

The Effect of Common Features on Brand Choice: Moderating Role of Attribute Importance

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In this article, the effect of common features on brand choice and the moderating role of attribute importance are examined. It is argued that when brand attributes differ in importance, common features are likely to enhance consumer preferences for the option with the best value on the most important attribute, thus further polarizing brands' choice shares. In contrast, when attributes are similar in their importance, common features are likely to have an opposite effect, equalizing brands' shares. The data provide support for these propositions.

Consumers often make choices among brands that share identical features. For example, airbags are a common feature for new cars, CD-ROMs are a common feature for most computers, and built-in power testers are a common feature for batteries. In addition, many products and services are bundled with almost identical bonus offerings, such as frequent-usage programs, gift certificates, and complimentary magazine subscriptions. In this article, I investigate how adding a common feature to all brands in the choice set affects the pattern of consumer choices.

Despite the substantive importance of this issue, little research has explicitly examined how common features affect brand choice. Furthermore, the existing studies are not consistent in predicting the nature of this effect. Three competing hypotheses come to mind. First, one could argue that because common features are nondiagnostic they will simply be ignored by consumers. This prediction is consistent with most of the sequential-elimination models of choice (e.g., Tversky 1972), which posit that redundant aspects of decision problems are edited out prior to choice deliberations. Hence, one can predict that common features will have no effect on choice.

Alternatively, one could argue that because common features will increase the perceived similarity between brands (Tversky 1977) we could see a convergence of brands' choice shares. This view is consistent with the

dilution effect, which asserts that nondiagnostic information is likely to dilute the differences on the diagnostic attributes (Nisbett, Zukier, and Lemley 1981). As a result, one can expect that common features will decrease brand differentiation by diluting the extremity of consumers' preferences. This prediction is also in agreement with the notion that when forming evaluative judgments, decision makers may average options' values on various attribute dimensions (Gaeth et al. 1991; Troutman and Shanteau 1976), thus decreasing the existing differences among alternatives. As a result, consumers are likely to become more indifferent about the choice options, and their preferences will tend to converge.

Finally, one could argue that, to the extent that the diagnostic attributes tend to favor one option over another, common features will enhance the choice share of the most preferred option. This prediction is in agreement with the findings that similarity along one attribute tends to enhance differences on other attributes (Mellers and Biagini 1994; Meyer and Eagle 1982; Tversky and Russo 1969), as well as with the findings by Carpenter and Nakamoto (1989), who show that similarities between two brands ("me-too" and a "pioneer") are likely to emphasize the advantages of the dominant brand (the pioneer). Thus, one would expect that common features may enhance consumers' existing preference for a given brand, leading to a divergence of their choice shares.

In sum, there are three different predictions on how common features affect brand choice. This article does not explicitly focus on the first proposition, which is consistent with the normative view; rather, it examines predictions suggesting that common features are likely to have a significant effect on consumer choices. In particular, I offer evidence that both convergence and divergence

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effects can be observed in different contexts, depending on the pattern of dispersion of importance of the diagnostic attributes. Thus, when attributes have equal importance, adding a common feature to a pair of options leads to a convergence of choice shares, whereas, when one of the diagnostic attributes has primary importance, endowing options with a common feature leads to a polarization of choice shares.

ATTRIBUTE IMPORTANCE AND THE COMMON FEATURE EFFECT

This research examines subjects' response to a series of hypothetical choice problems having the following structure. Decision sets consisted of two options, each described on either two or three attributes. If three attributes were described, the third comprised common features. The values of the alternatives on the remaining two attributes were organized so that each alternative was superior on one dimension and worse on the other.

A cornerstone of this research is the notion that providing subjects with an additional attribute comprising common features will increase the information load, thus complicating the choice. In this context, I propose that the pattern of dispersion on the relative importance of the options' attributes affects the way consumers resolve the decision conflict. Thus, when one of the attributes has primary importance, the presence of common features increases the likelihood that consumers will focus exclusively on this attribute, resulting in a choice made lexicographically. This prediction is consistent with a body of literature demonstrating that an increase in the information load is likely to be associated with more lexicographic decisions (Johnson and Meyer 1984; Payne 1976; Payne, Bettman, and Johnson 1993). This increase in consumers' reliance on the most important attribute naturally leads to an increase in the likelihood of choosing the option superior on this dimension. In an environment where consumers are homogeneous with respect to viewing a particular attribute as having a primary importance, increased choice lexicographicity will polarize options' choice shares.

