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Author(s): Ravi Dhar, Stephen M. Nowlis, Steven J. Sherman

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# Comparison Effects on Preference Construction

RAVI DHAR  
STEPHEN M. NOWLIS  
STEVEN J. SHERMAN\*

Consumers frequently compare alternatives to make similarity and preference judgments. Recent research suggests that the construction of both similarity and preference judgments can be captured by a feature-matching model that allows for shifts in the relative weights assigned to the various features of the alternatives being compared. An implication of this model is that engaging in one comparative process (e.g., similarity) can influence the relative weight assigned to the features that are considered in a second comparative judgment (e.g., preference). Our main proposition that the type and direction of the initial comparison process has a systematic effect on subsequent preference judgments and choice was tested in a series of studies. One study, which focused on alternatives about which consumers have information in memory, shows that the direction of an initial comparison task that elicits differences between two options systematically alters their relative attractiveness in a subsequent preference task. In two subsequent studies, the effect of engaging in an initial comparison task on subsequent preference judgments was tested for stimulus-based choice sets. The results on choice deferral and choice satisfaction were consistent with the notion that engaging in similarity/dissimilarity comparisons altered the relative weight assigned to common and unique features for the two alternatives. Mouselab was used to support the decision mechanisms underlying the effect of the initial similarity/dissimilarity judgments. An additional study examined how the effect of adding common features on subsequent preference was also contingent on the initial comparison task. We conclude with a study involving real consequences and a discussion of the theoretical and practical goals of our findings.

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Consumers usually compare several different brands before deciding which option to purchase. In some cases a comparison of the features of the options is spontaneously initiated by the consumer (Gilbert, Giesler, and Morris 1995). For example, a consumer at the grocery store might compare the ingredients of different brands of cereal on display to determine which one to purchase. In many other instances, marketers encourage consumers to make particular comparisons through such tactics as comparative advertising or shelf displays. Although recent research has examined the consequences of whether or not comparisons are made (Brenner, Rot-

tenstreich, and Sood 1999; Hsee and Leclerc 1998; Nowlis and Simonson 1997), we still know very little about the effect of making different types of comparisons on derived preferences. In this research, we examine the consequences of engaging in similarity or dissimilarity comparisons among the available alternatives on the subsequent preference outcomes for those options.

Although comparisons are often made for the purpose of choice, consumers at times also compare objects in order to make judgments of similarity that are basic to categorization, generalization, and discrimination (Nosofsky 1986; Tversky 1977). It is likely that consumers judge similarity or dissimilarity when they come across new products in reference to what they already own. For example, individuals may evaluate the similarity of a new house being built to their own house. Such judgments of similarity are often made without simultaneously making a preference or evaluative judgment. In this vein, the concept of similarity has been recognized as "one of the most central theoretical constructs in psychology which serves several functions" (Medin, Goldstone, and Gentner 1993). However, gener-

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\*Ravi Dhar is associate professor at the School of Management, Yale University, New Haven, CT 06511; Stephen M. Nowlis is assistant professor at the College of Business, Arizona State University, Tempe, AZ 85287; and Steven J. Sherman is professor in the Department of Psychology, Indiana University, Bloomington, IN 47405. The authors are listed alphabetically and contributed equally to the research. We thank the editor, associate editor, three *JCR* reviewers, and Itamar Simonson for useful comments and suggestions. This research has been funded by a grant from the Faculty Research Fund at the Yale School of Management.

ally, knowledge in the domain of perceptions of objects is viewed as being independent and incapable of revealing something about the preference dimension (Glazer 1984).

Much research has shown that consumer assessments of similarity and preference among the same options are not fixed but, rather, vary according to different tasks and contexts. The parallels in the manner in which these two judgments tend to vary with task and context variables have led researchers to suggest that the cognitive processes underlying the construction of preference and similarity judgments may be similar (Dhar and Glazer 1996; Kaplan and Medin 1997; Medin, Goldstone, and Markman 1995). If similar processes underlie the construction of both judgments, task-induced changes in the assessments of similarity judgments among the alternatives under consideration should carry over to have systematic effects on preferences. Specifically, cognitive processes engaged in the similarity judgment task may focus on certain subsets of features of the different alternatives, thereby influencing the information that is subsequently more salient in making preference judgments.

The general notion that making one judgment or decision can systematically affect a subsequent judgment or decision is well established in the area of human judgment. For example, judging the cost of a very expensive item first, as opposed to a very cheap item, can make a moderately expensive target item seem quite inexpensive (e.g., Kardes 1986; Parducci and Fabre 1995; Sherman et al. 1978). We pursue this general idea that judgments and decisions are very much affected by the preceding judgments that have been made. In the above example, the content of the initial judgment (the cost of a very expensive vs. a very cheap item) is varied. However, the type of judgment (i.e., the expensiveness of the item) is the same for the first and second judgment. We shall instead vary the type of judgment that is made on two subsequent judgments while holding constant the items that are evaluated. In particular we examine the impact of initial judgments of similarity/difference on subsequent preference judgments and choice.

Building on the feature-matching model (Houston, Sherman, and Baker 1989, 1991; Tversky 1977), we propose a focus-shift model to explain the effect of initial perceptual judgments on the relative weight assigned to specific features in a subsequent preference task. In one study, we focus on options about which consumers have information in memory. We show that the direction of an initial comparison task that elicits differences between two options systematically alters the relative attractiveness of these options in a subsequent preference task. The next set of studies focuses on the effect of engaging in an initial comparison task on subsequent choices and choice satisfaction for stimulus-based sets. The effect on preference and choice satisfaction are consistent with the notion that engaging in similarity/dissimilarity comparisons alters the relative weight assigned to common and unique features for the two alternatives. A fourth study examines how the effect of adding common features on subsequent preference is also

contingent on initial similarity/dissimilarity judgments. Finally, we support our proposed mechanisms through tests of mediation with decision process data collected with the Mouselab procedure.

## EFFECT OF THE COMPARISON PROCESS ON PREFERENCE CONSTRUCTION

Although some preference judgments are made by comparing the global evaluations of each option, consumer preference evaluations often involve first making feature-based comparisons among the available alternatives. A number of studies have shown that these judgments are influenced by the direction in which the alternatives are compared. The asymmetries in comparative judgment can be understood in terms of the feature-matching model, which was originally proposed by Tversky (1977) for the process involved in judgments of similarity. This model assumes that similarity judgments are the result of the linear combination of the shared and distinctive features of the objects being compared. Because the model posits that people judge similarity by mapping the features of one item (the subject) onto the features of the other item (the referent), the model suggests that the direction of comparison can influence the degree of perceived similarity. That is, when asked to assess the degree of similarity of *a* to *b*, one's focus is on the unique features of *a*, whereas when assessing the similarity between *b* and *a*, one's focus is on the unique features of *b*. This focus on the unique features of the subject of comparison leads, for example, to a greater perceived similarity of North Korea to China than of China to North Korea, because people are aware of more unique features of China than of North Korea. Building on Tversky's research, others have extended the direction of the comparison effect to the domain of preference judgments (Dhar and Simonson 1992; Houston et al. 1989; Kardes and Sanbonmatsu 1993; Mantel and Kardes 1999). Using several different manipulations, these studies show that the unique features of an option that is the subject of comparison are more salient and also exert a greater influence on preferences.

