integrity of the product's boundaries should be clarified, rendering it plausible to compare the product with the contextually primed concept. Hence, a comparison should now ensue at the judgment stage and reverse the initial encoding-based outcome, resulting in a contrast effect on product evaluations.

In sum, we expect that regardless of a target product's abstract or concrete positioning, at encoding a contextually activated concept is likely to exert an assimilation effect on people's initial impressions of an ambiguous target product. But at the judgment stage, the activated concept should be employed as a standard that is compared with the target product and should elicit a contrastive influence on product evaluations only if the target product is positioned concretely (not abstractly) and thus spawns a sufficiently precise and discriminable target representation.

Still, context effects may be influenced not only by the kind of data that are processed (e.g., abstract or concrete target product data) but also more fundamentally by how data are processed. Indeed, as noted earlier, we expected that the processing mind-set that consumers employ when they initially encounter a diverse-product/category environment can further influence how the contextually activated concept is used during the target product encoding and judgment stages. This follows because people's initial manner of processing typically becomes routinized and persists, making it likely to affect people's target product assessments downstream (Gollwitzer and Moskowitz 1996; Stapel and Koomen 2001). The next section identifies three processing mind-sets that consumers often use and offers theorizing about the way each mind-set may further moderate how the contextually primed concept is used when the target product positioning is either abstract or concrete.

CONSUMERS' PROCESSING MIND-SETS

Extant research has identified three processing mind-sets that consumers commonly adopt (Hunt and Einstein 1981; Malaviya, Kisielius, and Sternthal 1996; Meyers-Levy 1991). One, called an item-specific processing mind-set, oc-

curs when people treat each piece of encountered data in an absolute (vs. a relative or comparative) manner, such that they elaborate on each piece independently of all others. For example, suppose a consumer is informed that a new superstore is opening nearby and that it will carry assorted branded products, such as a Rolex watch, Aveda shampoo, a Sony TV, and Godiva candy. If asked how likely they would be to patronize this store, consumers with an item-specific processing mind-set might respond by considering the appeal of each of the store's branded products on its own, separately from all others (e.g., "Rolex watches are an extravagant luxury for very successful people; Aveda makes premium shampoos with all natural ingredients"). Alternatively, people may use a relational processing mind-set that entails viewing pieces of data in a relative (e.g., comparative) fashion. Still, those who use such a mind-set may emphasize either similarities that unite multiple pieces of data in terms of their overarching commonalities or dissimilarities that emphasize differences between pieces of data. Continuing the example involving the superstore, consumers with a similarity-focused relational processing mind-set would probably evaluate their likelihood of patronizing the store by envisioning and assessing the kind of store it would be, that is, the kinds of goods it would carry and the sort of person who would shop there (e.g., "The goods seem to be all top quality ones that cater to affluent people"). However, consumers with a dissimilarity-focused relational processing mind-set might respond by focusing on and evaluating the store's elemental inconsistencies, such as the disparities among the store's brands (e.g., "Aveda is an affordable shampoo, while Rolex is not only a watch but an exorbitantly priced one").

How might consumers' use of these processing mind-sets combine with target product positioning, influence the target product encoding and judgment processes, and thereby shape context effects on product evaluations? We expected that in contexts inhabited by high or low quality diverse-category brands, the fundamentals of the two-stage processing model should ensue. That is, the concept activated by the contextual goods is always expected to exert a direct or indirect assimilative influence on people's initial product impressions at encoding, irrespective of how the target product is positioned. But, whether that concept will serve as a comparison standard later at the judgment phase and prompt a reversal of the encoding-spawned outcome on product evaluations (e.g., an encoding-based assimilation effect will transform into a contrast effect) will depend not only on the target product positioning but also on whether the consumer's processing mind-set induces him or her to treat data in either an absolute (i.e., item-specific) or a relative (i.e., relational) manner. We elucidate our theorizing and the anticipated outcomes next.

The Influence of Contextual Data at the Encoding Stage

As just noted, a high or low quality concept implied by diverse-category contextual goods always should be acti-

vated and employed during target product interpretation at encoding (e.g., Srull and Wyer 1980). Yet, while this concept's use at encoding should be unaffected by the product's positioning, exactly how it is used should differ depending on the type of processing consumers use.

Specifically, as abundant priming effect studies suggest (e.g., Higgins 1996), consumers who employ an item-specific processing mind-set are likely to use the high or low quality concept directly to guide their interpretation of the target product at the encoding stage. The same also should occur for those who adopt a similarity-focused relational processing mind-set, given that this mind-set emphasizes similarities or points of overlap among concepts. Thus, those who employ either of these types of processing are expected to display an assimilation effect during target product encoding and initially perceive the product more favorably when the contextual brands are of high versus lower quality.

However, consumers who adopt a dissimilarity-focused relational mind-set by definition attend to dissimilarities. This implies that they may respond to the contextually primed high (low) quality concept by generating and considering a dissimilar, in fact, antithetical (i.e., opposite) concept, namely, the concept of low (high) quality. This thesis that an antithetical concept will be activated concurs not only with our understanding of such processors' dissimilarity focus but also with findings reported by numerous other researchers (Chartrand, Dalton, and Fitzsimons 2007; Park et al. 2001; Stapel and Koomen 2000). Further, given dissimilarity-focused relational processors' heightened access to this antithetical concept, it follows that such processors should use the antithetical concept to interpret the target product at encoding, causing their initial impressions of the product to be assimilated with a quality implication that is opposite of the one that was contextually primed. Thus, if we view this outcome in a conventional manner, that is, in relation to the quality implications of the contextual data, it represents an apparent contrast effect at encoding, for target product impressions should be more favorable when the contextual brands imply a low versus a high quality concept.

The Influence of Contextual Data at the Judgment Stage

Whether consumers' encoding-derived initial impressions of the target product are reversed due to a comparison (i.e., contrastive) process that can occur at the judgment phase is likely to depend on both target product positioning and the consumer's processing mind-set. As explained earlier, when the target product is positioned imprecisely on an abstract benefit, a comparison process is unlikely to occur at the judgment stage because the poorly defined representation of the target product that evolves undermines the prospect that any meaningful discriminations can be made. Hence, irrespective of the consumer's processing mind-set, his or her initial product impressions derived during encoding should prevail and determine product evaluations.

Different outcomes should ensue, however, when the target product is positioned concretely in a discriminable, precise manner, for such positioning should permit a comparison process during the judgment stage and reverse consumers' initial encoding-derived impressions. Still, whether this will truly ensue should be moderated further by consumers' processing mind-set.

First, consider those consumers who adopt an item-specific processing mind-set, which entails considering each piece of data independently of (vs. in relation to) others and hence treating stimuli in an absolute, noncomparative manner. These consumers' processing mind-set seems to dictate that they will refrain from any comparison process at the judgment stage, even if target product positioning is concrete and otherwise would foster such a comparison. Thus, irrespective of the product's positioning, consumers with an item-specific processing mind-set are expected to display only the encoding-engendered assimilation effect on their product evaluations.

However, consumers who adopt either a similarity- or a dissimilarity-focused relational processing mind-set should treat data in a relative and hence potentially comparative manner. Thus, when the target product is positioned concretely, both groups should pursue a comparison process during the judgment stage that reverses their encoding-derived impressions.

Specifically, consumers who adopt a similarity-focused relational processing mind-set should now use the contextually activated high (low) quality concept as a standard to which the target product is compared. Because this comparison should amplify disparities between the two representations, a contrast effect should emerge and reverse individuals' initial encoding-derived assimilation effect. Thus, similarity-focused relational processors should respond more favorably to the target product when the contextual items prime a lower (higher) quality concept.

