

The Impact of Common Features on Consumer Preferences: A Case of Confirmatory Reasoning

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This article examines how confirmatory reasoning moderates the impact of attractive and unattractive common features on consumer preferences. Building on the existing research on confirmatory information processing and the motivated reasoning framework, I propose that consumers evaluate common features in a way that supports their already established preferences. In a series of three studies, I show that the impact of common features is moderated by their attractiveness and the strength of individuals' already established preferences. In the context of a choice task, only attractive features were found to enhance individuals' already established preferences, and this effect was more pronounced for consumers with already established brand preferences compared to consumers who were indifferent to the options. The effect of attractive and unattractive features was reversed in the context of a rejection rather than a selection task. These findings are interpreted in the context of consumers confirmatory reasoning aimed at reaching a consistent and readily justifiable decision.

Consider the following scenario: A consumer is deciding between two computers, each described on several attributes: screen size, hard drive size, memory, and so on. After evaluating the available attribute information, she has established a preference for one of the brands (say, brand A). Later, she finds out that both brands share an identical and very attractive feature (say, a very fast modem). How would this information affect brand preference? Would there be any change in the strength of preference for brand A compared to brand B? Now imagine that this consumer finds out that the feature shared by both brands is unattractive (e.g., a very slow CD-ROM player). How would the news about the presence of this bad feature affect the already established preference for brand A? Would it have the same effect as in the case of an attractive common feature?

More generally, this scenario raises the issue of how adding shared product features with varying degrees of attractiveness affects consumers' already established preferences. Extant research on confirmatory information processing (Lord, Lepper, and Ross 1979; Russo, Medvec, and Meloy

1996; Russo, Meloy, and Medvec 1998; see also Klayman 1995) has demonstrated that consumers with an already established preference for one of the choice alternatives are likely to interpret the new information in a biased manner that bolsters the attractiveness of the initially more preferred option. This confirmatory processing has been shown to emphasize the advantages of the chosen alternative and downplay its deficiencies, ultimately spreading apart the attractiveness of the alternatives in favor of the chosen option (Festinger 1957).

Recent research has demonstrated that confirmatory biases occur not only after the actual decision has been made—as believed by the cognitive dissonance theorists (e.g., Davidson and Kiesler 1964; Festinger 1957)—but also before individuals make their choices. Most prominently, the notion of predecisional distortion of information has been advanced by Russo et al., who find that preferences derived from already reviewed information can lead to a predecisional distortion of the available information when this information is neutral for both brands (1996) and even for attributes that clearly favor one of the alternatives (1998). In this context, Russo et al. demonstrate that confirmatory information processing can occur in the absence of established preferences and that individuals' developing preferences can also serve as an antecedent to the confirmation bias.

Most of the research on confirmation information processing, however, has focused on a scenario in which the newly added information is ambiguous and individuals cannot clearly determine which brand is favored by the new

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data. The case of common features is different because they are identical for all alternatives in the choice set. In the case of common features there is little uncertainty as to which alternative is better on the common attributes because these features are identical for both brands. The nondiagnosticity of the common features in this case is caused by the fact that these features do not differentiate the alternatives and not by their ambiguity *per se* (Feldman and Lynch 1988; Tversky 1977).

The nondiagnostic nature of common features raises the question of whether they are evaluated in a confirmatory manner. Indeed, in cases when noncommon features are added to the choice set, consumers are presumed to interpret these features in a way that favors one of the decision alternatives over the other (e.g., feature A is perceived to be better than feature B), bolstering the importance of features that favor the preferred alternative and discounting features that decrease its attractiveness. Whether such biases occur in cases when the newly added features are identical and what factors might moderate this process is less clear and has not been addressed in the literature.

This article argues that common features can have a significant impact on consumer preferences and that this impact is a function of common feature attractiveness and the strength of individuals' already established brand preferences. Building on the motivated reasoning framework (Kunda 1990) and the reason-based view of choice (Montgomery 1983; Shafir, Simonson, and Tversky 1993; Simonson 1989), I propose that individuals creatively use common features to make consistent and readily justifiable decisions. The analysis of the impact of attractive and unattractive common features is based on the notion that common features provide consumers with additional reasons for choosing the initially preferred alternative. This confirmatory reasoning view of the impact of attractive and unattractive common features is discussed next.

CONFIRMATORY REASONING AND THE IMPACT OF ATTRACTIVE AND UNATTRACTIVE COMMON FEATURES

The reason-based view of consumer choice asserts that individual choice behavior under preference uncertainty can be understood better when seen as based on the available reasons for and against each alternative (Montgomery 1983; Shafir 1993; Shafir et al. 1993; Simonson 1989; Slovic 1975). This reason-based view of choice implies that consumer evaluations of product attributes are often moderated by their ability to generate reasons for and against choice alternatives. This assumption derives from research in social psychology and decision making, indicating that people have a variety of motives for justifying their decisions to themselves and to others. This need for justification might reflect cognitive dissonance (Festinger 1957), anticipation of regret (Bell 1982), or a more general need for consistency (Cialdini, Trost, and Newsom 1995; Janis and Mann 1977). On many occasions, the need for internal justification is

further reinforced by a need for external justification to others who may ultimately evaluate the decision (Lerner and Tetlock 1999; Simonson 1989).

Building on the reason-based view of choice, this article argues that consumers often evaluate shared features in a confirmatory manner and that attractive common features are likely to be framed as additional reasons that are consistent with choosing the preferred alternative. This prediction may appear intuitive, given that adding an attractive common feature to each of the choice alternatives is likely to increase each option's absolute utility. What is perhaps more interesting, and counterintuitive, in this case is the proposition that, guided by individuals' confirmatory reasoning processes, common features may increase not only the absolute attractiveness (or utility) of a given option but also its attractiveness relative to other options in the choice set.

How might the confirmatory reasoning mediate the impact of common features on consumer choice? When consumers have readily established preferences for one of the alternatives, they have an incentive to frame the available information in a way that produces additional reasons for selecting that alternative. In this context, I propose that attractive common features are treated as preference-enhancing information because they increase the overall utility of the to-be-chosen alternative. Guided by their confirmatory reasoning, consumers may focus on the improvement in the performance of the initially preferred option and deemphasize the fact that the other (nonchosen) option also improved its performance. This cognitive bolstering of the initially preferred option enhances consumers' already established preferences, diffusing the attractiveness of the choice alternatives.

The proposition that attractive common features are interpreted by consumers as additional reasons for choosing the initially preferred alternative is consistent with the dominance search framework (Montgomery 1983). This framework asserts that the choice process consists of a series of restructuring activities leading to a different representation of the decision task, which is aimed at framing the problem in such a way that one of the options can be identified as the best choice. More specifically, the dominance search framework views choice as a process of goal-driven preference structuring that, if successful, can readily provide decision makers with a good justification for their decisions. According to Montgomery, the process of dominance structuring often involves overweighting certain attribute dimensions and deemphasizing others, overestimating the performance of one of the options on certain attributes and underestimating its performance on the others, combining attributes, and so on. Building on the dominance structuring research, I propose that attractive common features are likely to provide decision makers with an opportunity to structure the decision in a way that creates additional reasons for selecting the most preferred alternative.