The feature-matching model is a general description of cognitive mechanisms underlying comparison processes and can describe the variation of both preference and similarity judgments as a function of specific task and context variables. If the construction processes involved in both judgments are similar, this suggests that engaging in initial similarity or dissimilarity comparisons should influence the decision rule that is evoked, as well as its properties such as the relative weights assigned to features, in the preference task. This is likely to occur for a number of reasons. First, because feature matching is only one of many decision strategies used to make choices, an initial task that primes a feature-matching process is likely to increase the likelihood that consumers engage in a similar strategy for determining

their preferences. General support for the notion of priming decision processes comes from Higgins and Chaires (1980), who demonstrate how exposure to items described with differentiated linguistic construction facilitates creative problem solving. Second, the initial comparison task should also make certain aspects of the choice options more salient. Because the feature-mapping process emphasizes the importance of the unique features of the subject of comparison, asking a consumer to consider “How different is a vacation in Paris from a vacation in Hawaii?” for example, is likely to make Paris the focus of comparison. The search for ways in which Paris is different is likely to lead to a recall of more unique features of Paris compared to Hawaii as a result of the salience of the features of the focal option. Thus, in a subsequent preference between the two alternatives, consumers are likely to use a feature-matching strategy and retrieve the aspects that were generated in the initial comparison task (in this case, the unique features of Paris). Because the alternatives in this case (Paris and Hawaii) have more positive than negative features, the focal alternative in the initial comparison task is likely to appear relatively more attractive in a subsequent preference task between the two alternatives.

In addition, the focus-shift framework makes an opposite prediction for relative preferences in the case where the two alternatives have primarily negative features. For example, consider two possible types of fines for a driving violation: cleaning graffiti from city walls or stuffing envelopes for a public event. In this case, an initial comparison dissimilarity task should increase the relative attention paid to the unique negative features that are generated for the focal alternative, thereby making it appear less attractive in a subsequent preference judgment. Thus, a selective focus on the unique features of the focal option in the initial comparison task leads to the prediction that this option will be relatively less preferred because its negative features are made salient and more likely to be considered. On the basis of this discussion, we offer the following hypotheses.

- H1a:** For generally attractive options about which consumers have information in memory, an alternative that serves as the focal option in an initial comparison task that elicits differences between the options is subsequently perceived as more attractive than it would be if the other alternative were the focal option.
- H1b:** For generally unattractive options about which consumers have information in memory, an alternative that serves as the focal option in an initial comparison task that elicits differences between the options is subsequently perceived as less attractive than it would be if the other alternative were the focal option.

## STUDY 1: EFFECT OF DIFFERENCE COMPARISONS ON PREFERENCE FOR A FOCAL ALTERNATIVE

### Method

Study 1 was designed to test Hypothesis 1a and Hypothesis 1b. The subjects were 320 undergraduate marketing students fulfilling a course requirement. The respondents were informed that they would be presented with alternatives in different categories and would be asked to answer some questions about them. In this and subsequent studies, it was emphasized that there were no right or wrong answers, and the researchers were interested only in each respondent’s opinions.

Each problem presented two options that were identified by their names, and respondents were first asked to elaborate on the differences between them. Three categories that were designed to have generally attractive aspects were used to test Hypothesis 1a. One problem, titled “Dessert,” involved a choice between two desserts: chocolate cake with raspberry sauce or strawberries with vanilla ice cream. In a second problem, titled “Vacation Spots,” respondents were asked to imagine that they had entered a sweepstakes contest where the choice was between a one-week vacation in either Maui, Hawaii, or Paris, France. In a third problem, titled “Job after Graduation,” subjects were asked to imagine that they would soon graduate and had been offered a job in sales management or with an advertising agency.

In order to test Hypothesis 1b, similar types of alternatives were created with the difference that these options were likely to be perceived as undesirable. In one problem, subjects were asked to imagine that they had broken the speed limit while driving to school. In order to waive the fine, the traffic violation department gave them a choice between two punishments: eight hours of stuffing envelopes for a local event or eight hours of cleaning graffiti from state property. In a second problem, subjects were asked to imagine that they were on medication for a chronic problem. They were offered a choice between two medications that were equally effective but had different side effects: one of them caused frequent mild heartburn and indigestion and the other caused frequent mild headaches. In a third problem, respondents were asked to imagine that they were moving into a new apartment and had to choose between two roommates: one who was messy and untidy or the other roommate who was noisy and always on the phone. Subjects were randomly assigned to the attractive or the unattractive pair conditions.

Respondents were likely to have some information in memory about the alternatives in these problems. After reading each problem, subjects were asked how the two options were different from one another. The identity of the option that was the focus of comparison was manipulated between subjects, such that each option was the focus of comparison in one version. For example, in the desserts category, respondents in one condition were asked to “please write below, in what ways is chocolate cake with

raspberry sauce dessert different from strawberries with vanilla ice cream dessert?" (so that cake served as the focal option). Subjects in the other condition were asked "in what ways are strawberries with vanilla ice cream different from chocolate cake with raspberry sauce dessert?" (so that ice cream served as the focal option). Following the thought listing, a 15-point scale from seven on one end (representing strong preference for one option) to seven on the other end (representing strong preference for the other option) was used to rate the relative preference between the two options (Dunning and Parpal 1989).

## Results and Discussion

We tested Hypothesis 1a and Hypothesis 1b with an ANOVA model, where the preference ratings were the dependent variable. To test Hypothesis 1a, we analyzed the simple effect of the direction of initial comparison for the three attractive categories. Hypothesis 1a predicts that, for generally attractive options, the alternative that is the focal option in an initial comparison of differences task has a higher relative preference than if the other option were the focal alternative. The results are summarized in Table 1. Consistent with Hypothesis 1a, averaged across the three categories, the difference in the attractiveness rating was 2.93 points when an alternative served as the focal option in the initial task than when it did not. The direction of the results was consistent across all three categories. The simple effect tested in the ANOVA model was significant ( $F(1, 475) = 22.05, p < .001$ ), thus supporting Hypothesis 1a. Finally, the ratings can be dichotomized to determine whether the shifts in preference ratings carry over to "choices." In accordance with the shifts in attractiveness ratings, an item was selected 17 percent more frequently when it served as the focal option in an initial comparison task. This difference was significant ( $t = 2.7, p < .01$ ) and was consistent across the three tested categories.