In contrast, when attributes have similar importance, consumers are faced with a relatively difficult decision because the relative advantages of the options on different attributes are balanced and individuals do not have a strong reason to select a particular alternative. Hence, in the absence of a tie breaker, such as the primary attribute heuristic, consumers may adopt either of the following two strategies. First, when consumers are truly indifferent between the options, they may choose one of the options arbitrarily, for example, by tossing a coin. In this case, by making brands more similar, common features are likely to reinforce their initial reaction of indeterminacy, thus increasing the likelihood of an arbitrary choice. Alternatively, consumers may focus on a particular attribute (e.g., the attribute on which options have highest variance) and choose the

option with the best value on this attribute. In this case, when consumers' decisions are guided by a lexicographic rule, adding common features will increase the likelihood of choosing the option superior on a subjectively determined primary attribute. Given a population with heterogeneous preferences, this may also lead to aggregate convergence of options' choice shares.

To summarize, the above reasoning maintains that when forced to make a difficult choice, individuals attempt to minimize the decision conflict and reach an effort-efficient decision. Building on the notion that the relative importance of brand attributes moderates the way consumers resolve the decision conflict, I argue that different patterns of dispersion of attribute importance often lead to a different impact of common features on brand choice. In particular, I predict that when one of the attributes has primary importance, common features are likely to strengthen consumers' preferences for the option with the best value on the primary attribute, thus leading to a divergence of brands' choice shares. In contrast, when attributes are similar in their importance, common features are likely to lead to aggregate convergence of brands' choice shares. More formally, these propositions can be presented as follows:

- H1:** The effect of common features on brand choice is moderated by the relative importance of product attributes.
- H2a:** When one of the product attributes has primary importance, common features will increase the likelihood of choosing the brand with the best value on the primary attribute, thus leading to a divergence of the choice shares of the alternatives.
- H2b:** When product attributes have similar importance, common features will lead to a convergence of brands' choice shares.

EXPERIMENTAL STUDY

Overview

Research presented here suggests that the relative importance of options' attributes moderates the effect of common features on brand choice. This proposition is tested by adding identical features to choice alternatives. Thus, in the benchmark condition, brands were described only on two attributes (e.g., resistance and warranty for stair climbers), whereas in the treatment condition a third attribute (common feature) was added (e.g., a free subscription to *Sports Illustrated*). To disentangle possible confounds between effects associated with the differences in the number of attributes and effects associated with the nondiagnostic nature of the common features, an additional manipulation of the salience of the common features is added (e.g., emphasizing the attractiveness of the subscription to *Sports Illustrated*).

The experimental hypotheses require that in some of the conditions one of the attributes have primary importance, whereas in the other conditions both attributes have similar importance. To assure attribute importance in the *primary* condition (i.e., with a primary attribute), the decision problems were introduced with a sentence emphasizing the importance of one of the attributes. In contrast, subjects in the *similar* condition were told that both attributes have similar importance.

Respondents were asked to make choices in several product categories. Choice sets consisted of two options, each described on either two or three attributes (the third attribute consisted of common features). Overall there were four product categories, and each of the respondents was presented with alternatives from two of these four categories.

Subjects and Design

Students from two major southeastern universities ($N = 432$) were randomly assigned to the conditions in a 2×3 between-subjects factorial design. The two factors were the relative importance of the attributes (primary/similar) and the presence/salience of common features (no common features present, a common feature was added to both alternatives, and the added common feature was made more salient). Thus, there were six experimental conditions overall. A between-subjects design was used to avoid memory-based response biases.

Stimulus Materials

Descriptive feature lists were created for four product categories.¹ Each product category was represented by two equally priced brands, neither of which was dominant on all attributes. Brands in the base condition were described on two attributes, whereas brands in the other two conditions were described on three attributes, where the third attribute was the common feature. All brands had fictional names in order to minimize differences in subjects' experience with particular brands. The product categories used were stair climber (attributes: resistance adjustability, warranty length), airline (attributes: seating comfort, in-flight service), cordless phone (attributes: operating range, battery life), and credit card (attributes: grace period, cash advance amount). The manipulation procedure included adding common features as well as increasing the salience of the added common features. The salience manipulation included adding a sentence emphasizing the attractiveness of the common feature and increasing its perceptual prominence. An example of the

stimuli in different experimental conditions is presented in Table 1.

An important assumption with regard to the manipulation procedure was that common features used in the study are not likely to draw subjects' attention to a particular attribute, thus increasing its perceived importance. For example, it was assumed that presence of a free magazine subscription was unlikely to change subjects' perceptions of the relative importance of resistance adjustability and warranty of a stair climber, whereas a 90-day money-back guarantee may prompt subjects to focus on the warranty. Consistent with this assumption, each of the product categories used in the study was pretested to assure that common features do not inherently affect subjects' perceptions of the relative importance of each of the attribute dimensions.