The hypothesis that attractive features can enhance individuals' already existing preferences is further supported by the motivated reasoning framework (Kunda 1990), which

asserts that motivation may affect reasoning through the individual's reliance on a biased set of cognitive processes. According to this view, biases in consumer processes are associated with people's motivation "to construct a justification of their desired conclusion that would persuade a dispassionate observer" (Kunda 1990, pp. 482–483). Similar to the dominance search view, the motivated reasoning approach asserts that people often creatively combine the available information in an attempt to construct new beliefs that support the desired conclusion. Consistent with the motivated reasoning view of choice, framing attractive common features in a way that supports individuals' initial preferences can provide consumers with additional reasons to support the selection of the preferred alternative.

Now, consider a scenario in which unattractive common features are added to the choice set. Given that the presence of an unattractive common feature is likely to decrease the overall attractiveness of the initially preferred alternative, unattractive features are likely to be viewed as evidence inconsistent with the hypothesis that the initially preferred alternative is indeed a good choice. As a result, consumers may discount the importance of the unattractive features (Festinger 1957; Janis and Mann 1977; Klayman 1995; Lord et al. 1979) by focusing on the fact that these features are shared and, as such, should not affect individuals' already established preferences.

More generally, I propose that consumers with established brand preferences are likely to frame common features as reasons for (in the case of attractive features) and against (in the case of unattractive features) selecting the initially preferred alternative. Furthermore, consumers are likely to bolster attractive common features of the initially preferred alternative, thus ensuring additional reasons for choosing that option and increasing its relative attractiveness over the other option(s) in the choice set. In contrast, unattractive features act as reasons against selecting the initially more attractive option and are likely to be discounted as having little or no impact on consumer preferences.

So far, this article has focused on a scenario in which consumers have established preferences for one of the alternatives and argued that these initial preferences may lead to confirmation biases in evaluating attractive and unattractive common features. Following this logic, one can expect that in the absence of established preferences, adding neither attractive nor unattractive common features would have a significant impact on consumer brand preferences. Indeed, to the extent that the presence of established preferences is a necessary condition for the occurrence of confirmatory information processing,¹ in the absence of prior preferences common features should have little or no impact on the evaluations of brands' relative attractiveness.

The proposition that the impact of attractive and unat-

tractive common features is a function of individuals' already established preferences is consistent with findings by Russo et al. (1996), who show that a greater distortion follows from a greater preference and that for a preference of zero there should be no distortion. This proposition is further consistent with the differentiation-consolidation theory (Svenson 1996). This theory asserts that people's choices can be represented by two processes: differentiation, which tends to separate alternatives until one option reaches a degree of distinction that is sufficient for the decision, and consolidation, which reaffirms the achieved differentiation. According to Svenson, consumers with established preferences for one of the alternatives tend to consolidate the available information around this preference by augmenting it with additional reasons for its choice. In contrast, consumers without initial preferences will search for information differentiating choice alternatives in an attempt to select one of the options. In this context, adding attractive common features might enhance consumers' already established preferences because it provides them with additional reasons for choice, thus consolidating their decision. In contrast, for individuals without established preferences, adding either attractive or unattractive common features is likely to further complicate the process of differentiating choice alternatives, further confusing their developing preferences.

To summarize, I assert that the impact of common features on consumer preferences is contingent upon the perceived attractiveness of these features and the strength of individuals' already established preferences. To test this proposition, I examine two scenarios: one in which consumers have relatively strong initial preferences for one of the alternatives and one in which consumers are rather indifferent to the alternatives. I predict that in the former scenario, attractive common features will be viewed as evidence consistent with the selection of the initially preferred alternative, increasing the relative attractiveness of this option over the other alternatives. In contrast, unattractive common features are likely to be discounted as evidence inconsistent with the selection of the preferred alternative and should have little or no impact on consumer preferences. Furthermore, predicted effects of adding common features on brands' relative attractiveness are likely to be a function of the strength of individuals' initial preferences; they are likely to be more pronounced for individuals with strong initial preferences and are likely to disappear in the absence of initial preferences.

These propositions are tested in a series of three studies. Study 1 examines the differences in the impact of attractive and unattractive common features on brands' relative attractiveness as a function of individuals' initial strength of preferences. Study 2 extends the findings of the first study by varying the focus of comparison in evaluating choice alternatives, which allows eliminating some of the alternative explanations for the data. Finally, study 3 tests the hypothesized preference confirmation mechanism of the differential impact of attractive and unattractive common fea-

¹Note that this argument does not take into account the possibility that preferences can be developed during the decision process (see Russo et al. 1996, 1998). Consumers who develop such preferences during the decision process might evaluate common features in a confirmatory manner as well.

tures by varying the nature of the choice task (select vs. reject).

STUDY 1

Method

Study 1 examines how the strength of individuals' initial preferences moderates the impact of attractive and unattractive common features on consumer preferences. More specifically, it tests the prediction that for individuals with already established preferences adding attractive common features would bolster these preferences, whereas unattractive features will have no bolstering impact. It further examines the proposition that the impact of attractive common features is more pronounced for individuals with established preferences than for individuals without such preferences.

Subjects and Design. Study participants, 67 students from a large midwestern university, were assigned to the conditions of a 2 (strength of preferences) $\times$ 3 (common features) mixed factorial design. The stimuli were three sets of laptop computers described on two main attributes: display size and hard drive size. Attribute values of these brands were such that one of the brands was superior on the first attribute, whereas the other was superior on the second attribute (brand A: 15.1-inch display and 4.8 GB hard drive vs. brand B: 12.3-inch display and 6.4 GB hard drive). Brands in all three choice sets were the same on these two attributes; they differed in terms of the presence of common features: brands in the first choice set were described only in terms of the above two attributes, whereas brands in second and third choice set in addition shared either attractive or unattractive common feature (a modem or a CD-ROM).

The independent variables were manipulated as follows. The common features factor was manipulated within subjects. Each subject was initially presented with a choice set without common features and then with two sets with a common feature framed as either attractive or unattractive. The strength of preferences was determined as a function of participants' initial evaluations of the brands' attractiveness. In particular, subjects who indicated that brands A and B were equally attractive in the initial (no common features) task were classified in the "no prior preference" condition, whereas subjects who expressed preference for either of the brands were classified in the "prior preference condition."

The dependent variables were measured as follows. Relative attractiveness (RA) of the choice alternatives ("How would you evaluate the relative attractiveness on brands A and B?") was measured on a nongraded scale with end points "These brands are equally attractive" and "One of the brands is clearly more attractive." Subjects' responses were later quantified by measuring the distance from the lower end of the scale to the mark reflecting each subject's response. Responses were then standardized on a 100-point scale so that zero signified "no preference" and 100 signified "strong preference" for one of the alternatives. Willingness to pay (WTP) was measured by asking subjects to write down a

specific dollar amount ("How much would you be willing to pay for the brand you find more attractive?").² Willingness to pay extra for the preferred brand (WTPE) was measured by asking subjects to write down a specific dollar amount ("How much extra would you be willing to pay for the brand you find more attractive [compared to the other brand]?"). Attribute importance (AI) was measured by asking subjects to rate (using the same type of scale as RA) how important each of the three attribute dimensions was for their choice ("How important for your choice was the [display size] [hard drive size] [Modem/CD-ROM]?"; end points: "Very important"/"Not important at all").