Hypothesis 1b predicts that, for generally unattractive options, the focal option in an initial comparison of differences task will be subsequently less preferred. Consistent with this proposition, averaged across the three categories, an alternative increased its unattractiveness rating by 1.47 points when it served as the focal option in the initial task. The results were in the expected direction for all three categories. The contrast that tested this simple effect in the above ANOVA model was significant ( $F(1, 475) = 10.95, p < .001$ ), thus supporting Hypothesis 1b. Again, the preference ratings can be dichotomized to determine the effect on "choices." In accordance with the shift in attractiveness ratings, these generally unattractive items were selected 12 percent less frequently when they were the focal option in the initial comparison task. This difference was significant ( $t = 2.0, p < .05$ ) and was consistent across the three tested categories.

The predictions above were based on the assumption that engaging in a perceptual task (i.e., judging how the items are different) increases the attention paid to the focal option, resulting in greater retrieval and consideration of the unique

**TABLE 1**  
STUDY 1: THE EFFECT OF DIFFERENCE COMPARISONS  
ON PREFERENCE FOR A FOCAL ALTERNATIVE—  
PREFERENCE RATINGS ( $N = 320$ )

Category	Option A is focal <sup>a</sup>	Option B is focal <sup>a</sup>	Difference in ratings <sup>a</sup>
For categories that are generally attractive (testing Hypothesis 1a):			
Dessert	1.60	1.89	3.49
Vacation	1.42	1.20	2.62
Job	1.94	.76	2.70
Total	1.65	1.28	2.93
For categories that are generally unattractive (testing Hypothesis 1b):			
Side effect	-.07	-.35	.42
Speeding ticket	-1.12	-1.74	2.86
Apartment roommate	-.55	-.58	1.13
Total	-.58	-.89	1.47

<sup>a</sup>The attractiveness ratings indicate how much the focal alternative was preferred. For example, when dessert A was the focal alternative, it received an attractiveness rating of 1.60. When dessert B was the focal alternative, it received a rating of 1.89, for a total difference of  $(1.60 + 1.89 = 3.49)$ . Negative numbers indicate that the focal alternative was not preferred.

features of this alternative from memory (memory-based judgments) in a subsequent preference judgment. An implicit assumption of our theory is that, if the descriptions for both alternatives are explicitly provided (stimulus-based judgment) such that neither alternative is likely to be the focus of comparison, the direction of the initial comparison task may not result in selectively focusing on the features of one option and is less likely to impact the subsequent relative preferences for alternatives. In order to consider this proposition, a set of three problems was used to test for boundaries of the effect of initial dissimilarity judgments on subsequent choice by manipulating whether the options were memory based or stimulus based. As in study 1, we manipulated which of the two options served as the focal alternative in the comparison task. In the memory-based condition, subjects were presented with two alternatives that were identified by their names (e.g., San Francisco and New York City), whereas in the stimulus-based condition, the two alternatives were described in terms of certain representative features. We replicated the results of study 1 and found that, for generally attractive options, the alternative that served as the focal option in the initial dissimilarity task had a relatively higher attractiveness rating than when the other option served as the focal option. Furthermore, as predicted, this effect did not occur for the corresponding stimulus-based choice sets.

Study 1 examined the effect of making dissimilarity judgments prior to judging preferences. Results supported the focus-shift model by demonstrating differences between attractive and unattractive alternatives for which information was available in memory. Although consumers are sometimes motivated to look for dissimilarities between

products (e.g., how a new brand is different from the one that is consumed currently), they are also motivated to look for similarities between products (e.g., which items to include in their consideration set for future consumption). The type of comparisons that consumers engage in, whether they be similarity or dissimilarity judgments, may have an effect on subsequent choices. Previous research (Gati and Tversky 1984; Tversky 1977) finds that the salience of common and unique features depends on whether the objects are compared in terms of similarity or dissimilarity. Specifically, the relative weight assigned to common features in relation to unique features is greater for similarity judgments compared to dissimilarity judgments. Further, because the common features are acquired regardless of which item is selected, the emphasis on unique features is often the norm in choice models (Meyer and Eagle 1982; Tversky 1972). However, both shared and unique features should logically be considered in decisions regarding whether or not to choose as well as the evaluation of the chosen alternative. This suggests that, if the shared features are considered in an initial comparison task, they are more likely to be evoked in a subsequent choice that includes a deferral option. Conversely, if these features are not emphasized in an earlier comparison task, they will likely be ignored in the subsequent preference task. Thus, the relative emphasis on shared and unique features in subsequent preference judgments can also be altered by the initial comparison task. Specifically, shared features are likely to receive relatively more attention when consumers first engage in a comparison task that elicits how the two alternatives are similar to each other than when the initial task elicits how the two items are different from each other.

We investigate the degree to which shared or unique features are emphasized in initial comparisons and its consequences on subsequent preferences by looking at the likelihood of selecting the no-choice or deferral option (Dhar 1997). The difference in deferral is predicted to occur because the attractiveness of the same alternatives will vary depending on the subset of features that are emphasized in the initial comparison task. For example, consider an alternative that is presented as a part of a unique-good pair, where the two items have different or unique good features but share their bad features. If consumers first engage in a task that tries to determine how the two items are different, they should be more likely to focus on the unique, good features and place relatively less emphasis on the shared, bad features in a subsequent preference task than when they first engage in a task to determine how the two items are similar. Accordingly, the alternatives are likely to appear more attractive after a dissimilarity task, and this should decrease the likelihood of selecting the no-choice or the deferral option. Conversely, if we consider unique-bad pairs, where both alternatives share good features but possess unique bad features, engaging in the two types of comparison processes should now reverse the relative preference for the no-choice option. In this case, making dissimilarity judgments prior to choice should increase the relative weight assigned to the unique bad features in a

subsequent choice task more than when similarity judgments are made. Thus, the alternatives are likely to appear less attractive after a dissimilarity task, and this should increase the likelihood of choice deferral.