Consumers with a dissimilarity-focused relational processing mind-set should engage in these same activities, but they are likely to use their self-generated highly accessible low (high) quality antithetical concept as a standard of comparison. Thus, a reversal of the apparent contrast effect formed during their target product encoding should occur. That is, the product evaluations of dissimilarity-focused relational processors should be more favorable when the contextual brands are high versus lower quality goods. Interestingly, this outcome is paradoxical when viewed in a conventional manner, with an apparent assimilation effect produced at the judgment stage.

In sum, the preceding theorizing suggests that a three-way interaction of consumers' processing mind-set, target product positioning, and the quality of the contextual brands should emerge on evaluations and net positive thoughts about the target product, as summarized below.

H1: When the target product is positioned on an abstract benefit, individuals who adopt an item-specific processing mind-set and those who employ a similarity-focused relational processing

mind-set should exhibit an assimilation effect on their target product evaluations and net positive thoughts. However, individuals who adopt a dissimilarity-focused processing mind-set should produce a contrast effect on both of these measures.

H2: When the target product is positioned on a concrete benefit, both individuals who adopt an item-specific processing mind-set and those who use a dissimilarity-focused relational processing mind-set should exhibit an assimilation effect on their target product evaluations and net positive thoughts. But, individuals who adopt a similarity-focused processing mind-set should produce a contrast effect on these two measures.

Table 1 presents a concise summary of our theorizing. For each processing mind-set and target product positioning condition, the table identifies the anticipated direction of the context effects that should occur at the encoding and the judgment stages.

Experiment 1 tests our hypotheses in a context where the contextual goods are from multiple, diverse categories and the target product belongs to yet a different category. Participants' processing mind-set was manipulated upon exposure to the contextual brands. Then individuals viewed an ad for a target vacation resort that was positioned on an abstract or concrete benefit.

EXPERIMENT 1

Method

Design. A total of 210 males and females participated in the study in small groups. Each was assigned randomly to treatments, creating a 3 (processing mind-set: item specific vs. similarity-focused relational vs. dissimilarity-focused relational) by 2 (target product positioning: abstract vs. concrete) by 2 (quality of contextual brands: low vs. high quality) between-subject factorial design.

Stimuli. To select the contextual stimuli, 85 individuals listed their thoughts about numerous brands from different product categories. Using this input, two lists were created, each with 15 well-known brands that were either of high or lower quality. The brands in each list belonged to the same set of disparate product categories. They included 11 higher (lower) quality brands, such as a Rolex (Casio) watch, Aveda (Suave) shampoo, a Mercedes-Benz (Hyundai) automobile, and a Sony (Sanyo) TV, plus four high (lower) quality well-known local brands from the furniture, sporting goods, grocery, and schools categories.

To verify that the contextual brands were perceived as intended in quality and valence, 40 pretest individuals assessed each brand in terms of its quality, upscale image, and favorableness on seven-point scales. These three items were averaged and formed a reliable index ($\alpha = .92$). Results of an ANOVA confirmed that respondents perceived the set of

TABLE 1

SUMMARY OF MECHANISMS THAT PRODUCE CONTEXT EFFECTS AS A FUNCTION OF TARGET PRODUCT POSITIONING AND CONSUMERS' PROCESSING MIND-SET

Routinized processing mind-set	→ Use of contextually primed concept at target product encoding	→ Use of contextually primed concept at judgment stage	→ Final target product evaluation
When target product positioning is abstract: Item specific	→ Interpretive frame: initial assimilation effect	→ Not used due to both abstract product positioning and type of processing employed	→ Assimilation effect (encoding based)
Similarity-focused relational (e.g., processing intensity is high, as under high NFC)	→ Interpretive frame: initial assimilation effect	→ Not used due to abstract product positioning	→ Assimilation effect (encoding based)
Dissimilarity-focused relational (e.g., processing intensity is low, as under low NFC)	→ Antithetical interpretive frame: initial contrast effect	→ Not used due to abstract product positioning	→ Contrast effect (encoding based)
When target product positioning is concrete: Item specific	→ Interpretive frame: initial assimilation effect	→ Not used due to type of processing employed	→ Assimilation effect (encoding based)
Similarity-focused relational	→ Interpretive frame: initial assimilation effect	→ Concept serves as comparison standard	→ Contrast effect (judgment based)
Dissimilarity-focused relational	→ Antithetical interpretive frame: initial contrast effect	→ Antithetical concept serves as comparison standard	→ Assimilation effect (judgment based)

NOTE.—NFC = need for cognition.

relatively high versus low quality contextual brands more favorably ($M = 5.63$ vs. 3.50 ; $F(1, 38) = 262.73$, $p < .001$).

In addition, two versions of a target ad were developed for a vacation resort. Both versions contained the same set of pictures and ad copy. The versions varied, however, in whether the headlined material positioned the target vacation resort on either an imprecise and highly subjective abstract benefit (i.e., overall quality) or a clearly calibrated concrete benefit (i.e., price). Specifically, in the abstractly positioned ad, this material read, "The intoxicating beauty of the Caribbean will make you swoon when you stay at Aria Vacation Resort. Now is the time to indulge! Enjoy an atmosphere of a relaxing dream vacation. It's everything you're looking for when you need an escape." In the concretely positioned ad, this material read, "Enjoy the intoxicating beauty of the Caribbean at a price that will make you swoon at Aria Resort. From \$1095—6 days/5 nights all inclusive. Now is the time to indulge! Everything you can eat, drink, and do is included, with no hidden charges. Even tipping is forbidden."

A final pretest assessed our thesis that, unlike individuals who adopt an item-specific or a similarity-focused relational processing mind-set, those who employ a dissimilarity-focused relational processing mind-set are likely to respond to the contextual brands by evoking a concept that is antithetical (i.e., dissimilar) to that which is primed directly. To test this, 107 individuals received the high or lower quality contextual brands and completed the same tasks used in experiment 1 to induce the adoption of the intended processing mind-sets and foci (see procedure for details). Next, they examined the ad for and listed their thoughts about the abstractly positioned target vacation resort. To assess whether the contextual brands led individuals to evoke the primed, the antithetical, or no quality-related concept, we

examined their first and thus top-of-mind (TOM) quality-related thought about the target product vis-à-vis the quality level of the presented contextual brands. If the quality level mentioned in their TOM thoughts about the product was the same as that represented by the contextual brands, they were coded as having elicited the primed concept. If it was opposite of that signified by the contextual brands, they were coded as having elicited the antithetical concept. Data analysis via multinomial logistic regression revealed significant effects that concurred with expectations ($\chi^2 = 18.95$, $p < .01$). Individuals' TOM quality-related thoughts about the product were more aligned with the primed concept when either an item-specific ($M = .28$; $\chi^2 = 7.86$, $p < .01$) or a similarity-focused relational ($M = .19$; $\chi^2 = 4.01$, $p < .05$) processing mind-set was adopted rather than a dissimilarity-focused relational processing mind-set ($M = .03$). Yet, TOM quality-related thoughts were more concordant with the antithetical concept when people adopted a dissimilarity-focused relational ($M = .19$) versus either an item-specific ($M = .02$; $\chi^2 = 5.85$, $p < .05$) or a similarity-focused relational ($M = .00$; $\chi^2 = 6.62$, $p < .01$) processing mind-set.

Procedure. Participants were told that they would take part in two unrelated, self-paced, computer-administered studies and then logged on to a Web site. To ensure that the studies were perceived to be truly unrelated, their materials differed in terms of font, font size, format, and colors. Also, at the end of the first study, participants were asked to exit the first Web site and thanked for completing that study. They then logged on to a different site for the second study.