Procedure. Participants were given a booklet containing the stimuli and were asked to imagine that they were buying a laptop computer. They were informed that all brands were equally priced (around \$1,500) and that some of the brands are bundled with extra features: some with a modem and some with a CD-ROM.

Next, participants were presented with the choice set AB, in which brands A and B were described on two attributes: hard drive and display size. Subjects were asked to select one of these brands and evaluate their relative attractiveness. These responses were used to classify subjects into one of the two initial preference conditions. Respondents were also asked to indicate their willingness to pay for the preferred brand (WTP), as well as their willingness to pay extra for that brand (WTPE).

After answering these questions, subjects were shown an ad explaining the importance of a modem's speed and emphasizing the differences between a 56K (very fast) and 14.4K (very slow) modem. Following the manipulation check questions ("How would you rate the attractiveness of a 56K [14.4K] modem?"), subjects were shown a choice set CD, in which brands C and D were described on three attributes, the third being a modem shared by both brands. Some subjects were given a choice set with a 56K modem (attractive feature) and the others were given a set with a 14.4K modem (unattractive feature). As in the initial task, subjects were asked to indicate their preferred brand and to answer the other dependent variable and manipulation check questions (RA, WTP, WTPE). In addition, subjects were asked to indicate the importance of the attributes describing choice alternatives (AI) on their decisions.

Finally, subjects were shown an ad describing the difference between a 64 $\times$ and 4 $\times$ CD-ROM. They were given the third choice set EF, in which both brands shared another common feature (either unattractive or attractive CD-ROM, counterbalanced for attractiveness with the set CD) and were asked to answer the dependent variable and manipulation check questions.

²The WTP measure ("How much would you be willing to pay for that brand?") served a dual purpose. Apart from functioning as a manipulation check, it was used as a reference frame, providing subjects with the opportunity to express their overall evaluations of the utility of the chosen brand independent from the relative evaluations of this brand (RA and WTPE).

TABLE 1

THE EFFECT OF ATTRACTIVE AND UNATTRACTIVE COMMON FEATURES ON CONSUMER PREFERENCES (STUDY 1)

Prior preferences	Common features		
	Common features not present	Attractive features added	Unattractive features added
Prior preference condition ($n = 44$)	62.82	67.73*	61.54
No prior preference condition ($n = 23$)	18.82	19.39	17.22

NOTE.— Cell numbers indicate the means of subjects' evaluations of the relative attractiveness of brands A and B on a 100-point scale, where 100 indicates strong preference for one of the alternatives and zero indicates indifference between the alternatives. Only attractive features in the "prior preference" condition significantly increase relative preferences.

* $p < .001$.

Results

Manipulation Check. Subjects' evaluations of the relative attractiveness of the options were used to assign them to one of the prior preference conditions. Recall that the relative attractiveness ratings were on a 100-point scale, whereby zero signified no preference and 100 signified strong preference for one of the alternatives. The following criterion for the presence of initial preferences was applied: subjects with preferences in the upper two-thirds of the relative attractiveness scale (score above 33.3) were considered to have established prior preferences, whereas subjects with a score below 33 were classified into the "no prior preference" condition. Consistent with this criterion, 23 respondents were classified into the "no preference" condition ($M = 18.83$, $SD = 8.82$), while the remaining 44 were classified into the "prior preference" condition ($M = 62.82$, $SD = 15.95$).³

To check the effectiveness of the common feature attractiveness manipulation, I examined subjects' ratings of common feature attractiveness taken after the manipulation procedure. The means of these evaluations were significantly different at the .001 level ($M = 77.6$ for the attractive feature and $M = 21.05$ for the unattractive feature). Additionally, I examined how the dollar amount reflecting subjects' willingness to pay for the chosen option varied as a function of the presence of attractive and unattractive common features. Consistent with the manipulation goal, subjects were willing to pay more for the brand when attractive common features were added (\$1,580; $SD = 128$), compared to when unattractive common features were added (\$1,482; $SD = 154$, $F(1, 120) = 74.9$, $p < .001$).

³To ensure that the selection of the cutoff point between the "no preference" and "prior preference" conditions is not critical for the results, an alternative criterion was selected as well. For that purpose, the lower quarter (rather than the lower third) of the scale was coded as a "no preference" condition. This assignment did not substantially affect the data pattern. To illustrate, in the no preference condition, individuals' evaluations of the relative attractiveness of brands were $M = 13.28$, $SD = 6.64$ (no common features); $M = 12.21$, $SD = 7.35$ (attractive common features); $M = 11.57$, $SD = 6.73$ (unattractive common features); $n = 14$. Subjects in the "prior preference" condition evaluated brands' relative attractiveness as follows: $M = 56.81$, $SD = 19.77$ (no common features); $M = 61.41$, $SD = 21.66$ (attractive common features); $M = 55.51$, $SD = 20.21$ (unattractive common features); $n = 53$.

The Impact of Attractive and Unattractive Common Features on Consumers' Strength of Preferences. Subjects' strength of preferences was measured as reflected in their evaluations of brands' relative attractiveness (RA) and their willingness to pay extra for the preferred brand (WTPE). A summary of the relative attractiveness data is presented in Table 1.

The means data show that in the prior preference condition adding attractive common features was associated with an increase in the relative attractiveness for the initially preferred brand (from $M = 62.82$ to $M = 67.73$), whereas adding unattractive features had a directionally opposite effect ($M = 61.54$). For subjects in the "no preference" condition, adding attractive features led to a shift in preferences from $M = 18.82$ to $M = 19.39$, while adding unattractive features resulted in relative preference of $M = 17.22$. Willingness to pay extra data displayed a similar pattern: adding attractive features in the prior preference condition was associated with an increase in subjects' WTPE from $M = 137.5$ to $M = 147$, while adding unattractive features led to a decrease in willingness to pay extra ($M = 129.8$). For subjects in the no prior preferences condition the WTPE data were as follows: $M = 72.5$ (no common features), $M = 75.0$ (attractive common features), $M = 62.5$ (unattractive common features).

To test the significance of these data, I examined a model in which RA and WTPE were represented as a function of prior preferences, common features, and their interaction. Recall that it was argued that the effect of attractive common features will vary across the two prior preference conditions and, specifically, will be more pronounced for respondents with established prior preferences compared to those in the "no preference" condition. The data show that the impact of attractive common features on brands' relative attractiveness is, indeed, a function of the strength of individuals' prior preferences ($F(1, 128) = 10.25$, $p < .005$). The WTPE data, although directionally consistent, did not reach conventionally established norms of statistical significance ($F(1, 118) = .88$). The combined effect of RA and WTPE was significant at the .05 level (MANOVA: $F(2, 238) = 3.48$).