The choice deferral predictions are consistent with the premise that the relative focus on the shared features of the alternatives increases when the comparison task elicits similarity judgments than when it elicits dissimilarity judgments. If indeed there is a differential focus on unique and common features during the initial comparison process, such differences should be revealed by monitoring the information acquisition process employed by the subjects during the two tasks. A second advantage of observing the comparison processes is that these changes in focus can then be used to perform a mediational test for the proposed differences in choice deferral. Consequently, the next study uses the Mouselab program (Johnson et al. 1993) to test the premise that choice deferral is mediated by a shift in the relative attention paid to the common and unique features during the initial comparison task. On the basis of this discussion, we offer the following hypotheses:

- H2:** The type of choice set (e.g., unique-bad and unique-good options) moderates the effect of the initial comparison process on choice deferral. Choice deferral for unique-good pairs is greater after similarity than dissimilarity judgments. Conversely, choice deferral for unique-bad pairs is lower after similarity than dissimilarity judgments.
- H3:** Consumers will acquire a greater ratio of unique to common information about the alternatives when the task entails making dissimilarity as opposed to similarity judgments.
- H4:** The relative focus on good versus bad features during the initial similarity/dissimilarity judgment mediates the subsequent preference for the no-choice (deferral) option.

## STUDY 2: EFFECT OF INITIAL SIMILARITY/DIFFERENCE COMPARISON ON CHOICE DEFERRAL

### Method

Subjects were 142 undergraduate marketing students fulfilling a course requirement. Respondents were told that they would be evaluating two alternatives in each of three different product categories: restaurants, CD players, and school classes (see Fig. 1 for an example; note that the actual appearance of this example to subjects in the Mouselab program is slightly different from what is shown in the figure, but the information provided to respondents is as presented). Two factors were manipulated in a 2 (subjects first made either similarity or dissimilarity judgments)  $\times$  2 (alternatives either had common bad features and unique good features [unique-good pairs] or alternatives had com-

FIGURE 1

## STUDY 2: EXAMPLE OF PRODUCT CATEGORY: RESTAURANTS

Imagine that you are going to dinner and you have the following two options. You also have the option of skipping these restaurants and looking for others.

Restaurant A	Restaurant B
Features: - Good desserts and drinks - Wide selection - Easy to get to - Long wait - Dull atmosphere - Unfriendly waiters	Features: - Good appetizers - Good entrees - Plenty of parking - Long wait - Dull atmosphere - Unfriendly waiters

**In this situation, I would** (please circle your answer below)

- (a) Not choose any of these restaurants and look for other restaurants
- (b) Choose restaurant A
- (c) Choose restaurant B

mon good features and unique bad features [unique-bad pairs]) between-subjects design. Each option had three unique and three common features. For example, in the restaurants category, for the unique-good pairs, "restaurant A" offered "good desserts and drinks, wide selection, and easy to get to," "restaurant B" offered "good appetizers, good entrees, and plenty of parking," while both had "long wait, dull atmosphere, and unfriendly waiters." In the unique-bad condition, "restaurant A" was "expensive, not very clean, and noisy," "restaurant B" had "long wait, dull atmosphere, and unfriendly waiters," while both offered "good appetizers, good entrees, and plenty of parking." The features for the different product categories were adapted from an earlier study by Houston and Sherman (1995). The two initial comparison tasks manipulated the relative focus on shared and unique features by asking subjects to make similarity or dissimilarity judgments between the two options on a scale of zero ("not at all similar/different") to 10 ("very similar/different"). After this task was completed, subjects were asked to move to the next screen. Subjects were told that, as in real choice situations, they could either choose between the two alternatives they had just compared, or they also had the option to not make a choice and to look for other alternatives. Each subject made a choice in the three different categories. Subjects were randomly assigned

to each condition, and the order in which the three problems were seen was randomly determined.

The experiment was conducted using Mouselab (Johnson et al. 1993), a computer-based process tracing technique. Mouselab has been used in a variety of ways in decision research (e.g., Dhar and Nowlis 1999; Sen 1998) and is suited to support and extend the interpretation of the preference data. Subjects were told the following: "During this experiment, you will make decisions based on information you collect from the computer screen. This information will be hidden in 'boxes' on the screen. In order to see what the boxes on the screen contain, you will open them up by moving the cursor into one box at a time. When you move the cursor out of a box, it will close. A box can be re-opened by moving the cursor back into the box. The first thing we will ask you to do is make a practice decision." Subjects then completed the practice problem before making decisions in each of the three categories. After the practice problem, subjects were told that they would be shown two options that would be described by several different features. They were further told that each option had features that were common to both alternatives or unique to each alternative. The information regarding each category was displayed in closed boxes presented in an option  $\times$  feature matrix, where the information in each box could be revealed

by moving the mouse-controlled cursor to the relevant box. Thus, if subjects wished to see information about a particular feature of one of the options, they would move the cursor to that particular box, which would then open and the information would be revealed. As soon as the cursor moved off that box, the box closed. Mouselab recorded which boxes were opened, in what sequence, and how much time was spent in each box.

In this study, we want to show through a mediation analysis that the shift in relative focus on good and bad features is indeed what may be driving the subsequent effect on choice deferral. In order to show mediation, we must demonstrate three relationships (Baron and Kenny 1986). First, we must show the predicted significant choice set X type of comparison interaction on choice deferral (Hypothesis 2). Second, we must show this same interaction effect on the proposed mediator, the degree of focus on good and bad features. Third, we must show that the choice set X type of comparison interaction on deferral is reduced or eliminated when the processing measure is also included.

## Results and Discussion

*Choice Effects.* Hypothesis 2 predicted that choice deferral for unique-good pairs would be lower when consumers first engage in dissimilarity compared to similarity judgments. Conversely, choice deferral for unique-bad pairs would be higher when subjects first make dissimilarity judgments compared to similarity judgments. A logit model was constructed to test this hypothesis. The dependent variable was whether or not the deferral option was selected and was modeled as a function of the following independent dummy variables: (1) a variable indicating whether similarity or dissimilarity judgments were made prior to choices, (2) a variable indicating whether the options in the set were unique-good pairs or unique-bad pairs, (3) a two-way interaction between (1) and (2), which tests Hypothesis 2, and (4) five alternative-specific variables that capture the mean tendency to select each alternative (e.g., Guadagni and Little 1983). The main effect of type of comparison was not statistically significant, and the main effect of option type was significant ( $\chi^2 = 12.7, p < .01$ ), indicating that subjects were overall more likely to choose in the unique-good than in the unique-bad pairs. This is consistent with past findings that choices involving unique-good pairs are perceived more favorably (Dhar and Sherman 1996). Consistent with Hypothesis 2, coefficient 3 above was significant ( $\chi^2 = 8.2, p < .01$ ). For the unique-good pairs across the three problems, mean decision deferral decreased from 32 percent when subjects first engaged in similarity judgments to 21 percent when dissimilarity judgments were made before the preference decision (see Table 2). In contrast, for unique-bad pairs, decision deferral increased from 47 percent when subjects first engaged in similarity judgments to 63 percent when dissimilarity judgments were made. The results were consistent across all three categories.