The so-called first study served both to vary the processing mind-set that participants employed and as a contextual product priming task. Participants were told that brands can differ from each other in many ways. Hence, the

purpose of the study was to assess their perceptions of a number of brands. To simulate a true consumer context, all participants received the names of 15 high or lower quality brands from diverse categories. The core processing mind-sets were manipulated using the same methods employed successfully by others (Hunt and Einstein 1981; Meyers-Levy 1991). Specifically, in the item-specific processing mind-set condition, we asked participants to form a mental image of the features of each brand. Each brand name appeared alone on a screen and thus was considered in isolation. Then after 10 seconds, participants rated how vivid their image of that brand was.

Alternatively, participants in both the similarity- and dissimilarity-focused relational processing mind-set conditions completed two short tasks. The first was a picture appraisal task, which primed participants to focus on either similarities or dissimilarities. This task was adapted from one used by Mussweiler (2001), who found it effective for unconsciously manipulating people's relative focus on similarities or dissimilarities in a later task. Informed that the task was a pretest for future research, all participants received the same pair of pictures. Those who were to focus on similarities (dissimilarities) were asked to list as many similarities (differences) between the two depicted scenes as they could. Then participants commenced the second task, which served to prime the contextual brands and reinforce the intended relational processing mind-set. Participants in the relational processing mind-set conditions received the same 15 high or lower quality contextual brands as did those in the item-specific processing mind-set condition, but all brands appeared on a single screen. Participants who were intended to adopt a similarity-focused relational processing mind-set were instructed to organize the brands into categories such that they felt that the brands "in each category were similar to each other." Those who were to adopt a dissimilarity-focused relational processing mind-set were asked to arrange the brands such that those "in one category were different from those in the other categories."

At this point participants were thanked for completing the first study and asked to access another Web page for a different, unrelated study. For this ad-viewing study, participants were told only that they would be shown an ad for a new product. First, they viewed a target ad for a new Caribbean vacation resort that was positioned on either an imprecise abstract benefit (i.e., overall quality) or a clearly calibrated concrete benefit (i.e., price). Then they evaluated the resort on seven items (1 = not at all; 7 = extremely) that tapped their overall affect toward the resort (favorable impression, likeable, appealing, desirable) and its more specific features (luxurious, upscale option, high quality amenities). All items loaded on one factor. Thus, the items were averaged to form a single, highly reliable ($\alpha = .92$) evaluation index.

Participants then reported their thoughts about the target product followed by their recall of the ad claims. Ad claim recognition was assessed next by asking participants to identify whether three true target claims and three foils, which

were merely similar to true claims, actually appeared in the target ad. Afterward, participants were asked to recall the contextual brand names that they had examined in the first study. Finally, after completing some demographic measures, participants were probed about whether they thought the two studies were related and, if so, how. No participant indicated any awareness of the relationship between the studies.

Results

ANOVAs were conducted on the 3 (processing mind-set) by 2 (target product positioning) by 2 (quality of the contextual brands) between-subjects design. Table 2 reports all treatment means.

Manipulation Checks. Initial analysis supported the effectiveness of the processing mind-set manipulations during contextual brand encoding. Extant research suggests that recall of nonobviously related items such as our contextual brands should be heightened by the use of relational versus item-specific processing (Hunt and Einstein 1981). Consistent with this, a main effect of the processing mind-set emerged on recall of the contextual brands ($F(1, 190) = 13.83, p < .001$). Simple effects tests indicated that such recall was lower when participants employed an item-specific ($M = 7.04$) versus either a similarity-focused ($M = 9.22; F(1, 190) = 26.93, p < .001$) or a dissimilarity-focused relational processing mind-set ($M = 8.28; F(1, 190) = 8.80, p < .01$).

Further analysis assessed the effectiveness of the similarity- and dissimilarity-focused relational processing mind-set manipulations. Evidence of this would emerge if, among participants who adopted a relational processing mind-set and thus categorized the multicategory contextual brands into groups, those with a similarity- versus a dissimilarity-focused relational processing mind-set sorted the brands into fewer groups (Srull, Lichtenstein, and Rothbart 1985). This follows because sorting items into fewer, more inclusive groups indicates more extensive consideration of the items' similar or shared properties (Isen 1987). Indicating that the manipulations were successful, those who employed a relational processing mind-set revealed a main effect of processing focus on the number of contextual brand groups that were formed ($F(1, 119) = 9.22, p < .01$): participants with a similarity- versus dissimilarity-focused relational processing mind-set categorized the brands into fewer groups ($M = 4.05$ vs. 5.38).

Next, we analyzed whether the processing mind-set manipulations introduced when the contextual brands were presented carried over and affected encoding of the target product data. Prior research indicates that during recall, clustering of similar ad claims should be heightened when people employ relational rather than item-specific processing (Meyers-Levy 1991). Thus, evidence that the expected processing mind-set was used for target ad encoding would obtain if ad claim clustering was greater when participants received a relational versus an item-specific processing

TABLE 2
TREATMENT MEANS FOR EXPERIMENT 1

	Item-specific processing		Similarity-focused relational processing		Dissimilarity-focused relational processing	
	Low quality context	High quality context	Low quality context	High quality context	Low quality context	High quality context
Abstract target positioning:						
Target product evaluations	5.28 (.99)	6.19 (.70)	4.58 (.99)	6.09 (.62)	6.02 (.47)	5.35 (.93)
Net positive thoughts	-.05 (2.49)	1.62 (1.56)	-1.88 (2.33)	1.75 (2.46)	1.94 (2.29)	.06 (2.93)
Recall of contextual brands	6.82 (2.34)	7.62 (2.13)	9.93 (2.94)	9.14 (1.99)	8.27 (2.37)	7.94 (3.39)
Ad claim clustering (ARC scores)	.53 (.59)	.60 (.47)	.90 (.14)	.92 (.21)	.82 (.29)	.89 (.22)
Signal detection (<i>A'</i>) of recognition	.70 (.23)	.72 (.23)	.65 (.27)	.65 (.24)	.51 (.36)	.65 (.26)
No. of groups formed from contextual brands	NA	NA	4.38 (1.66)	4.19 (1.97)	6.00 (3.26)	5.39 (2.36)
Concrete target positioning:						
Target product evaluations	4.72 (.57)	5.77 (.80)	5.54 (.65)	4.92 (1.27)	4.90 (.92)	5.76 (1.09)
Net positive thoughts	-.35 (2.32)	1.90 (1.91)	3.06 (2.95)	-.50 (3.34)	-1.80 (2.33)	2.06 (2.72)
Recall of contextual brands	6.50 (2.62)	7.21 (1.57)	8.56 (2.68)	9.33 (2.44)	8.40 (2.41)	8.53 (2.69)
Ad claim clustering (ARC scores)	.54 (.62)	.72 (.18)	.94 (.16)	.77 (.58)	.60 (.89)	.80 (.40)
Signal detection (<i>A'</i>) of recognition	.72 (.20)	.68 (.32)	.58 (.30)	.51 (.29)	.52 (.32)	.59 (.30)
No. of groups formed from contextual brands	NA	NA	3.63 (1.54)	4.00 (1.32)	4.80 (3.52)	5.31 (3.04)

NOTE.—ARC = adjusted ratio of clustering; NA = not applicable; standard deviations are reported in parentheses.

mind-set manipulation. Clustering was assessed using an adjusted ratio of clustering (ARC; Hunt and Einstein 1981). Confirming that the processing mind-set manipulations affected encoding of the target product material as intended, a processing mind-set main effect emerged on ARC scores ($F(1, 176) = 5.99, p < .01$). Clustering was greater when participants used a mind-set that fostered similarity- ($M = .89; F(1, 176) = 11.71, p < .01$) or dissimilarity-focused relational processing ($M = .75; F(1, 176) = 3.46, p < .07$) versus item-specific processing ($M = .60$).