Experimental Procedure

Subjects were informed that the study investigated consumer brand preferences. Graduate and undergraduate students were tested in groups ranging in size between 20 and 40 people. They were asked to fill out a short questionnaire, where they had to choose one of the options in two product categories. The experimental procedure took an average of 10 minutes, and at the end subjects were debriefed and, where applicable, credit for their participation was arranged.

Manipulation Check

To check whether the manipulation of the relative importance of the attribute dimensions was successful, a sample of 60 subjects drawn from the same population was asked to evaluate the relative importance of the product attributes.² I used the same stimuli as in the main experimental conditions with one exception: instead of making a choice, subjects had to provide evaluations of attribute importance on a five-point scale (1 = first attribute is significantly more important, 3 = both attributes have equal importance, 5 = second attribute is significantly more important). Each subject had to rate two product categories, which yielded 64 observations in the primary condition and 56 in the similar condition. If the manipulation procedure was successful, one would expect that the similar-condition evaluations of attribute importance would have a distribution with a mean in the neighborhood of three, whereas in the primary condition the distribution would have a mean close to one. The means of the evaluations in the two condi-

¹Eleven product categories were tested. Four of them did not show either a significant or a consistent pattern of change in consumer preferences and were dropped from the stimulus set. Three more product categories were excluded because there were significant interactions between the presence of common features and the evaluations of products' performance on either of the other two attributes.

²A different sample was used in order to avoid any possible biases in subjects' responses if they had to make choices after evaluating the importance of the product attributes. In order to assure the validity of the manipulation check, subjects were provided with the same information as the subjects in the main study, thus ruling out possible inconsistencies due to subjects' evaluations of the local and global importance of the attributes (Goldstein 1990).

TABLE 1
AN EXAMPLE OF THE STIMULI (STAIR CLIMBER) IN DIFFERENT EXPERIMENTAL CONDITIONS

Common features	Attribute importance			
	Primary (one of the attributes has primary importance)		Similar (attributes have similar importance)	
	Brand A	Brand B	Brand A	Brand B
Not present (brands described on two attributes)	9 resistance levels 1-year warranty	5 resistance levels 3-year warranty	9 resistance levels 1-year warranty	5 resistance levels 3-year warranty
Present (brands described on three attributes)	9 resistance levels 1-year warranty 6-month subscription to <i>Sports Illustrated</i>	5 resistance levels 3-year warranty 6-month subscription to <i>Sports Illustrated</i>	9 resistance levels 1-year warranty 6-month subscription to <i>Sports Illustrated</i>	5 resistance levels 3-year warranty 6-month subscription to <i>Sports Illustrated</i>
Present and salient (brands described on three attributes; common feature made more salient)	9 resistance levels 1-year warranty <u>6-month subscription</u> to <i>Sports Illustrated</i>	5 resistance levels 3-year warranty <u>6-month subscription</u> to <i>Sports Illustrated</i>	9 resistance levels 1-year warranty <u>6-month subscription</u> to <i>Sports Illustrated</i>	5 resistance levels 3-year warranty <u>6-month subscription</u> to <i>Sports Illustrated</i>

NOTE.—The attribute information is shown as it appeared in the actual stimuli (including the boldface, the italics, and the underlined text).

tions were consistent with the expectations: $\bar{X} = 2.93$ (SD = 0.87) for the similar and $\bar{X} = 1.53$ (SD = 0.67) for the primary condition. More important, the difference between these two conditions was significant ($t(118) = 9.94, p < .001$), indicating a substantial difference in the perceived attribute importance across the experimental conditions.

An additional test of the manipulation procedure was provided by investigating the strength of subjects' preferences for the chosen option. This test is based on the notion that if subjects in the primary condition perceived one of the attributes to have primary importance, they were likely to face less uncertainty and, thus, be more confident in their decisions. In contrast, the subjects in the similar conditions were likely to face a relatively more difficult task, given that they initially had to decide on the relative importance of the attribute dimensions. Thus, differences in subjects' strength of preferences for the chosen option could be viewed as an indication of the success in manipulating subjects' perceptions of the relative attribute importance.

To test this proposition, a four-point scale (1 = weakly prefer, 4 = strongly prefer) was administered to a subsample of 70 subjects.³ The scale was incorporated into the main questionnaire and was located immediately following each of the subject's answers. Each

subject had to evaluate his or her strength of preferences in one product category, which yielded 70 evaluations (34 in the primary condition and 36 in the similar condition). The evaluation of the effectiveness of the manipulation procedure was based on a comparison of the means of subjects' evaluations across the primary and the similar conditions in cases where brands in the choice set were described only on two attributes (no common features). The data suggested a significant difference in the evaluations made in the primary condition ($\bar{X} = 3.18, SD = 0.80$) and the similar condition ($\bar{X} = 2.92, SD = 0.87, t(68) = 1.30, p < .10$). These results provided additional evidence that the manipulation of the relative importance of the attribute dimensions was successful.