It was further proposed that in the "prior preference" condition attractive common features would increase the relative preference for the initially preferred brand, whereas adding

unattractive features would have no impact. To test this prediction I examined simple effects of attractive and unattractive common features in the “prior preference” condition. Adding attractive common features had a significant impact on both relative attractiveness ($M = 62.82$ vs. $M = 67.73$; $F(1, 128) = 38.13$, $p < .001$) and willingness to pay more ($M = 137.5$ vs. $M = 147$; $F(1, 118) = 4.99$, $p < .05$).⁴ Adding unattractive features in this case resulted in a nonsignificant decrease in the relative attractiveness of the initially preferred brand ($M = 62.82$ vs. $M = 60.54$; $F(1, 128) = 2.56$, $p < .15$) and a marginally significant decrease in subjects’ willingness to pay more for that brand ($M = 137.5$ vs. $M = 119$; $F(1, 118) = 3.29$, $p < .10$). The omnibus test of the impact of attractive and unattractive common features for subjects with established preferences was significant as well (MANOVA: $F(2, 238) = 14.04$, $p < .001$; RA: $F(1, 128) = 33.71$, $p < .001$; WTPE: $F(1, 118) = 8.34$, $p < .001$).

So far, the analysis has been focused on the impact of attractive and unattractive common features in the “prior preference” condition. Recall that it was also proposed that in the “no prior preference” condition adding neither attractive nor unattractive common features would significantly affect individuals’ preferences. Consistent with this prediction, attractive features did not have a significant impact on subjects’ preferences as measured by both RA and WTPE ($F(1, 128) < 1$). Adding unattractive features had nonsignificant impact on RA ($F(1, 128) = 2.14$, $p < .20$) and WTPE ($F(1, 118) = 2.62$, $p < .15$) as well. The omnibus test of the impact of attractive and unattractive common features for subjects in the “no preference” condition was nonsignificant for RA ($F(1, 128) = 2.10$, $p < .20$) and WTPE ($F(1, 118) = 2.29$, $p < .20$).

The Relative Importance of Attractive and Unattractive Common Features. The confirmatory reasoning account for the common feature effect implies that attractive features are framed as reasons for choosing one of the alternatives and therefore will be viewed as more important than unattractive common features, which are likely to be framed as reasons against either of the alternatives. In this

context, the confirmatory reasoning hypothesis can be further substantiated by examining subjects’ evaluations of the relative importance of attractive and unattractive common features. If the theory advanced in this article is correct, attractive common features should be perceived as more important than unattractive features. Furthermore, because confirmatory reasoning is likely to be stronger for individuals with established prior preferences, this asymmetric weighting of the attractive and unattractive features should be more pronounced for subjects in the “prior preference” condition than for subjects in the “no prior preference” condition.

The mean importance ratings for subjects in the “prior preference” condition were $M = 62.36$ ($SD = 29.2$) for attractive features and $M = 44.84$ ($SD = 26.2$) for unattractive features ($F(1, 65) = 45.76$, $p < .001$). Subjects in the “no prior preference” condition displayed a directionally similar tendency to place more weight on attractive common features ($M = 60.83$, $SD = 28.7$ vs. $M = 53.30$, $SD = 25.3$; $F(1, 65) = 4.41$, $p < .05$). More important, the asymmetric weighting of attractive features was more pronounced in the “prior preference” condition compared to the “no prior preference” condition, as indicated by the significant interaction ($F(1, 65) = 5.12$, $p < .05$). These findings show that the perceived importance of common features is a function of these features’ attractiveness and the strength of individuals’ prior preferences.

Discussion

The data from this study show that the impact of common features is a function of their valence and the strength of individuals’ initial preferences. This prediction is supported by the evaluations of brands’ relative attractiveness and directionally supported by subjects’ willingness to pay extra for the preferred brand. It was further hypothesized that for individuals with already established preferences, adding attractive common features would bolster their evaluations of the initially preferred alternative relative to the other brand. This prediction was supported by the data. An unexpected finding was the marginally significant decrease in subjects’ initial preferences when unattractive common features were added to the choice set. Recall that it was predicted that unattractive features would be discounted on the grounds that they are inconsistent with the selection of the initially preferred option. These data do not contradict the notion that unattractive common features are framed as reasons against choosing the preferred alternative; rather, these findings suggest that the discounting of the unattractive common features might not be complete and the residual effects will have an impact on the relative attractiveness of the options.

Further, it was predicted that adding neither attractive nor unattractive common features would have a significant impact on consumers without initially established preferences. The data were consistent with this prediction, although in the case of attractive common features the data pattern was similar (but nonsignificant) to that in the “prior preference” condition. One possibility for these data is that some of the

⁴Following up on the findings of Russo et al. (1996), who show that stronger preferences are likely to be associated with more pronounced distortion, I tested whether the impact of attractive common features is more pronounced for individuals with stronger initial preferences. For that purpose, subjects in the “prior preference” condition were divided into two subgroups: subjects with preferences between 66.7 and 100 (upper third of the scale) were placed in the “strong preference” condition, whereas subjects with preferences between 33.3 and 66.7 (middle third of the scale) were placed in the “weak preference” condition. There were 26 subjects in the first condition and 18 in the second (the rest of the subjects were either in the “no preference” condition or in the “unattractive feature” condition). For the purposes of comparison, the impact of common features is represented as the difference between the strength of subjects’ initial preference and the strength of their preference when an attractive common feature was added to the choice set. The impact of attractive common features was indeed more pronounced in the “strong preference” condition compared to the “weak preference” condition, although the interaction did not reach statistical significance (RA: $\Delta M = 4.5$ vs. $\Delta M = 5.5$; WTPE: $\Delta M = 8.33$ vs. $\Delta M = 11.1$; MANOVA: $F(2, 238) < 1$).

subjects in the “no prior preference” condition had already established, although weak, initial preference for one of the alternatives (recall that initial preferences of the subjects in this condition varied between zero and 33 on a 100-point scale). Another possibility, suggested by findings of Russo et al. (1996, 1998), is that during the decision process individuals might have developed preferences for one of the alternatives and that these preferences led to a confirmatory processing of the common features.

A closer look at the data also reveals that the impact of common features is more pronounced on individuals’ evaluations of brands’ relative attractiveness compared to their willingness to pay extra for that brand. One possible explanation for this data pattern is the different nature of scales used to evoke and measure these evaluations. Recall that the scale used to measure RA required subjects to project their evaluations onto the RA scale. In contrast, the WTPE measure, instead of providing subjects with a particular scale, asked them to generate their responses. It is possible that in the context of a within-subject design, repeated generation of similar evaluations (such as the three WTPE measures) was less sensitive to changes in the underlying variables compared to the RA scale.

Attribute importance data show that the differential weighting of attractive versus unattractive features was more pronounced for individuals in the “prior preference” compared to the “no preference” condition. Note that subjects’ attribute importance evaluations potentially confound two factors: the importance of the common feature attribute in the specific choice just completed (or “local” importance) and its importance in the general situation of choosing between two brands in the product class (or “global” importance; Goldstein 1990; see also Drolet and Simonson 2000; Nowlis and Simonson 1997). The fact that the mean importance ratings of the nonattractive feature were significantly above zero suggests that individuals’ global evaluations played a certain part in their responses. At the same time, the observed difference in attribute importance ratings between the two prior preference conditions cannot be readily explained by subjects’ global importance evaluations and is likely a result of a shift in individuals’ local importance evaluations related to the nature of the decision task.