Additional evidence for the processing mind-set manipulations was sought by examining participants' recognition of the ad claims. Research has established that recognition performance is enhanced by the use of item-specific rather than relational processing (e.g., Hunt and Einstein 1981; Meyers-Levy 1991). Signal detection analysis (*A'*; Pollack and Norman 1964) of the recognition data revealed a main effect of processing mind-set ($F(1, 198) = 4.56, p < .05$). Participants exhibited superior discrimination between true claims and foils when they adopted an item-specific ($M = .71$) rather than either a similarity- ($M = .60; F(1, 198) = 5.09, p < .05$) or a dissimilarity-focused relational processing mind-set ($M = .58; F(1, 198) = 7.76, p < .01$).

In sum, our manipulation check measures indicate that the intended processing mind-sets were induced and used when people initially viewed the diverse-category contextual brand data. Further, this processing mind-set remained active later when people assessed the target product.

Target Product Evaluations and Thoughts. Two judges, both blind to treatments, classified the valence of participants' thoughts about the target product ($r = .96$). These data were analyzed in terms of the quantity of participants' net positive (i.e., positive minus negative) thoughts.

As anticipated, ANOVAs revealed a three-way interaction of the processing mind-set, target product position-

ing, and quality of the contextual brands on both participants' evaluations ($F(1, 198) = 18.47, p < .001$) and net positive thoughts ($F(1, 198) = 27.38, p < .001$) about the target vacation resort. Further examination of these effects supported our predictions, showing that the effect of the processing mind-set varied depending on target product positioning. Specifically, when target product positioning was abstract, a significant interaction of the processing mind-set and the quality of the contextual brands emerged on both evaluations ($F(1, 198) = 12.90, p < .001$) and net positive thoughts ($F(1, 198) = 8.46, p < .001$). As predicted, planned contrasts showed that participants who adopted an item-specific processing mind-set displayed an assimilation effect, producing more favorable target product evaluations ($F(1, 198) = 9.48, p < .001$) and more net positive thoughts ($F(1, 198) = 3.66, p < .06$) when the contextual brands were high rather than lower quality brands. Likewise, planned contrasts showed that when participants employed a similarity-focused relational processing mind-set, an assimilation effect obtained on evaluations ($F(1, 198) = 20.74, p < .001$) and net positive thoughts ($F(1, 198) = 13.62, p < .001$). Yet, when individuals employed a dissimilarity-focused relational processing mind-set, a contrast effect emerged on both product evaluations ($F(1, 198) = 3.78, p = .05$) and net positive thoughts ($F(1, 198) = 3.47, p < .06$). These individuals' responses were more favorable when the contextual brands were relatively low rather than high in quality.

A very different pattern of outcomes obtained on the ANOVAs when target product positioning was concrete. Again, the two-way interaction emerged on both target product evaluations ($F(1, 198) = 8.40, p < .001$) and net positive thoughts ($F(1, 198) = 17.83, p < .001$). Planned contrasts supported our predictions. Specifically, individuals who employed an item-specific processing mind-set again

displayed an assimilation effect, evaluating the vacation resort more favorably ($F(1, 198) = 12.01, p < .001$) and generating more net positive thoughts ($F(1, 198) = 6.34, p < .05$) when the contextual brands were of high rather than lower quality. However, those who used a relational processing mind-set exhibited context effects that always reversed, but the direction of the effects varied when individuals focused on either similarities or dissimilarities. Participants who adopted a similarity-focused relational processing mind-set displayed a marginal contrast effect on their product evaluations ($F(1, 198) = 3.33, p < .07$) and a significant contrast effect on net positive thoughts ($F(1, 198) = 13.12, p < .001$). Their responses were more favorable when the contextual brands were lower rather than high in quality. However, planned contrasts showed that those who adopted a dissimilarity-focused relational processing mind-set exhibited assimilation effects on evaluations ($F(1, 198) = 6.04, p < .05$) and net positive thoughts ($F(1, 198) = 14.79, p < .001$). They responded more favorably to the concretely positioned target product when the contextual brands were high versus low in quality.

Discussion

The results of experiment 1 support our theorizing, revealing that in diverse-product/category settings, the direction of context effects on people's product evaluations depends on whether the product is positioned abstractly or concretely and on the particular processing mind-set that people use. Further, it appears that the outcomes that occurred did so because these two factors influence how people use the contextual data at the encoding and judgment stages.

Our results indicate that, regardless of how the target product was positioned, when individuals adopted either an item-specific or a similarity-focused relational processing mind-set, the contextually primed concept apparently guided their interpretation of the product during encoding directly, producing an assimilation effect on initial product impressions. However, when they used a dissimilarity-focused relational processing mind-set, which emphasizes differences between pieces of data or concepts, the primed concept prompted thought about an opposing, antithetical concept, and this concept served as an interpretive frame during encoding. The result was an encoding-based contrast effect on such individuals' initial product impressions.

As we theorized, the preceding encoding-based context effects persisted at the judgment stage and were evident on people's target product evaluations in two instances. One was when, regardless of people's processing mind-set, the target product was positioned on an abstract and thus imprecise benefit, which limited the extent to which a comparison process could provide meaningful insight about the benefit's relative standing. A second such instance was when people adopted an item-specific processing mind-set. Because such a mind-set involves elaborating on all pieces of data independently of other information, it should deter the use of a between-item comparison process during judgment—even if the target product is positioned concretely

and thus would otherwise encourage such a comparison. Thus, together, the preceding observations suggest that whether people undertake a comparison process during judgment rests on two conditions: (1) the benefit on which an ambiguous target product is positioned must be sufficiently precise (i.e., concrete) to support a fruitful comparison process, and (2) the consumer must adopt a relative (i.e., relational), not absolute (i.e., item-specific), processing mind-set.

Upholding these deductions, when target product positioning was precise (i.e., concrete) and people's processing mind-set assumed a relative (i.e., relational processing) perspective, they reliably engaged in a comparison process during the judgment stage. Specifically, they employed the quality concept that was activated either directly (i.e., given a similarity-focused relational processing mind-set) or indirectly (i.e., given a dissimilarity-focused relational processing mind-set) by the contextual data as a standard against which they compared the target product. Because such comparisons generally amplify disparities and promote a contrast, individuals' encoding-based impressions of the product were overturned. Hence, the assimilation (contrast) effect that those with a similarity- (dissimilarity-) focused relational processing mind-set manifested during product encoding reversed at the judgment stage, resulting in a contrast (assimilation) effect. Interestingly, the pattern of outcomes produced by those who used a dissimilarity-focused relational processing mind-set is the inverse of what is typically observed: when target product positioning was concrete, such individuals elicited an apparent contrast effect during product encoding, but this outcome transformed into an assimilation effect during the judgment stage.

In sum, experiment 1 offers important insight into how target product positioning and consumers' processing mind-set can affect how diverse-category contextual data are used and ultimately shape the direction of context effects. Nevertheless, this study is silent about a key issue. We found that when individuals adopted a relational processing mind-set, our manipulation that induced them to focus on either similarities or dissimilarities had crucial consequences. Yet, it remains unknown what determines which focus such individuals naturally will use. We reasoned that because in multi-category contextual settings such as ours people are exposed to many brands that clearly belong to dissimilar categories, this should make salient and increase the accessibility of dissimilarities. Thus, people who expend limited resources pursuing relational processing may be likely to focus primarily on dissimilarities. However, might those who employ such processing but do so in a resource intensive manner be motivated to look beyond the products' obvious dissimilarities, identifying and focusing instead on their similarities?