TABLE 2

STUDY 2: THE EFFECT OF TYPE OF COMPARISON ON CHOICE INCIDENCE—SHARE OF RESPONDENTS ( $N = 142$ ) CHOOSING NEITHER OPTION (%)

Product category	Unique-good pairs		Unique-bad pairs	
	Similarity judgments first	Dissimilarity judgments first	Similarity judgments first	Dissimilarity judgments first
Restaurants	46	36	62	79
CD players	30	17	69	76
School classes	17	8	15	36
Total	32	21	47	63

*Processing Effects.* We first examined the ratio of unique to common features that were acquired from the Mouselab data, in order to test Hypothesis 3. To do this, we constructed a value for each subject equal to the number of unique features examined minus the number of common features examined divided by the total number of unique and common features examined, which will be referred to hereafter as COMM (Dhar and Nowlis 1999). This value is similar in style to PATTERN, a variable used to measure the degree of compensatory and noncompensatory processing (e.g., Payne, Bettman, and Johnson 1988). The value of this number can range from +1.0 to -1.0, with positive numbers indicating a greater focus on unique features and negative numbers indicating a greater focus on common features. An ANOVA model was then constructed with this ratio as the dependent measure and with the type of initial comparison (similarity or dissimilarity judgment) and the type of choice set (unique-good or unique-bad pairs) as the two independent variables. The main effect of type of comparison, which tests Hypothesis 3, was significant ( $F(1, 422) = 7.02, p < .01$ ). When initial comparisons involved similarity judgments, this ratio was 0.379, and when comparisons involved dissimilarity judgments, this ratio was 0.434. Thus, although unique features received more weight in both cases, similarity judgments increased the relative weight assigned to the common features.

The differential attention to unique features for the two comparison tasks suggests that there should be an interaction between the type of initial comparison and the type of choice set (unique-good versus unique-bad) on the relative focus on good and bad features. That is, the relative focus on good features for unique-good pairs will be greater after dissimilarity than similarity judgments. Conversely, the relative focus on good features for unique-bad pairs will be greater after similarity than dissimilarity judgments. To examine this, we constructed a value for each subject equal to the number of good features examined minus the number of bad features examined divided by the total number of good and bad features examined, which will be referred to hereafter as VAL (Dhar, Nowlis, and Sherman 1999). The value of VAL can range from +1.0 to -1.0, with positive numbers indicating a greater focus on positive features and

negative numbers indicating a greater focus on negative features. An ANOVA model was then constructed with this ratio as the dependent measure and with the type of initial comparison (similarity or dissimilarity judgment) and the type of choice set (unique-good or unique-bad pairs) as the two independent variables. The interaction between these two variables was significant ( $F(1, 422) = 6.54, p < .05$ ), which supports our framework.

For the unique-good pairs, the value of VAL increased from 0.341 during similarity judgments to 0.428 during dissimilarity judgments. Thus, for unique-good pairs, subjects focused relatively more on good features during dissimilarity judgments, which parallels our earlier finding that choice deferral decreased in this case. Conversely, for unique-bad pairs, VAL decreased from  $-0.391$  during similarity judgments to  $-0.478$  during dissimilarity judgments. In this case, subjects focused more on bad features during dissimilarity judgments, and choice deferral increased. Finally, we found that the main effect of the type of choice set was highly significant ( $p < .001$ ), such that there was greater attention paid to the bad features in the unique-bad pairs and to the good features in the unique-good pairs. This is consistent with other research showing that consumers tend to focus relatively more on unique than on common features (Dhar and Sherman 1996).

*Mediation Analyses.* Our framework suggests that the effect of initial comparison and type of choice set on choice deferral is mediated by the relative focus on good and bad features involved in preference evaluation. As mentioned above, we found a significant choice set X initial comparison interaction on choice deferral, which satisfies the first criterion for mediation. Next, as also mentioned above, we found a parallel significant choice set X initial comparison interaction on VAL, satisfying the second criterion for mediation. Finally, the third criterion of mediation was supported, as the effect of choice set type X initial comparison on choice deferral was weaker when VAL was included as a variable ( $\chi^2 = 4.2, p < .05$ ; vs.  $\chi^2 = 8.2, p < .01$ , as mentioned above). Consistent with Hypothesis 4, the results of the mediation tests show that a shift in relative focus may mediate the effect of initial comparison type on choice deferral for the two types of choice sets.

The second study looked at the effect of engaging in an initial comparison task between two stimulus-based alternatives on the subsequent likelihood of making a choice between them. The results showed that subjects were less likely to choose from a unique-good pair if a prior task elicited judgments of similarity than of dissimilarity. In contrast, subjects were more likely to choose from a unique-bad pair when they initially performed a similarity than a dissimilarity task. The process data from Mouselab support the notion that differences in relative weight assigned to the features that were highlighted in the initial comparison task mediate the changes in the preference assessments after the two types of comparisons.

The next study extends these results of the effect of the comparison task to postchoice evaluations when consumers

are forced to choose. Specifically, if the difference in deferral reflects a difference in evaluation of the attractiveness of the items across the two comparison tasks, immediate satisfaction with the chosen option (hereafter, choice satisfaction) is also likely to be determined by the features of the items that are considered in the choice task. Specifically, choice satisfaction with the selected item is likely to be an increasing function of the focus on its good features and a decreasing function of the focus on its bad features. Because engaging in a similarity task prior to choice for unique-good pairs increases the relative salience of its shared bad features, it is likely to lead to relatively less choice satisfaction than when the initial comparison task elicits dissimilarities between the two items. Conversely, for choice between unique-bad pairs, consumers should be relatively more dissatisfied if they first engage in an initial dissimilarity judgment task, because its shared good aspects are relatively less prominent compared to what happens after a similarity task. Based on this reasoning, the following hypotheses are proposed:

- H5:** The type of choice set moderates the effect of the comparison process on choice satisfaction. Choice satisfaction for unique-good pairs is greater when choice is made after initial dissimilarity than similarity judgments. Choice satisfaction for unique-bad pairs is greater when choice is made after initial similarity than dissimilarity judgments.
- H6:** The relative focus on good versus bad features during the initial similarity/dissimilarity judgment mediates the subsequent level of choice satisfaction.

### STUDY 3: EFFECT OF INITIAL SIMILARITY/DIFFERENCE COMPARISON ON CHOICE SATISFACTION

#### Method

Subjects were 153 undergraduate marketing students fulfilling a course requirement. Respondents made decisions using Mouselab in three categories: apartments, blind dates, and automobiles. As in study 2, subjects first rated the similarity or dissimilarity between the two options (using the same scales as in study 2). Next, subjects were asked to make a choice between the two alternatives. Finally, subjects rated how satisfied they were with their chosen option, on a scale of zero ("very unsatisfied") to 10 ("very satisfied"). Two factors were manipulated in a 2 (subjects first made similarity or dissimilarity judgments)  $\times$  2 (choice set consisted of unique-good pairs or unique-bad pairs) between-subjects design. As in study 2, each option had three unique and three common features.