Study 1 examined the impact of adding either attractive or unattractive common features by asking subjects to indicate the strength of their preferences for the more attractive option. In all conditions, however, the most attractive brand was the focus of comparison and the less attractive brand the referent. Thus, the framing of the choice task could have contributed to the observed preference shifts. Indeed, it has been shown that individuals are likely to pay more attention to the features of the focal brand rather than to the features of the referent (Dhar and Simonson 1992; Houston, Sherman, and Baker 1989; Yamagishi and Miyamoto 1996; see also Dhar, Nowlis, and Sherman 1999). It is possible that the observed increase in the relative attractiveness of the more attractive brand can be explained at least partially by the direction-of-comparison attention effects, associated

with the framing of the choice task. To ensure that the observed effect is a function of the hypothesized confirmatory reasoning rather than driven solely by direction-of-comparison effects, in study 2 the direction of comparison is counterbalanced: some of the subjects were asked to compare brand A to brand B whereas the others are asked to compare brand B to brand A.

STUDY 2

Method

The design of study 2 was similar to that of the first study. The key differences were: (1) the addition of the focus-of-comparison counterbalancing and (2) manipulating the attractiveness of the common features between subjects (rather than within subjects as in study 1).

Subjects and Design. The subjects, 92 undergraduate students from a large midwestern university, were assigned to the conditions of a 2 (strength of preferences) $\times$ 2 (common features presence) $\times$ 2 (common features attractiveness) $\times$ 2 (direction of comparison) mixed factorial design. The strength of preferences factor was formed by assigning consumers to one of the two experimental conditions (prior/no prior preferences) based on their evaluations of the relative attractiveness of the alternatives during the initial choice task. The presence of common features was manipulated within subjects; subjects were initially exposed to a set in which brands were described on two attributes and then to a set in which a common feature was added to the set. The attractiveness of the common feature was manipulated between subjects; some of the subjects were presented a choice set with an attractive common feature (24 $\times$ CD-ROM), whereas others were shown a set in which the common feature was unattractive (2 $\times$ CD-ROM). Finally, the focus of comparison was counterbalanced across subjects: some of the subjects were asked to evaluate the attractiveness of brand A relative to brand B, whereas others were asked to evaluate the attractiveness of brand B relative to brand A.

Experimental Procedure. Subjects were asked to imagine that they were buying a laptop computer and that they were looking at several laptops priced around \$1,800. Next, subjects were presented with a choice set AB, in which brands A and B were described only on two attributes (display size and hard drive size). They were asked to choose one of the brands and to answer several questions regarding their strength of preferences for the chosen option. Some of the subjects were asked to evaluate the relative attractiveness of brand B (“How would you evaluate the attractiveness of Brand B?”; scale anchors: “Brand B is clearly *more* attractive than Brand A,” “These brands are equally attractive,” “Brand B is clearly *less* attractive than Brand A”), whereas others were asked to evaluate the relative attractiveness of brand A (“How would you evaluate the attractiveness of Brand A?”; scale anchors: “Brand A is clearly *more* attractive than Brand B,” “These brands are equally attractive,”

TABLE 2

THE EFFECT OF ATTRACTIVE AND UNATTRACTIVE COMMON FEATURES ON CONSUMER PREFERENCES (STUDY 2)

Prior preferences	Common features		
	Common features not present	Attractive features added	Unattractive features added
Prior preference condition ($n = 59$)	64.95	72.17*	64.46
No prior preference condition ($n = 33$)	51.42	53.12	48.53

NOTE.—Cell numbers indicate the means of subjects' evaluations of the relative attractiveness of brands A and B on a 100-point scale, where 100 indicates strong preference for one of the alternatives and the midpoint indicates indifference between the alternatives. Only attractive features in the "prior preference" significantly increase relative preferences.

* $p < .01$.

"Brand A is clearly *less* attractive than Brand B"). Subjects were also asked to rate the relative importance of the two attributes.

Next, subjects were shown an ad explaining the difference between a $2 \times$ and a $24 \times$ CD-ROM and were asked two manipulation check questions. Then, subjects were given the same choice set AB in which brands A and B were described on three attributes, the third being the common feature (CD-ROM). For some of the subjects the CD-ROM was framed as an attractive feature ($24 \times$) and for the others as an unattractive feature ($2 \times$). As in the first set, subjects were asked to make a choice, to answer the strength-of-preference questions and rate the relative importance of the brand attributes.

Results

To check the success of the manipulation procedure, I examined subjects' evaluations of the attractiveness of a fast ($24 \times$) and a slow ($2 \times$) CD-ROM. The mean ratings of attractiveness of a $2 \times$ and a $24 \times$ CD-ROM were significantly different at the .001 level ($M = 34.2$ vs. $M = 74.9$). An additional requirement of this study was that subjects differ in their initial evaluations of the relative attractiveness of the choice alternatives: 33 of the 92 subjects rated both alternatives as equally attractive and subsequently were assigned to the "no prior preference" condition; the remaining 59 subjects were assigned to the "prior preference" condition.

A summary of the relative attractiveness data is presented in Table 2. Subjects' responses were standardized on a 100-point scale so that 100 signified strong preference for one of the alternatives and the midpoint signified that alternatives are perceived to be equally attractive. In the "prior preference" condition, adding attractive common features enhanced subjects' existing preferences (from $M = 64.95$ to $M = 72.17$), whereas adding unattractive common features did not appear to substantially change their evaluations (from $M = 64.46$). A similar, although less pronounced, pattern of change in preferences was displayed by subjects who initially were indifferent to the alternatives ($M = 51.42$ for the no common feature condition, $M = 53.12$ in the presence of attractive features, and $M = 48.53$ in the presence of unattractive features).

To analyze the above data I examined a model representing the evaluations of the relative attractiveness of the choice alternatives as a function of subjects' initial preferences, presence of common features, and the attractiveness of common features. The data show a significant difference in how adding attractive and unattractive common features affected relative attractiveness evaluations of the subjects in the "prior preference" condition ($F(1, 75) = 6.96, p < .05$). Adding attractive features was associated with an increase in the attractiveness of the initially preferred alternative ($M = 64.95$ to $M = 72.17$; $F(1, 75) = 11.28, p < .01$),⁵ whereas adding unattractive features had no effect ($F(1, 75) < 1, NS$). These findings lend support for the experimental hypotheses.

It was also predicted that the impact of attractive common features would be pronounced in the "prior preference" compared to the "no prior preference" condition. The data indicate that the increase in the strength of subjects' existing preferences, associated with adding attractive common features, is more pronounced when they had already established preferences, compared to the condition in which consumers were initially indifferent between the brands ($F(1, 75) = 3.97, p = .05$). Simple effects of adding attractive as well as unattractive features in the "no prior preference" condition were nonsignificant, as predicted ($F(1, 75) < 1, NS$).