Experiment 2 explores this question by drawing on research that ties the magnitude of resources individuals allocate to processing (i.e., their processing intensity) with their likelihood of ordering information by focusing on data similarities. Specifically, several researchers have suggested that people who devote more intense levels of resources to cognitive activities (e.g., those high in need for cognition

[NFC]) are particularly motivated to understand, organize, and actively impose structure on stimuli (Moskowitz 1993; Srull et al. 1985). Further, such organization can be achieved by detecting “shared properties [similarities] among elements” (Hunt and Marschark 1987, 131). Indeed, recent research supports this linkage. It finds that a factor known to heighten the resources people expend during processing (i.e., counterfactuals; Meyers-Levy and Maheswaran 1992) promotes relational processing that is marked by connecting data or seeing similarities among remote associates (Kray, Galinsky, and Wong 2006).

The preceding work and logic leads us to propose the following: in diverse-category contexts, consumers who adopt a relational processing mind-set and devote a fairly intense resource level to such processing are likely to employ similarity-focused relational processing, for such a focus should facilitate the identification of commonalities and organizing themes that order data. Yet, those who adopt a relational processing mind-set but expend few resources should be disinclined to enforce order, and hence they should pursue dissimilarity-focused relational processing.

Support for such theorizing would obtain if the context effects observed in experiment 1 were replicated when relational processors’ natural inclination to process data intensely is assessed via their NFC. Hence, in experiment 2, all participants performed the categorization task that induced a relational processing mind-set, but they received no manipulation that influenced the focus they would use. Later, their NFC was assessed to gauge the intensity of their processing and thus their likelihood of focusing on similarities or dissimilarities. An interaction of NFC, target product positioning, and the quality of the contextual brands was expected on the key response measures, conceptually replicating study 1’s results. That is:

- H3:** When the target product is positioned on an abstract benefit and individuals adopt a relational processing mind-set, high NFC individuals should display an assimilation effect on target product evaluations and net positive thoughts, whereas low NFC individuals should exhibit a contrast effect. But, when the target product is positioned on a concrete benefit, relational processors who are high in NFC should exhibit an apparent contrast effect on these measures, while those low in NFC should display an assimilation effect.

EXPERIMENT 2

Method

Design. Experiment 2 was a 2 (NFC: low vs. high) by 2 (target product positioning: abstract vs. concrete) by 2 (quality of the contextual brands: low vs. high) between-subject factorial. All 93 participants were induced to adopt a relational processing mind-set. Their processing intensity

was measured on a NFC scale, and they were classified as high or low using a median split.

A pretest was run to assess a key thesis: because high (low) NFC people who employ a relational processing mind-set should pursue a similarity- (dissimilarity-) focus, such individuals are likely to respond to the contextual brands by evoking the primed (antithetical) concept. To examine this, 46 individuals were asked to view and categorize the high or the lower quality contextual brands, thereby always inducing a relational processing mind-set. Subsequently, they examined the abstractly positioned vacation resort ad, listed their thoughts about the resort, and completed a NFC scale (Cacioppo and Petty 1982). Then, using the same method employed in the experiment 1 pretest, we coded whether the contextual brands led high and low NFC individuals to evoke the primed, the antithetical, or no quality-related concept. Multinomial logistic regression revealed the anticipated effect of NFC ($\chi^2 = 14.71, p < .01$). Upholding the view that when a relational processing mind-set is used, resource intensive processors focus on similarities and low intensity processors focus on dissimilarities, high versus low NFC individuals produced more TOM quality-related thoughts about the product that concerned the primed concept ($M = .32$ vs. $.04; \chi^2 = 5.50, p < .01$). Yet, low versus high NFC individuals listed more such thoughts that concerned the antithetical concept ($M = .29$ vs. $.00; \chi^2 = 8.32, p < .01$).

Procedure. Except for the modifications noted, all elements of experiment 1 were maintained. The first study served to prime the contextual brands and induce a relational processing mind-set. The task that manipulated participants’ focus was eliminated. Instead, all participants were presented with the 15 high or lower quality contextual brands on a single screen. A relational processing mind-set was induced by asking all participants to categorize the brands, grouping them into as many or as few categories as needed so that each group captured a common theme.

Next, the second study presented the target resort ad that was positioned on either an abstract (i.e., quality) or a concrete (i.e., price) benefit. Participants reported their product evaluations, thoughts, and recall of the contextual brands. Following this, participants’ inclination to process data intensely was measured using a NFC scale. Finally, participants were probed about the possible relationship between the two studies. No one discerned it.

Results

All data were analyzed via ANOVAs using the 2 (NFC) by 2 (target product positioning) by 2 (quality of the contextual brands) factorial design. Table 3 presents all treatment means.

Effect of Processing Intensity (NFC) on Relational Processing Focus. We theorized that because high (low) NFC individuals would devote intense (modest) levels of resources to imposing structure on the contextual brands,

TABLE 3
TREATMENT MEANS FOR EXPERIMENTS 2 AND 3

	Abstract product positioning				Concrete product positioning			
	High NFC or processing intensity (similarity focused)		Low NFC or processing intensity (dissimilarity focused)		High NFC or processing intensity (similarity focused)		Low NFC or processing intensity (dissimilarity focused)	
	Low quality context	High quality context	Low quality context	High quality context	Low quality context	High quality context	Low quality context	High quality context
Experiment 2 (NFC):								
Target product evaluations	5.13 (.99)	6.31 (.62)	5.98 (.71)	4.48 (1.23)	6.01 (.56)	4.63 (1.27)	4.90 (1.21)	6.05 (.45)
Net positive thoughts	-.09 (1.92)	2.27 (2.64)	3.60 (1.64)	-.25 (3.13)	2.31 (1.84)	-1.00 (1.80)	-.73 (2.37)	1.91 (1.57)
No. of groups formed from contextual brands	2.82 (1.53)	2.82 (1.60)	4.18 (1.72)	3.92 (1.75)	4.54 (1.76)	3.58 (.99)	5.55 (3.29)	5.45 (2.77)
Experiment 3 (processing intensity):								
Target product evaluations	4.60 (1.25)	5.36 (.84)	5.29 (.85)	4.70 (1.23)	5.22 (.69)	4.61 (1.00)	4.65 (.90)	5.35 (.72)
Net positive thoughts	.10 (2.00)	1.74 (1.91)	.90 (1.94)	-.74 (2.37)	.74 (2.32)	-.65 (2.25)	-.42 (2.11)	1.55 (1.76)
No. of groups formed from contextual brands	6.19 (1.99)	5.30 (2.02)	6.95 (2.85)	6.84 (3.30)	4.75 (2.42)	4.80 (2.52)	6.40 (2.60)	5.85 (3.01)

NOTE.—NFC = need for cognition; standard deviations are reported in parentheses.

they would engage in predominately similarity- (dissimilarity-) focused relational processing. Evidence of this would emerge if high NFC participants, who presumably employed a similarity-focused relational processing mind-set, classified the brands into fewer groups than did low NFC participants, who used a dissimilarity-focused relational processing mind-set (Srull et al. 1985). Supporting this premise, only a main effect of NFC emerged on the number of groups formed ($F(1, 85) = 10.05, p < .01$). High rather than low NFC relational processors categorized the brands into fewer groups ($M = 3.49$ vs. 4.74).