## Results and Discussion

*Choice Satisfaction Effects.* Hypothesis 5 predicted that choice satisfaction for unique-good pairs would be higher after dissimilarity judgments compared to similarity judgments. Conversely, choice satisfaction for unique-bad pairs would be greater after similarity judgments compared to dissimilarity judgments. An ANOVA model was constructed to test Hypothesis 5. The dependent variable was satisfaction with the chosen alternative, and this was modeled as a function of the type of initial comparison and whether the options in the set were unique-good pairs or unique-bad pairs. The main effect of the type of comparison was insignificant, while the main effect of type of choice set was significant ( $F(1, 454) = 15.39, p < .001$ ), indicating that overall choice satisfaction was higher for unique-good pairs (Houston and Sherman 1995). The interaction between these two factors tests Hypothesis 5. Consistent with Hypothesis 5, the interaction was significant ( $F(1, 454) = 4.19, p < 0.05$ ). Results were consistent across all three categories and are reported in Table 3. For example, in the category of apartments for unique-good pairs, choice satisfaction increased from 6.50 after similarity judgments to 7.32 after dissimilarity judgments. However, for unique-bad pairs, ratings of satisfaction dropped from 5.87 after similarity judgments to 5.77 after dissimilarity judgments. Overall, the effect of the comparison process on choice satisfaction was stronger for unique-good pairs than for unique-bad pairs. A possible reason for this may be that, even though the bad features are relatively less salient for unique-bad pairs after similarity judgments, they continue to be prominent in determining choice satisfaction.

*Processing Effects.* We also examined the degree to which respondents examined unique and common features in the initial comparison task, again testing the COMM variable that was used in study 2. When comparisons involved initial similarity judgments, this ratio was 0.357, and when comparisons involved dissimilarity judgments, this ratio was 0.426. We tested the hypothesis in the same way as was done in study 2 and found it to be statistically significant ( $F(1, 454) = 8.50, p < .01$ ). Also as in study 2, we used VAL to examine the extent to which subjects focused on good versus bad features for the two types of choice sets due to the initial comparison task. As predicted, there was a significant choice set X initial comparison interaction on VAL ( $F(1, 454) = 4.84, p < .05$ ).

Similar to Hypothesis 4 (which investigated the mediation of choice deferral), Hypothesis 6 predicts that the effects of initial comparison and type of choice set on choice satisfaction is mediated by VAL (the relative focus on good and bad features). As mentioned above, we found that there was a significant choice set X type of comparison interaction on choice satisfaction, satisfying the first criterion of mediation. Next, we found that there was a parallel significant interactive effect of type of comparison and choice set on VAL, satisfying the second criterion of mediation. Finally, the third criterion of mediation was sup-

**TABLE 3**

STUDY 3: THE EFFECT OF TYPE OF COMPARISON ON POSTCHOICE SATISFACTION—RATINGS OF POSTCHOICE SATISFACTION ( $N = 153$ )

Product category	Unique-good pairs		Unique-bad pairs	
	Similarity judgments first	Dissimilarity judgments first	Similarity judgments first	Dissimilarity judgments first
Apartments	6.50	7.32	5.87	5.77
Automobiles	5.77	5.94	5.16	4.47
Blind date	5.53	6.27	3.28	3.15
Total	5.93	6.56	4.77	4.39

ported, as the interaction of choice set X type of comparison was no longer significant when VAL was included as a variable ( $F(1, 454) = 2.01, p > .20$  vs.  $F(1, 454) = 4.19, p < .05$ , as presented earlier). Thus, consistent with Hypothesis 6, VAL was found to mediate the effect of initial comparison type on choice satisfaction.

The previous studies used the comparison process to shift the relative weight assigned to the common or the unique features of both alternatives during preference judgments. Engaging in dissimilarity or difference judgments led to an increase (for unique-good pairs) or a decrease (for unique-bad pairs) in the attractiveness of the choice set as a whole relative to engaging in similarity judgments. The comparison process may also affect the relative attractiveness of the alternatives within a choice set. To the extent that the comparison process focuses on shared features that are either good or bad, it may systematically influence the strength of preference between the alternatives provided.

Consider a choice between two CD players, each of which has unique good and bad features. Now imagine that new common features are added, either all good features or all bad features. Recent research suggests that adding a common feature to both alternatives increases the relative preference between them when the added feature is attractive but not when it is unattractive (Chernev 1997). Although several different psychological processes have been proposed for the effect, this prediction is in agreement with the findings that, as two options become more similar along one dimension (through the addition of common features in this case), differences along other dimensions are magnified (Mellers and Biagini 1994). This suggests that the strength of preference between the two items should increase more when common attractive features are added if subjects first make similarity judgments than if they first make dissimilarity judgments. This is because similarity judgments will put more focus on the shared features, thus accentuating their impact for the more preferred option. Conversely, when common negative features are added to both items, the strength of preference for the more preferred option should decrease more for similarity judgments than for dissimilarity judgments, again because similarity judgments will put more focus on the shared features. On the basis of this discussion, we propose the following hypotheses:

**H7a:** Adding relatively attractive common features will increase the strength of preference for the preferred alternative more after similarity than dissimilarity judgments.

**H7b:** Adding relatively unattractive common features will decrease the strength of preference more after similarity than dissimilarity judgments.

#### STUDY 4: EFFECT OF ADDING COMMON FEATURES ON THE IMPACT OF INITIAL SIMILARITY/DIFFERENCE COMPARISONS

##### Method

Subjects were 180 undergraduate marketing students fulfilling a course requirement. Respondents made decisions in four product categories. As in the previous studies, they first rated either the similarity or dissimilarity between the two options (using the same scales). Similar to study 1, respondents next rated their relative preference between the two options, on an 11-point scale from +5 (strongly prefer A) to -5 (strongly prefer B). Three factors were manipulated in a 2 (subjects first made similarity or dissimilarity judgments, a between-subjects factor)  $\times$  2 (base condition or common features added to base condition, a between-subjects factor)  $\times$  2 (relatively attractive or unattractive features added, a within-subject factor) mixed design.