I also tested whether subjects in the prior preference condition displayed asymmetric bias in evaluating the importance of the attractive and unattractive common features. Recall that the data reported in the first study show that attractive common features were rated as more important than unattractive features and that this effect was more pronounced for subjects in the prior preference condition. Study 2 data are consistent with the first prediction; the mean evaluation of the relative importance of attractive features

⁵As in study 1, I also tested if the impact of attractive common features was more pronounced for individuals with stronger initial preferences. Based on the strength of their initial preferences, subjects were divided by median split into two groups: "strong preference" ($n = 15$) and "weak preference" ($n = 16$). Adding common features was directionally consistent with Russo et al. (1996) findings, demonstrating that stronger initial preferences were associated with a stronger information distortion ($\Delta M = 6.83$ in the "weak preference" condition vs. $\Delta M = 7.5$ in the "strong preference" condition). Although directionally consistent, these differences did not reach the established norms of statistical significance ($F(1, 60) < 1$).

was $M = 66.17$, which is significantly higher than the mean evaluations of the unattractive features ($M = 40.36$; $F(1, 57) = 9.97$, $p < .005$). Unlike study 1, study 2 did not detect differences in subjects' evaluation of attractive and unattractive common features across the two prior preference conditions ($F(1, 57) < 1$). One explanation for these data is the nature of the design of the second study, in which feature attractiveness was manipulated between subjects, thus adding extra variance in subjects' attribute importance evaluations.

Discussion

The effect of common features on consumer preferences was in the predicted direction and significant even as the focus of comparison was varied. From a theoretical standpoint, this finding suggests that the asymmetric nature of the impact of attractive and unattractive common features on consumer preferences cannot be entirely attributed to the focus of comparison effects. From a methodological standpoint, study 2 confirmed the results of the first study by using a more conservative between-subjects manipulation of common feature attractiveness. The data from the two studies converge showing that, for individuals with an initial preference for one of the alternatives, adding attractive features bolstered the initially preferred alternative, whereas adding unattractive features had no effect. In contrast, adding neither attractive nor unattractive common features had a significant impact on preferences for consumers who were indifferent to the choice alternatives. Convergence of the results from the two studies provides further support for the confirmatory reasoning view of the differential impact of attractive and unattractive common features.

This article hypothesized that the differential impact of attractive and unattractive common features on consumer preferences is a function of their confirmatory reasoning, whereby attractive common features are framed as reasons for selecting the initially preferred alternative, whereas unattractive common features are framed as reasons against this choice and discounted. Data furnished by the first two studies, although consistent with these predictions, provide rather indirect evidence for the confirmatory reasoning mechanism of the common feature effect. Further and more direct evidence that attractive and unattractive common features are framed as reasons for and against selecting the initially preferred alternative is provided in study 3, in which I manipulate the nature of the decision task to elicit a different framing context for the common feature effect.

STUDY 3

This study varies the nature of the choice task by asking some of the subjects to select one of the alternatives, whereas the others were asked to reject one of the options. Relevant literature suggests that when faced with a selection task, individuals focus on the positive evidence, whereas in a rejection task negative information receives more weight (Dunning and Parpal 1989; Shafir 1993). Building on this

research, I predict that when consumers are faced with a rejection task, unattractive common features will be viewed as evidence consistent with the decision task at hand because they provide individuals with an additional reason to reject that alternative. As a result, in this case unattractive common features, instead of being discounted, should have a significant impact on consumer preferences and polarize consumer preferences by further decreasing the attractiveness of the less preferred option. In contrast, adding attractive common features in the context of a rejection task is not predicted to have an effect on consumer preferences, because it does not offer information consistent with the current goal of rejecting one of the alternatives.

This article predicts that varying the nature of the decision task will lead to shifts in consumer preferences. In the context of a selection task, adding attractive common features will bolster the initially preferred alternative, whereas unattractive features will have no effect. In contrast, in a rejection task attractive common features will have no effect, whereas unattractive features will further decrease the relative attractiveness of the less preferred alternative. With respect to individuals' evaluations of the relative importance of attractive and unattractive features, it is predicted that in the context of a rejection task unattractive common features will be viewed as more important than attractive features—a prediction that is directionally opposite to the observed data in the case of a selection task, whereby individuals bolstered the importance of the attractive common features.

Method

The design of study 3 was similar to that of the first study. The main difference was the addition of a manipulation of the nature of the decision task (select vs. reject).

Subjects and Design. Seventy-six respondents from a large midwestern university were randomly assigned to the conditions of a 3 (common features) $\times$ 2 (decision task) mixed design. The common feature factor was manipulated within subjects. Each subject was initially presented with a choice set without common features (base condition), then with two sets with either attractive ("attractive" condition) or unattractive common features ("unattractive" condition). The order of presentation of the choice sets with attractive and unattractive common features was counterbalanced across subjects. The nature of the decision task was manipulated between subjects. Some of the respondents were asked to select which of the two brands they would keep (choice condition), whereas others were asked to decide which of the two brands they would return (reject condition).

Building on the findings of the first two studies—that the effects of adding common features are most pronounced when consumers can readily establish a preference for one of the alternatives—study 3 focused exclusively on this scenario. For that purpose, the stimuli were designed to assure preference for one of the brands (brand B), which had by far a superior display (15 inch vs. 12.1 inch) and a slightly inferior hard drive (10.6 GB vs. 10.2 GB). This manipulation

TABLE 3

THE EFFECT OF ATTRACTIVE AND UNATTRACTIVE COMMON FEATURES ON CONSUMER PREFERENCES AS A FUNCTION OF THE NATURE OF THE DECISION TASK (STUDY 3)

Decision task	Common features		
	Common features not present	Attractive features added	Unattractive features added
Select task ($n = 37$)	71.49	75.77*	70.19
Reject task ($n = 39$)	69.02	68.19	74.91*

NOTE.—Cell numbers in the select task scenario indicate the means of subjects' evaluations of the degree to which brand B is more attractive than brand A. Cell numbers in the reject task scenario indicate the means of subjects' evaluations of the degree to which brand A is less attractive than brand B. Adding attractive common features significantly increases preferences in context of a select but not a reject task, whereas adding unattractive features significantly decreases preferences only in the context of a reject but not a select task.

* $p < .001$.

is consistent with the research indicating that the importance weight given an attribute depends on the variation of brands' values on this attribute (e.g., Drolet and Simonson 2000; Goldstein 1990; Meyer and Eagle 1982; Nowlis and Simonson 1997).

The key dependent variables were the brands' relative attractiveness (RA) and perceived importance of the common feature (AI). The RA was measured in terms of subjects' evaluations of the relative attractiveness of the brand they decided to select or reject ("How would you rate the relative attractiveness of the brand you decided to keep [return]?" end points: "This brand is clearly more [less] attractive"; "These brands are equally attractive"). Perceived importance of the common feature was measured using the same scale as in the first two studies.

Experimental Procedure. Subjects were asked to evaluate three pairs of notebook computers and for each pair to decide which brand to keep ("select" condition) or to reject ("reject" condition). Next, subjects were presented with a choice set AB, in which brands were described only on two attributes (display and hard drive), and were asked to decide which brand to keep (return). The stimuli were similar to the ones used in studies 1 and 2. Attribute values were updated to correspond to the current market reality (brand A: 14.1-inch display and 12.6 GB hard drive; brand B: 15-inch display and 12.2 GB hard drive). Subjects were asked to indicate how much they would be willing to pay for the selected/rejected alternative (manipulation check), rate the relative attractiveness of the brand they decided to keep (return), and evaluate the importance of the brand attributes.

Next, subjects were shown an ad explaining the importance of a CD-ROM's speed and differences between CD-ROMs with various speeds ($4\times$ to $64\times$). Following this manipulation, subjects were presented with the set CD, in which brands C and D shared an identical CD-ROM, which was framed as either attractive ($64\times$) or unattractive ($4\times$). They were asked to choose (reject) one of the brands and to answer the RA and AI questions.