Target Product Evaluations and Thoughts. ANOVAs revealed the anticipated three-way interaction of NFC, target product positioning, and quality of the contextual brands on both product evaluations ($F(1, 85) = 44.15, p < .001$) and net positive thoughts ($F(1, 83) = 43.63, p < .001$). Further examination of these effects revealed that the influence of NFC varied depending on the target product positioning. When such positioning was abstract, an interaction of NFC and quality of the contextual brands emerged on evaluations ($F(1, 85) = 19.15, p < .001$) and net positive thoughts ($F(1, 83) = 17.87, p < .001$). As predicted, planned contrasts showed that high NFC participants seemingly adopted a similarity-focused relational processing mind-set, revealing an assimilation effect on their evaluations ($F(1, 85) = 6.15, p < .05$) and thoughts ($F(1, 83) = 4.56, p < .05$). Thus, their responses were more favorable when the contextual brands were of high versus lower quality. Yet, per comparable contrasts, low NFC participants adopted a dissimilarity-focused relational processing mind-set, exhibiting a contrast effect on evaluations ($F(1, 85) = 11.85, p < .001$) and net positive thoughts ($F(1, 83) = 12.88, p < .01$). As such, their responses were more favorable when the contextual brand quality was low versus high.

A different pattern of outcomes obtained when target

product positioning was concrete. Here, ANOVAs revealed an interaction of NFC and quality of the contextual brands on both target product evaluations ($F(1, 85) = 16.37, p < .001$) and net positive thoughts ($F(1, 83) = 17.52, p < .001$). As expected, the following contrasts showed that the resulting context effects reversed. High NFC participants, who employed a similarity-focused relational processing mind-set, displayed a contrast effect on both their evaluations ($F(1, 85) = 9.78, p < .01$) and net positive thoughts ($F(1, 83) = 10.89, p < .01$); their responses were more favorable when the contextual brands were lower rather than high in quality. Yet, low NFC participants, who adopted a dissimilarity-focused relational processing mind-set, exhibited an assimilation effect on their evaluations ($F(1, 85) = 5.75, p < .05$) and net positive thoughts ($F(1, 83) = 5.74, p < .05$), responding more favorably when the contextual brands were of high versus lower quality.

Discussion

The findings of experiment 2 indicate that individuals' use of a similarity- or dissimilarity-focused relational processing mind-set can be influenced by their inclination to engage in resource intensive processing, as gauged by their NFC. The outcomes further suggest that the particular context effects that high or low NFC individuals produce when they adopt a relational processing mind-set depend on whether the target product is positioned on an abstract or a concrete benefit. These findings conceptually replicate those produced by individuals who adopted a relational processing mind-set in experiment 1. Per hypothesis 1, when target product positioning was abstract, individuals who were high in NFC, and thus apparently employed a similarity-focused relational processing mind-set, displayed an assimilation effect on their responses, yet, low NFC individuals, who os-

tensibly assumed a dissimilarity-focused relational processing mind-set, exhibited a contrast effect. Alternatively, when target product positioning was concrete and thereby encouraged the use of a comparison process during the judgment stage (i.e., hypothesis 2), these outcomes reversed: high NFC relational processors displayed a contrast effect, while low NFC relational processors exhibited an assimilation effect.

Despite the consistency and potency of our findings, a few limitations remain. First, we suggested that the alternative foci used by high and low NFC individuals who assume a relational processing mind-set reflect differences in the intensity of their processing. This claim would be more convincing and seem more germane to true consumer contexts if the outcomes of study 2 were observed, but individuals' processing intensity was manipulated explicitly. Second, some might take issue with our use of the resort package price as the benefit in the concrete positioning condition. Although price is concrete, it inextricably confounds two features: price and perceived quality. Thus, the results of experiment 2 might be more compelling if a concrete yet purer quality benefit were used. Finally, despite the measures we took to represent the contextual and product evaluation tasks as two unrelated studies, separation between the two tasks could be stronger. Experiment 3 was run to address each of these issues.

EXPERIMENT 3

The stimuli, procedure, and dependent measures in this study were the same as those of experiment 2 except for the following changes. First, we introduced an involvement manipulation to our 161 participants to vary (vs. measure) the intensity of their processing. Those in the high (low) processing intensity condition were told at the outset that they were among a small and select group of (a few thousand) individuals in the country's top (North American) universities who were participating in two separate, unrelated studies. Further, their opinions were extremely important and would be influential in decisions made by the studies' sponsors (their particular opinions would not be disclosed but instead would be averaged with those of many other respondents). Second, the target resort's abstract versus concrete positioning was manipulated by varying only whether quality-related claims in the ad headline were stated abstractly or via precise (i.e., concrete) numerical ratings. Specifically, the ad always contained the same pictorial materials and verbal ad copy. However, in the abstract positioning version, the headlined material contained the previously used general claims and listed the following four abstract feature-pertinent assertions: "relaxing overall experience," "well-appointed rooms," "fine cuisine," and "diverse recreation and entertainment." In the concrete version, the headlined material read, "Awarded outstanding ratings by the prestigious *Travel and Leisure* magazine (Vacation Resorts issue, January 2006)" and then listed the four aforementioned features (e.g., "overall experience" and "rooms"), but next to each feature was the magazine's rating of it, as

designated by a number of stars (i.e., 3.5, 4, 3.5, and 4, all out of 5). Third, separation of the two studies was bolstered further by employing (a) even more disparate fonts, font sizes, and colors in the sets of task materials, (b) different experimenters and rooms, and (c) a booklet for administering the first study but computer-relayed materials for administering the second.

Results

All data were analyzed via ANOVAs using a 2 (processing intensity: high vs. low) by 2 (target product positioning: abstract vs. concrete) by 2 (quality of the contextual brands: low vs. high) between-subjects design. Treatment means are reported in table 3.

Effect of Processing Intensity on Relational Processing Focus. Paralleling the logic we offered for high (low) NFC individuals, because participants who process data more intensely should try to impose substantial (minimal) structure on the multicategory contextual brands, high (low) processing intensity individuals were expected to adopt a similarity- (dissimilarity-) focused relational processing mind-set. Support for this premise would emerge if high versus low intensity (i.e., similarity- vs. dissimilarity-focused) relational processors classified the brands into fewer groups. Indeed, an ANOVA revealed a main effect of processing intensity on the number of groups that individuals formed ($F(1, 152) = 7.73, p < .01$). High rather than low intensity relational processors categorized the brands into fewer groups ($M = 5.27$ vs. 6.51).

Target Product Evaluations and Thoughts. ANOVAs revealed the anticipated three-way interaction of processing intensity, target product positioning, and quality of the contextual brands on both target product evaluations ($F(1, 153) = 19.21, p < .001$) and net positive thoughts ($F(1, 149) = 22.81, p < .001$). Further examination of these effects revealed that the influence of processing intensity varied depending on the target product positioning. When such positioning was abstract, a processing intensity by quality of the contextual brands interaction emerged on product evaluations ($F(1, 153) = 9.45, p < .01$) and net positive thoughts ($F(1, 149) = 9.99, p < .01$). As predicted, follow-up contrasts showed that high intensity participants adopted a similarity-focused relational processing mind-set, revealing an assimilation effect on their evaluations ($F(1, 153) = 6.96, p < .05$) and net positive thoughts ($F(1, 149) = 4.90, p < .05$). Hence, their responses were more favorable when the contextual brands were of high versus lower quality. Yet, planned contrasts showed that low intensity participants appeared to employ a dissimilarity-focused relational processing mind-set, exhibiting a marginal or significant contrast effect on evaluations ($F(1, 153) = 3.45, p < .07$) and net positive thoughts ($F(1, 149) = 4.85, p < .05$). They responded more favorably when contextual brand quality was lower rather than high.