In one condition, subjects compared two options where each option offered only two unique features (the base condition). In the condition where the options offered additional common features, each option also had two common features. Two of the product categories, calculators and airlines, were designed to test Hypothesis 7a, such that we added generally attractive common features. For example, in the product category of calculators (in the base condition), subjects compared "calculator A," which offered a reliability rating from Consumer Reports of 90 out of 100 and 50 functions, and "calculator B," which offered a rating of 95 out of 100 and 20 functions. In the condition where common features were added, both calculators also offered "above average battery life and a special sale price." Two other product categories, credit cards and binoculars, were designed to test Hypothesis 7b, such that we added generally unattractive common features. For example, in the product category of binoculars (in the base condition), subjects compared "binoculars A," which had a magnification level of seven times and a price of \$49, and "binoculars B," which had a magnification level of 14 times and a price of \$69. In the other condition where common features were added, both binoculars also had a "somewhat heavy weight and below average reliability."

##### Results and Discussion

The results are summarized in Table 4. Averaged across the two categories testing Hypothesis 7a, after similarity

comparisons, subjects' mean strength of preference rating was 1.40 in the base condition when neither option offered common features. When both of these options offered common, generally attractive features, the mean rating was 2.19, an increase of 0.79. However, after dissimilarity comparisons, there was virtually no difference in strength of preference ratings in the two conditions (1.56 vs. 1.57). These results are consistent with Hypothesis 7a and are consistent across both of the product categories. The results pertaining to Hypothesis 7b show that the addition of common, generally unattractive, features decreased the strength of preference after similarity comparisons were made by an average of 1.12. However, after dissimilarity comparisons, no systematic pattern was observed. These results are generally consistent with Hypothesis 7b.

We tested these two hypotheses with an ANOVA model, where the strength of preference rating was the dependent variable, and the three independent variables were: (1) the addition of common features, (2) the type of initial comparison, and (3) the relative attractiveness of the common features. In order to test Hypothesis 7a, we tested an interaction contrast between the addition of common variables and the type of comparison, for the problems where attractive common features were added. The interaction contrast testing Hypothesis 7a was marginally significant ( $F(1, 172) = 2.93, p < .10$ ). We tested Hypothesis 7b in the model with a similar interaction contrast, now focusing only on the addition of relatively unattractive common features. The interaction from the ANOVA model testing Hypothesis 7b was significant ( $F(1, 172) = 4.22, p < .05$ ). Once again, these results support the idea that similarity and dissimilarity judgments shift the relative focus on shared versus unique features, respectively.

#### STUDY 5: EFFECT OF INITIAL DISSIMILARITY JUDGMENTS ON CHOICES INVOLVING REAL CONSEQUENCES

The studies so far demonstrate the conditions under which initial comparisons affect subsequent preferences. One limitation of the tests presented so far is that they all involved hypothetical choices. In particular, because no real costs were incurred, a concern that arises with demonstrating effects in the laboratory is that the results may not reflect consumer responses when faced with consequential choices. However, because the focus was on systematic differences in preferences across comparison conditions and to the extent that such differences were observed, it undermines an argument based on a lack of real consequences. Second, although the focus was on the difference in preferences after the two comparison tasks, a question that naturally arises is whether assessments of preference in the absence of an explicit comparison task are closer to assessments that follow similarity or dissimilarity judgments. Because the previous studies did not include a control (i.e., no comparison) condition, they did not address whether choice in absence of

**TABLE 4**  
 STUDY 4: THE EFFECT OF ADDED COMMON FEATURES ON THE IMPACT  
 OF COMPARISON TYPE—PREFERENCE RATINGS  
 ( $N = 180$ )

Category	Similarity judgments			Dissimilarity judgments		
	Without common features	With common features	Total effect <sup>a</sup>	Without common features	With common features	Total effect <sup>a</sup>
Adding attractive common features (test of Hypothesis 8a):						
Calculator	1.39	2.28	.89	1.54	1.32	-.22
Airline	1.41	2.09	.68	1.57	1.82	.25
Total	1.40	2.19	.79	1.56	1.57	.01
Adding unattractive common features (test of Hypothesis 8b):						
Binoculars	2.91	1.67	-1.24	2.86	2.38	-.48
Credit card	2.24	1.25	-.99	.75	1.47	.72
Total	2.58	1.46	-1.12	1.81	1.93	.12

<sup>a</sup>Total effect is the difference in preference when the common features are added to each alternative.

comparisons is closer to a choice made following a similarity or a dissimilarity judgment.

Although we believe that with hypothetical situations subjects generally indicate how they would act, we decided to test one of the propositions using real choices. A secondary objective of this study was to determine the preference outcomes in the absence of an initial comparison condition. To ensure that respondents perceived the task as having real consequences, we informed them that, to show our appreciation for their participation in a study (unrelated to current research), they would receive \$1 for their participation. After completing the unrelated survey, subjects were provided with an opportunity to exchange the \$1 for a large-sized snack (either a large bag of candy or a large bag of potato chips). In a second problem (restaurant problem), subjects were told that three students selected at random would receive \$25 for their participation in the unrelated study. For the restaurant problem, students were provided with an opportunity to purchase a dinner for two at one of two restaurants in the event that they won the cash prize. The two items in each category were explicitly described on several attributes: the snack problem was constructed as a unique-good pair, and the restaurant problem was constructed as a unique-bad pair. Subjects were 300 undergraduate students, and they were randomly assigned to one of three conditions. Similar to study 2, subjects first made either similarity or dissimilarity judgments between the two items. In addition, there was a control condition with a no-comparison task. Although subjects were told that they had the option of not buying either option and keeping the cash, the value of the alternatives described was higher than the cash prize in order to make the purchases attractive. Thus, the decision task involved keeping a sum of money (\$1 for the snack problem and \$25 for the restaurant problem) or buying one of two items provided.

We predicted that the snack items (unique-good pair) would be less attractive after making similarity judgments. When respondents first made similarity judgments between the two snacks, 80 percent chose to keep the cash prize. As

predicted, when subjects first made dissimilarity judgments, this number decreased to 64 percent ( $t = 2.5, p < 0.05$ ). In the control or the no-comparison condition, 72 percent of the respondents preferred to keep the cash. For the restaurant problem, which involved a unique-bad pair, we expected that the two options would be more attractive after first making similarity judgments. We found that 60 percent of subjects preferred the cash prize when they first made similarity comparisons for the two options. As predicted, this number increased to 80 percent when subjects first made dissimilarity judgments ( $t = 2.9, p < .01$ ). In the control condition, 72 percent of the respondents preferred the cash equivalent. These findings provide further support for our analysis of the principles underlying comparison effects on preferences. Furthermore, in both cases, the share of the no-choice option in the no-comparison condition was intermediate to the two comparison conditions and was somewhat closer to the choices in the dissimilarity task condition. This suggests that both types of comparisons affect preferences, but the process in the aggregate appears to be closer to making dissimilarity judgments with lower emphasis on shared features.