Next, subjects were shown an ad explaining the importance of a modem's speed and differences between modems with various speeds (28.8K to 56K). They were presented

with the choice set EF, in which brands shared an identical modem framed as either attractive (56.6K) or unattractive (28.8K). The order of presenting attractive and unattractive features was counterbalanced across subjects: some of the individuals were presented with an attractive CD-ROM and unattractive modem, whereas others were presented with an unattractive CD-ROM and attractive modem. As in the previous tasks, subjects had to choose (reject) one of the options and to answer the RA and AI questions.

Results and Discussion

To check the dispersion of subjects' initial preferences, I examined their initial evaluations of the relative attractiveness of brands A and B (the choice set presented first). All 76 subjects selected brand B (rejected brand A), indicating a strong polarization of initial preferences toward brand B ($M = 71.0$; $SD = 12.9$). The success of manipulating common feature attractiveness was checked by examining the differences in subjects' evaluations of attractiveness of (1) $4\times$ and $64\times$ CD-ROMs and (2) 28.8K and 56K modems. As in the first two studies, the differences were significant at the .001 level, indicating the success of the manipulation procedure. Subjects also indicated that they were willing to pay significantly more for the chosen option when it had an attractive rather than unattractive common feature (\$1,835 vs. \$1,684), further supporting the manipulation procedure.

A summary of the relative attractiveness data is presented in Table 3. Numbers in different cells reflect subjects' strength of preferences for brand B. It is important to note that consistent with the nature of the decision task (select vs. reject), subjects in the "select" condition expressed their preference for brand B by directly evaluating its attractiveness, whereas subjects in the "reject" condition expressed their evaluations of the more attractive brand B by the degree of "unattractiveness" of the rejected brand A. To illustrate, a change in the strength of subjects' preferences from $M = 69.02$ to $M = 74.91$ indicates that adding unattractive common features was associated with an increase in the "unattractiveness" of brand A, which in the context of a

binary choice corresponds to an increase in the attractiveness of the preferred brand B.

Table 3 shows that for subjects in the “select” condition adding attractive common features strengthened their initial preferences (from $M = 71.49$ to $M = 75.77$), whereas adding unattractive common features marginally weakened these preferences. The change in preferences of the subjects in the “reject” condition was in the opposite direction: adding attractive common features resulted in a minor decrease (from $M = 69.02$ to $M = 68.19$) in their preferences for brand B (or, more precisely, an increase in the attractiveness of the rejected brand A), whereas adding unattractive feature resulted in an increase in their preferences for brand B (a decrease in the attractiveness of brand A). Overall, these data are in the predicted direction.

To test the significance of the above effects, I examined a model representing subjects’ strength of preferences for brand B as a function of the nature of the decision task, presence of common features, and their interaction. To test the proposition that the impact of attractive and unattractive common features is moderated by the nature of the decision task, I examined the two-way interaction. It was significant at the .001 level ($F(2, 144) = 40.46$), lending support for the experimental hypothesis.

It was further proposed that the impact of attractive features would vary across the two choice task conditions. Consistent with this prediction, the data show that the effect of adding attractive common features is significantly different for subjects in the “select” and “reject” task ($F(1, 144) = 13.88$, $p < .001$). A similar prediction was made with respect to the impact of unattractive common features, a prediction that also was supported by the data ($F(1, 144) = 27.34$, $p < .001$).

This research hypothesized that in the context of a selection task, adding attractive features would bolster subjects’ preferences for the more attractive brand B, whereas adding unattractive features would have no effect. The data were consistent with this prediction, replicating the findings of studies 1 and 2 (prior preference condition). The impact of adding an attractive common feature was significant ($F(1, 144) = 18.95$, $p < .001$), whereas adding an unattractive feature had no effect ($F(1, 144) = 1.74$, NS).

It was further predicted that in the context of a rejection task adding common features would have the opposite effect; attractive common features would have no impact, while unattractive common features would lead to an increase in the preference for brand B. Consistent with these predictions, the data show that adding attractive features did not significantly change individuals’ preferences ($F(1, 144) = 1.46$, $p > .20$), whereas adding unattractive features was significant at the .001 level ($F(1, 144) = 37.69$).

Subjects’ evaluations of common feature importance across the experimental conditions were examined in the context of a model in which common feature importance was represented as a function of the decision task, presence of common features, and their interaction. The data indicate that the impact of common feature attractiveness on sub-

jects’ evaluations of its importance was moderated by the nature of the decision task ($F(1, 144) = 34.79$, $p < .001$). Specifically, subjects in the “select” task perceived attractive common features to be more important than unattractive features ($M = 62.19$ and $M = 51.05$; $F(1, 144) = 40.88$, $p < .001$). In contrast, subjects in the “reject” task viewed unattractive features to be marginally more important ($M = 35.29$ and $M = 32.09$; $F(1, 144) = 3.57$, $p < .10$). Another interesting observation is that in the context of a choice task, both attractive and unattractive common features were perceived to be significantly more important than in the context of a rejection task ($M = 56.6$ vs. $M = 33.7$). This data pattern lends further support for the proposition that consumers are likely to evaluate attractive and unattractive common features based on their consistency with the decision task.

By reversing the data pattern observed in studies 1 and 2, study 3 demonstrates that the direction of the common feature effect is a function of the nature of the decision task. Thus, attractive common features had a more pronounced impact on consumer preferences in the context of a selection task, whereas unattractive features had a more pronounced impact in the context of a rejection task. The pattern of subjects’ evaluations of common feature importance displayed a similar pattern: attractive common features were viewed as more important in a selection task, whereas unattractive common features were viewed as more important in the context of a rejection task. Overall, these data are consistent with the notion that the observed common feature effect is a function of consumers’ confirmatory reasoning.

GENERAL DISCUSSION

This article theorized that the observed differences in the impact of attractive and unattractive common features are a result of individuals’ confirmatory reasoning. Extant research on decision biases commonly distinguishes two types of confirmatory information processes (Klayman 1995; Nisbett and Ross 1980). First, individuals may distort the available evidence in such a way that essentially neutral information is transformed to confirm individuals’ extant preferences (Hamilton and Zanna 1974; Russo et al. 1996). In case of common features, this confirmatory distortion means that individuals will restructure the available information in a way that the same feature is valued differently for the preferred and the nonpreferred brand. For example, consumers who prefer brand A to brand B may value the same feature more if it belongs to brand A than if it belongs to brand B.

Another form of confirmatory processing is associated with a differential weighting of the available evidence depending upon whether or not it is consistent with individuals’ already established preferences (Klayman and Ha 1987; Russo et al. 1996). This differential weighting results in bolstering the information consistent with individuals’ extant preferences and discounting the inconsistent information. In the case of common features, differential weighting implies that common features consistent with individ-

uals' initial preferences will be bolstered, whereas common features inconsistent with individuals' established preferences are likely to be discounted.