The pattern of outcomes differed, however, when tar-

get product positioning was concrete. Here, follow-up ANOVAs revealed an interaction of processing intensity and contextual brand quality on target product evaluations ($F(1, 153) = 8.97, p < .01$) and net positive thoughts ($F(1, 149) = 10.99, p < .01$). As expected, the context effects reversed. Planned contrasts indicated that high intensity participants, who employed a similarity-focused relational processing mind-set, displayed a marginal contrast effect on both their evaluations ($F(1, 153) = 3.79, p < .06$) and net positive thoughts ($F(1, 149) = 3.62, p < .06$). Yet, contrasts run on low intensity participants, who employed a dissimilarity-focused relational processing mind-set, exhibited an assimilation effect on evaluations ($F(1, 153) = 5.02, p < .05$) and such thoughts ($F(1, 149) = 7.43, p < .01$).

In sum, the results of this study are compelling. Using improved and more consumer-relevant manipulations and procedures, they conceptually replicate the outcomes of experiment 2.

GENERAL DISCUSSION

Two motivations prompted this research. One was a desire to better understand how exposure to contextual brands from diverse product categories can influence consumers' evaluations of a target product that belongs to still a different category. Although they have been rarely studied, environments inhabited by such diverse contextual and target product categories appear to be the norm in real-world consumer settings. A second motivation arose from a seemingly anomalous observation: assimilation effects dominated in the handful of studies we found that at all approximated such diverse-category environments. This seemed surprising because consumers' contextual exposure to multiple products from disparate categories would be expected to sensitize consumers to dissimilarities (as opposed to similarities) between items and thereby heighten the likelihood of observing contrast, not assimilation, effects. This unanticipated observation spurred us to search for unknown factors that not only shape context effects but are likely to affect the potential emergence of a comparison process, which is believed to stimulate contrast effects. Careful scrutiny of this process seemed to implicate three rather novel consumer-relevant factors that were likely to influence how consumers use the contextual data they encounter in diverse-product/category settings, whether such data are used when encoding the target product or judging it (i.e., by comparing it with a standard), and how the use of these data at the two pivotal stages affects the direction of context effects ultimately observed on target product evaluations.

Spurred by deductions derived from the two-stage model (Schwarz and Bless 2006) and prior findings, experiment 1 focused on the influence of two such factors: the processing mind-set that consumers adopt and the positioning of the target product. We predicted and found that because consumers who adopt an item-specific processing mind-set treat data in an absolute manner by considering each piece of information independently of others, they reliably refrain from engaging in a comparison process during the judgment

stage. Thus, these consumers' target product evaluations always reflected only the assimilation effect that, in accord with the two-stage model, occurred during the encoding stage. Yet, this was not so for consumers who adopted a relational processing mind-set, which involves noticing relationships between pieces of data and thus treating data in a relative (i.e., potentially comparative) manner. These consumers' target product evaluations were shaped during both the encoding and the judgment stages. And although these consumers' similarity- or dissimilarity-focused relational processing differed in exactly how they used the contextual data (i.e., dissimilarity-focused relational processors used such data to generate a concept that was antithetical to the contextually activated one, and they then used this antithetical concept during the encoding and judgment processes), it is important to note that these consumers' target product evaluations always followed the spirit of the two-stage model. Importantly, experiment 1 also showed that how precisely the target product was positioned further determined whether consumers who employed a relational processing mind-set engaged in a comparison process at the judgment stage. Extant research has shown that discriminating a target product from a comparison standard requires that the representation and boundaries of the product are reasonably well defined or precise. Thus, study 1 revealed that consumers pursued a comparison process at the judgment stage only when the ambiguous target product was positioned on a fairly well-defined concrete benefit, not on an abstract one. Accordingly, when target product positioning was concrete (abstract), the product evaluations of consumers who employed a relational processing mind-set reflected the influence of the contextually activated concept during both the encoding and the judgment processes (only the assimilative influence of the contextually activated concept that occurred during encoding).

Experiment 2 replicated the preceding findings, while also extending them. Specifically, it identified a crucial determinant of whether consumers are likely to focus on either data similarities or dissimilarities when they adopt a relational processing mind-set. Because settings that are inhabited by many heterogeneous category contextual products should make salient and highly accessible the dissimilarities among the products, consumers who process information relationally yet in a nonintense way are likely to focus on such dissimilarities and adopt a dissimilarity-focused relational processing mind-set. However, relational processors who process data intensely and thus should be motivated to seize on potentially more potent ways to organize data may look beyond such apparent dissimilarities and instead pursue a similarity-focused relational processing mind-set. Indeed, study 2 observed this by measuring consumers' NFC as a gauge of the intensity of their relational processing.

Finally, experiment 3 replicated yet further strengthened the insights gained in the other two studies. By manipulating consumers' involvement level rather than measuring the correlational construct of NFC, it demonstrated that in diverse-category contexts, it is indeed the magnitude of resources

that consumers devote to their relational processing that determines whether they focus on either data dissimilarities or similarities. Further, this study manipulated target product positioning in a cleaner, more compelling way, and it also tightened the study procedure.

In conclusion, this research contributes to theoretical knowledge in several important ways. First, it investigates for the first time whether and how context effects may emerge in settings where the contextual goods belong to different categories from each other *and* from the target product. This is important because such settings dominate the consumer landscape. Second, while our findings nicely align with the processes delineated by the two-stage model of context effects, we identify and show how two highly consumer-relevant factors, namely, the positioning of the target product and consumers' processing mind-set, can jointly and at times surprisingly influence how contextual data are used during the encoding or judgment stages and determine the direction of context effects. In particular, we show that how precisely (i.e., concretely vs. abstractly) an ambiguous target product is positioned can determine whether consumers undertake a comparison process at the judgment stage. In addition, consumers' mind-set or type of processing exerts two important influences that can shape both the encoding and judgment stages. Their type of processing influences (a) whether either a contextually primed concept (i.e., given either item-specific or similarity-focused relational processing) or an opposing, antithetical concept (i.e., given dissimilarity-focused relational processing) is activated and employed during the evaluation process and (b) whether the preceding concept will be used only during the encoding stage (i.e., given item-specific processing) or also during the judgment stage, provided that the target product is positioned concretely (i.e., given either similarity-focused or dissimilarity-focused relational processing). Third, we show that in diverse-product/category contexts, the magnitude of resources that consumers expend during processing, whether gauged via a NFC measure or a more consumer-relevant involvement manipulation, can determine whether those with a relational processing mind-set will focus on either similarities or dissimilarities. Finally, this research explains when, how, and why a paradoxical, not previously documented, outcome can occur: an apparent contrast effect during target product encoding and an apparent assimilation effect during the judgment stage. This can occur when dissimilarity-focused relational processing prevails and the target product is positioned concretely.

Implications and Limitations

Our research also suggests some important practical implications. It indicates that when considering outlets for product placement, it may be advisable to consider three factors beyond the quality level of the alternative outlets' merchandise. These include the processing mind-set that the target shopper is likely to use (e.g., work by Meyers-Levy 1988 implies that female shoppers should favor relational, while males should favor item-specific processing), how in-

tensely the shopper may process store data (e.g., most likely, more intensely in specialized outlets than in mass merchandise ones), and whether the target product is positioned abstractly or concretely. To exemplify, suppose that to increase sales volume, a relatively high quality product is seeking entry in discount outlets that generally carry lower quality goods. Based on the preceding assumptions about how particular variables influence the level of the critical factors, our framework suggests that if the target shopper is a relational processing female consumer, an abstractly positioned high quality product is likely to produce better results if it is placed in discount mass merchandise outlets, where shoppers presumably employ nonintensive cognition and thus should engage in dissimilarity-focused relational processing. However, if the focal product is positioned on a concrete benefit, results should be superior if it is placed in specialized discount outlets, where female shoppers should employ more intense cognition and thereby engage in similarity-focused relational processing. Note that these expectations follow because the factors that operate in each case enable the product to leverage anticipated context effects, in this example producing efficacious contrast effects on product evaluations and potentially sales. As table 1 shows, in the first (second) case, this contrast effect occurs because dissimilarity-focused (similarity-focused) relational processors encounter an abstractly (concretely) positioned high quality product in a low quality context.