## GENERAL DISCUSSION

A main purpose of the present set of studies was to examine the implications of the commonality of cognitive processes that underlie similarity and preference judgments. Recent research has shown that whether or not items are compared can affect preferences (Brenner et al. 1999; Hsee and Leclerc 1998; Nowlis and Simonson 1997). This research focuses on how the direction and type of comparisons (similarity or dissimilarity judgments) can affect preferences. We demonstrated and provided an understanding for the ways in which a shift in focus in an initial comparison between a set of stimuli can affect the subsequent construction of preferences. Our findings allowed us to both demonstrate important effects of initial similarity/difference judgments on subsequent choice and to clarify the processes

that are involved in such effects. In particular, study 1 showed that an initial judgment of the difference between two attractive objects leads to a greater relative preference for the focal object. Conversely, for two relatively unattractive choices, an initial difference judgment reduced the relative preference for the focal object. The next two studies demonstrated how the selective weighting of features in an initial comparison task influenced subsequent preference and choice satisfaction evaluations. Study 2 examined the likelihood of choice deferral for unique-good or unique-bad pairs following different types of comparisons. As predicted, choice deferral for unique-good pairs was greater after similarity than dissimilarity judgments. Conversely, choice deferral for unique-bad pairs was greater after dissimilarity than similarity judgments. Study 3 expanded these findings by investigating the effects on choice satisfaction. As hypothesized, choice satisfaction was greater for unique-good pairs following dissimilarity as opposed to similarity judgments. However, for unique-bad pairs, choice satisfaction was greater following similarity as opposed to dissimilarity judgments. Study 4 examined the effects of adding common features on relative preference due to the impact of initial comparisons. Following similarity judgments, additional common positive features led to an increase in the strength of preference, whereas additional common negative features led to a decrease in the strength of preference. Following dissimilarity judgments, no such effects of additional common features were observed. In light of these findings, we discuss two general goals, a theoretical goal and a practical goal.

### The Theoretical Goal

Although it has long been known that the similarity of alternatives affects choices (e.g., Lefkoff-Hagius and Mason 1993), our hypotheses were based on a theoretical understanding of the correspondences in the processes that underlie the construction of perceptual and preference judgments. In every case, an initial judgment focused participants on certain features of the items; because a choice task also often involves feature focus and feature matching, these now salient features played a greater role in the choice itself and in the subsequent level of choice satisfaction. These findings thus support the process model for similarity/dissimilarity judgments previously developed by Tversky (1977) as well as the process model of choice proposed by Houston et al. (1989, 1991). Studies 2 and 3 in particular provided support for the theoretical process model through a mediational analysis demonstrating that the shift in focus on good and bad features during the initial similarity/dissimilarity judgment mediated subsequent preference and choice.

It should be pointed out that, because both similarity/dissimilarity judgments and preference judgments may involve feature focus and feature matching, it should be possible to demonstrate that an initial choice will have an impact on the subsequent construction of similarity/dissimilarity. This would be the reverse kind of effect to what was

observed in the current studies. In particular, because choice typically involves the underweighting of shared features and a focus on unique features, subsequent judgments of similarity should decrease after an initial choice judgment. Moreover, certain other tasks may also involve a selective focus on features, such as the task of identifying criterial features of a category. For example, consider the task of listing the things that define fast food. For such a task, it is only shared features that matter. Any unique feature of a possible exemplar is not likely to be a critical feature. Thus, an initial categorical feature task for a set of objects should lead to an increased focus on shared features in relation to unique features, and this should increase the degree of judged similarity of items on a subsequent judgment as well as diminish the focus on unique features for a subsequent choice task.

The article focused on how initial similarity or dissimilarity judgments mediate the relative weight that is assigned to features in subsequent choice. In addition to influencing the favorability of the options, the two comparisons may also influence the degree of choice difficulty that previous research has shown to impact some of the dependent variables (e.g., choice deferral and choice satisfaction). For example, making similarity judgments is likely to reduce discrimination and increase the difficulty of choice, which has been shown to increase deferral (Dhar 1997). Although such a process predicts a main effect of similarity on deferral and choice satisfaction for unique-good and unique-bad pairs, our findings generally point to an interaction effect in how prior similarity judgments affect deferral for unique-good and unique-bad pairs. Future research should examine if, and when, decision difficulty interacts with favorability to influence choice.

### The Practical Goal

The studies also have an important practical goal in pointing out new insights about consumer choice behavior. Our results clearly demonstrate ways in which consumer choices can be significantly altered by a prior judgment and by processing particular information about the candidate options. Because few products achieve total dominance in the marketplace, the type of comparisons highlighted in comparative advertisements may determine the nature of trade-offs that consumers make in order to choose. In particular, we have seen how the prior consideration of the degree of similarity or dissimilarity between potential choices can have a major impact on several important aspects of consumer behavior: the likelihood that the consumer will choose one of the currently available options as opposed to deferring the choice, the market share that the available options are likely to enjoy, and the satisfaction with one's specific choice.

Marketers have many ways in which they can encourage or discourage comparisons that have a consequence for preferences. In a store environment, one brand can be directly compared with another brand through displays. For example, a brand can discourage comparisons through an

end-of-aisle display, which separates the brand from others in its category. In a nonstore environment, such as the Internet, brand managers and retailers also can determine how the information about the options in each category should be displayed, and which options can be easily compared. Thus, depending on the features that are salient and the starting point of comparison, marketers can systematically enhance the likelihood that their brand is chosen.

The findings also have important implications for comparative advertising that has become popular (e.g., Beatty and Gibson 1998). Although much of the academic research has focused on the question of relative effectiveness of comparative ads in relation to noncomparative ads, comparative ads themselves differ in the degree to which they highlight association or differentiation between the brands being compared (Pechmann and Ratneshwar 1991). The current findings suggest that the differences in communication tactics will highlight different features about the brands being compared and influence choice and satisfaction in different ways than is generally considered in this literature.

From a normative viewpoint, a consideration of how similar or dissimilar two items are should not affect consumer preferences. If the consumer choice process is one in which the two alternatives are separately evaluated and, subsequently, these global evaluations are compared, there would indeed be no effect on preferences by initially making a similarity/dissimilarity judgment (Sanbonmatsu, Kardes, and Gibson 1991). However, it is precisely because both choice and similarity/dissimilarity judgments involve a focus on only certain features and a differential weighting of features (as opposed to a complete consideration of all the features of all the items in the choice set) that the kinds of comparison effects that we demonstrated do occur. As consumers attempt to simplify the task they face by focusing on only a limited number of features, they also leave themselves open to effects of seemingly irrelevant factors and experiences on their preferences and levels of choice satisfaction.

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