An important issue is whether both effects contribute to the observed biases in evaluating common features. Studies reported in this article offer direct evidence that individuals place more weight on attractive than unattractive common features. In addition to the general phenomena of bolstering the attractive and discounting the unattractive common features, differential weighting bias might also involve differential valuation of the attractive common features describing each of the choice alternatives. Such differential valuation might emanate from consumers' focus on the attractive feature of the preferred brand (e.g., because it provides an additional reason for choosing that brand), more or less ignoring the same feature of the less preferred brand. This differential focus might explain how individuals initially distort the available information and interpret the objectively nondiagnostic common features in a way that favors one of the alternatives.

While the differential weighting hypothesis is directly supported by the experimental data, the evidence for the occurrence of a confirmatory distortion and a change in meaning is rather indirect. Indeed, it is possible that the differential focus on the features of the chosen and non-chosen brand is accompanied by a distortion of the meaning of the common features so that the feature describing the preferred alternative is viewed as more attractive. In that case, one can argue that both confirmatory distortion and differential weighting processes can potentially contribute to the observed impact of attractive and unattractive common features on consumer preferences. The issue of confirmatory information distortion in conjunction with common features needs further investigation and is a promising area for future research.

Alternative Explanations

It can be argued that the observed polarization of consumer preferences associated with adding common features to the choice set can be attributed to the increased decision complexity caused by the increase in the scope of the choice task (e.g., three attributes instead of two). Faced with a more complex choice task, consumers are more likely to use the simplifying lexicographic heuristic (i.e., rely exclusively on the most important attribute; Payne, Bettman, and Johnson 1993). The increased reliance on the most important attribute naturally enhances consumers' preferences for the brand superior on the most important attribute, leading to a further polarization of brands' choice shares (Chernev 1997).

Although the decision complexity theory offers a simple and plausible explanation of why adding common features may bolster individuals' preferences for the preferred option, it cannot account for the differential impact of attractive and unattractive common features. Indeed, because decision complexity theory equates the presence of common features with the increase in the attribute dimensionality of the choice task, it would predict that both attractive and unattractive

features should have equal impact on consumer preferences because the dimensionality of the choice task is the same regardless of the attractiveness of common features.

Another explanation of the observed data can be built on the notion that adding common features reduces the uncertainty surrounding the choice set. Indeed, given that alternatives were described only on two attributes, it is reasonable to assume that consumers were faced with some uncertainty about the performance of the preferred option on the unobservable attributes. In this context, revealing brands' values on a common attribute eliminates the possibility that the preferred alternative is inferior on this attribute, thus enhancing their already established preferences. However, this uncertainty reduction argument, while consistent with the confirmatory reasoning hypothesis, cannot in itself account for the differential impact of the attractive and unattractive common feature on consumer preferences.

Theoretical Contributions

The literature suggests that unfavorable information is likely to be more influential on consumer brand evaluations than favorable information (e.g., Lutz 1975; Mizerski 1982; Wright 1974). For example, the research in social psychology on person perception predicts that negative information has disproportionate influence on forming impressions (e.g., Anderson 1965; Fiske and Taylor 1991). The data presented in this article show, however, that in some cases positive information has greater impact than negative information. This finding does not necessarily contradict the existing literature but rather documents the contingency of the existing data on the mode of decision task. Indeed, most of the prior studies have examined the differential impact of favorable and unfavorable information in the context of an evaluation rather than a choice task and, as a result, were less likely to evoke confirmation information processing leading to discounting the negative information.

Observed impact of attractive common features on consumer preferences challenges the conventional wisdom that in order to simplify the choice task individuals edit out common features on the grounds that they are nondiagnostic information and do not differentiate between brands. Prospect theory (Kahneman and Tversky 1979) and the information restructuring framework (Coupey 1994), for example, assert that individuals eliminate features that are common to all alternatives even before evaluating the relative attractiveness of these alternatives. Similar assumptions are made by theories maintaining that consumers do not necessarily form overall evaluations of the choice options but, rather, make their decisions via a series of sequential comparisons of the alternatives on various attributes (e.g., Tversky 1969). Data reported in this article suggest, however, that in cases when (1) the shared common feature is attractive and (2) consumers have already established preferences, they might use a confirmatory reasoning approach rather than edit out common features; as a result, common features can have a significant impact on consumer preferences.

The finding that under certain conditions adding attractive common features to the choice set strengthens consumers' already established preferences challenges the notion that the strength of individuals' relative brand preferences may decrease when the attractiveness of each of the alternatives is increased by the same amount. Indeed, consistent with the common assumption in economics that value functions are concave and the marginal contribution of a given attribute is inversely related to the overall value of the product, one can expect that consumers will be more sensitive to changes in the relative attractiveness of brands with lower rather than higher utility (see Nowlis and Simonson [1996] for a detailed discussion). In other words, differences that are identical in absolute terms are likely to be valued differentially depending on the brands overall attractiveness, and the subjective valuation of these differences is likely to decrease as the overall attractiveness of the choice options increases. I show, however, that increasing the attractiveness of all brands in the choice set by adding common features might asymmetrically enhance consumer preferences for one of the alternatives. More generally, this article offers a new perspective on the effects of common product features (Dhar, Nowlis, and Sherman 1999; Dhar and Sherman 1996), demonstrating the asymmetric nature of the impact of attractive and unattractive common features on consumer brand preferences.

This research also contributes to the literature on confirmation biases (Klayman 1995; Russo et al. 1996, 1998), documenting consumers' use of nondiscriminating information to confirm their developing preferences. Indeed, it has been implicitly assumed that in order to have an impact on individuals' preferences the new information should either differ across the choice alternatives or at least be sufficiently ambiguous to enable individuals to come up with different interpretations of this information (e.g., Hoch and Deighton 1989; Hoch and Ha 1986). Data reported in this article add to this literature by demonstrating that confirmation information processing might occur even when the new information is unambiguous and does not effectively discriminate between the choice alternatives.

Managerial Implications

As marketplaces become increasingly competitive and a growing number of products share identical features, managers need to understand how various attractive and unattractive common features affect consumer preferences. The valence of common features is important because features often vary in their attractiveness to different segments. Features viewed as very attractive by some consumers may be perceived as less attractive or even as unattractive by others. For example, a fat-free label is likely to be desirable to the health-conscious consumer and undesirable to the taste-conscious gourmet; coupons and other promotional offers are likely to be attractive features for deal-prone individuals, whereas others may find these features unattractive; the stock quote feature offered by many Web sites might be a desirable feature for some consumers and a distraction for

others. In this context, I show that features perceived as attractive by a certain segment are likely to strengthen their existing preferences, whereas features perceived as unattractive will have no significant impact.

Should firms promote attributes on which all brands are equal? The literature on strategic brand management suggests that a successfully differentiated brand may further benefit from promoting features on which it matches the competition (e.g., Keller 1998; see also Carpenter and Nakamoto 1989). The data reported in this article refine this argument by showing that it applies to a greater extent for attractive than for unattractive common features; in the presence of a significant differentiating point, adding attractive common features helps an already differentiated brand, whereas adding unattractive features has little or no effect on consumer preferences. On the other hand, in the absence of a differentiating point, both attractive and unattractive common features may further increase consumers' indifference. More generally, these findings suggest that segmentation strategies based on targeting consumers with varying levels of brand preferences (e.g., loyal vs. switchers) are likely to yield different response to appeals based on common features.

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