At the same time, certain limitations of our work merit future inquiry. Research should explicitly assess a deduction that follows from our theorizing. Specifically, we proposed that under resource-constrained conditions (e.g., low NFC or involvement), consumers who adopted a relational processing mind-set focused on data dissimilarities because our diverse-category contextual and target products made dissimilarities as opposed to similarities more salient and accessible. This suggests that whereas in diverse-product/category contexts such resource-limited processors should adopt a dissimilarity-focused relational processing mind-set, in settings inhabited by many same-category contextual and target products, these processors should adopt a similarity-focused relational processing mind-set.

Another issue that merits inquiry emerges from the observation that in each of our studies, the contextually activated concept always concerned the notion of quality, and similarly the target product was always positioned on a quality benefit. Research should examine whether our findings are limited to instances where the contextually activated concept and the focal benefit on which the target product is positioned concern the same product feature. These questions represent just a smattering of those that we hope future work will explore.

REFERENCES

- Cacioppo, John T. and Richard E. Petty (1982), "The Need for Cognition," *Journal of Personality and Social Psychology*, 42 (January), 116-31.

- Chartrand, Tanya L., Amy N. Dalton, and Gavan J. Fitzsimons (2007), "Nonconscious Relationship Reactance: When Significant Others Prime Opposing Goals," *Journal of Experimental Social Psychology*, 43 (September), 719–26.
- Gollwitzer, Peter M. and Gordon B. Moskowitz (1996), "Goal Effects on Thought and Behavior," in *Social Psychology: Handbook of Basic Principles*, ed. E. Tory Higgins and Arie W. Kruglanski, New York: Guilford, 361–99.
- Herr, Paul M. (1986), "Consequences of Priming: Judgment and Behavior," *Journal of Personality and Social Psychology*, 51 (December), 1106–15.
- Higgins, E. Tory (1996), "Knowledge Activation: Accessibility, Applicability, and Salience," in *Social Psychology: Handbook of Basic Principles*, ed. E. Tory Higgins and Arie W. Kruglanski, New York: Guilford, 133–68.
- Hunt, R. Reed and Gilles O. Einstein (1981), "Relational and Item-Specific Information in Memory," *Journal of Verbal Learning and Verbal Behavior*, 20 (October), 491–514.
- Hunt, R. Reed and Marc Marschark (1987), "Yet Another Picture of Imagery: The Roles of Shared and Distinctive Information in Memory," in *Imagery and Related Mnemonic Processes: Theories, Individual Differences, and Applications*, ed. Mark A. McDaniel and Michael Pressley, New York: Springer, 129–50.
- Isen, Alice M. (1987), "Positive Affect, Cognitive Processes, and Social Behavior," in *Advances in Experimental Social Psychology*, Vol. 20, ed. L. Berkowitz, New York: Academic Press, 204–53.
- Kray, Laura J., Adam D. Galinsky, and Elaine M. Wong (2006), "Thinking within the Box: The Relational Processing Style Elicited by Counterfactual Mind-Sets," *Journal of Personality and Social Psychology*, 91 (July), 33–48.
- Malaviya, Prashant, Jolita Kisielius, and Brian Sternthal (1996), "The Effect of Type of Elaboration on Advertisement Processing and Judgment," *Journal of Marketing Research*, 33 (November), 410–21.
- Meyers-Levy, Joan (1988), "Gender Differences in Information Processing: A Selectivity Interpretation," in *Cognitive and Affective Responses to Advertising*, ed. Patricia Cafferata and Alice Tybout, Lexington, MA: Lexington Books, 219–60.
- (1991), "Elaborating on Elaboration: The Distinction between Relational and Item-Specific Elaboration," *Journal of Consumer Research*, 18 (December), 358–67.
- Meyers-Levy, Joan and Durairaj Maheswaran (1992), "When Timing Matters: The Influence of Temporal Distance on Consumers' Affective and Persuasive Responses," *Journal of Consumer Research*, 19 (December), 424–33.
- Meyers-Levy, Joan and Brian Sternthal (1993), "A Two-Factor Explanation of Assimilation and Contrast Effects," *Journal of Marketing Research*, 30 (August), 359–68.
- Moskowitz, Gordon B. (1993), "Individual Differences in Social Categorization: The Influence of Personal Need for Structure on Spontaneous Trait Inferences," *Journal of Personality and Social Psychology*, 65 (July), 132–42.
- Mussweiler, Thomas (2001), "'Seek and Ye Shall Find': Antecedents of Assimilation and Contrast in Social Comparison," *European Journal of Social Psychology*, 31 (September), 499–509.
- Park, Jong-Won, Song-Oh Yoon, Kyeong-Heui Kim, and Robert S. Wyer Jr. (2001), "Effects of Priming a Bipolar Attribute Concept on Dimension versus Concept-Specific Accessibility of Semantic Memory," *Journal of Personality and Social Psychology*, 81 (September), 405–20.
- Pollack, Irwin and Donald A. Norman (1964), "An Efficient Non-parametric Analysis of Recognition Memory," *Psychonomic Science*, 1, 327–28.
- Poncin, Ingrid, Rik Pieters, and Michele Ambaye (2006), "Cross Advertisement Affectivity: The Influence of Similarity between Commercials and Processing Modes of Consumers on Advertising Processing," *Journal of Business Research*, 59 (June), 745–54.
- Raghunathan, Rajagopal and Julie R. Irwin (2001), "Walking the Hedonic Product Treadmill: Default Contrast and Mood-Based Assimilation in Judgments of Predicted Happiness with a Target Product," *Journal of Consumer Research*, 28 (December), 355–68.
- Schwarz, Norbert and Herbert Bless (1992), "Constructing Reality and Its Alternatives: An Inclusion/Exclusion Model of Assimilation and Contrast Effects in Social Judgment," in *The Construction of Social Judgment*, ed. Leonard L. Martin and Abraham Tesser, Hillsdale, NJ: Erlbaum, 217–45.
- (2006), "Mental Construal Processes: The Inclusion/Exclusion Model," in *Assimilation and Contrast in Social Psychology*, ed. Diederik A. Stapel and Jerry Suls, New York: Psychology.
- Strull, Thomas K., Meryl Lichtenstein, and Myron Rothbart (1985), "Associative Storage and Retrieval Processes in Person Memory," *Journal of Experimental Psychology: Learning, Memory, and Cognition*, 11 (March), 316–45.
- Strull, Thomas K. and Robert S. Wyer Jr. (1979), "The Role of Category Accessibility in the Interpretation of Information about Persons: Some Determinants and Implications," *Journal of Personality and Social Psychology*, 37 (October), 1660–72.
- (1980), "Category Accessibility and Social Perception: Some Implications for the Study of Person Memory and Interpersonal Judgments," *Journal of Personality and Social Psychology*, 38 (June), 841–56.
- Stapel, Diederik A. and Willem Koomen (2000), "The Impact of Opposites: Implications of Trait Inferences and Their Antonyms for Person Judgment," *Journal of Experimental Social Psychology*, 36 (September), 439–64.
- (2001), "The Impact of Interpretation versus Comparison Mindsets on Knowledge Accessibility Effects," *Journal of Experimental Social Psychology*, 37 (March), 134–49.
- Stapel, Diederik A., Willem Koomen, and Aart S. Velthuisen (1998), "Assimilation or Contrast? Comparison Relevance, Distinctness, and the Impact of Accessible Information on Consumer Judgments," *Journal of Consumer Psychology*, 7 (1), 1–24.