RESULTS

A summary of the experimental data, organized in the form of contingency tables, is presented in Table 2. Thirty-six subjects participated in each condition. Each subject made choices in two product categories, and thus there were 864 observations.

Hypothesis 1 proposes that attribute importance moderates the effect of common features on brand choice. This hypothesis was tested by adding common features to choice options and by manipulating the salience of the added common features. More specifically, I expected to observe moderating effects of attribute importance as common features were added as well as when those features were increased in salience.

³Since subjects have already indicated their choices, the four-point scale used here is, in effect, equivalent to an eight-point scale (1 = strongly prefer brand A, 8 = strongly prefer brand B) traditionally used for similar purposes (e.g., Payne and Braunstein 1971).

TABLE 2
THE EFFECT OF COMMON FEATURES ON BRAND CHOICE

Stimuli	Common features	Primary importance		Similar importance	
		Brand A	Brand B	Brand A	Brand B
Stair climber	Not present	24	12	15	21
	Present	30	6	16	20
	Present and salient	32	4	18	18
Airline	Not present	27	9	15	21
	Present	32	4	15	21
	Present and salient	32	4	17	19
Cordless phone	Not present	25	11	16	20
	Present	31	5	18	18
	Present and salient	31	5	19	17
Credit card	Not present	23	13	17	19
	Present	29	7	18	18
	Present and salient	34	2	19	17

For the purposes of statistical evaluation, the data were analyzed using categorical modeling (the CATMOD procedure in SAS [SAS Institute 1990]). To examine the validity of Hypothesis 1, I tested a model describing choice as a function of (1) the attribute importance (ATTRIMP), (2) the main effect of common features (COMFTR), and (3) their interaction: CHOICE = ATTRIMP + COMFTR + ATTRIMP · COMFTR.

The data supported the notion that attribute importance moderates the effects of common features on choice, and the overall interaction effect was significant ($\chi^2 = 14.6, p < .001$). In particular, when adding common features, the main effect of attribute importance was significant ($\chi^2 = 37.1; p < .001$). More important, the interaction effect was also significant ($\chi^2 = 7.94; p < .01$), indicating that attribute importance moderates the impact of common features on consumer choice. The alternative manipulation (adding salient common features) yielded similar results: the main effect of attribute importance ($\chi^2 = 91.68$) and the interaction effect ($\chi^2 = 13.82$) were significant at the .001 level, supporting Hypothesis 1.

Hypothesis 2a proposes that in the primary importance condition common features will lead to a divergence of consumers' brand preferences. More specifically, brand preferences of the subjects in the conditions where common features were added were expected to be more polarized than those of subjects in the condition without common features. It was also expected that subjects in the condition where common features were salient will have more polarized preferences than subjects in the conditions where common features were either not present or present but not salient.

The findings supported Hypothesis 2a; adding common features (conditions 1 and 2) affected options' choice shares in the predicted direction for all product categories. The mean shares of the two brands were 69

percent and 31 percent initially, diverging to 85 percent and 15 percent after the common features were added (see Fig. 1).

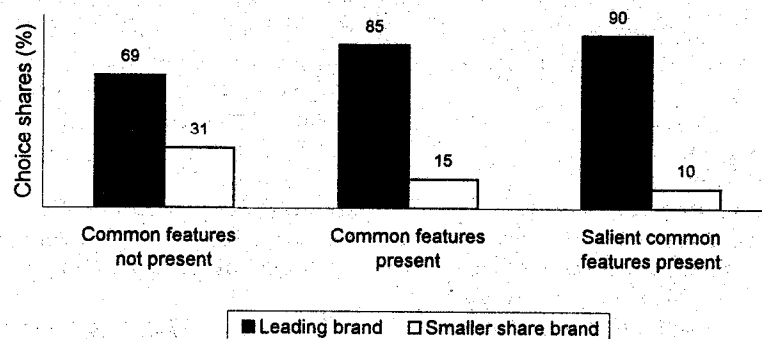
For the purposes of statistical evaluation, I tested a model describing consumers' choices as a function of (1) the main effect of common features, (2) the main product category effect (PRODCAT), and (3) their interaction: CHOICE = COMFTR + PRODCAT + COMFTR × PRODCAT. The overall effect of adding common features was significant ($\chi^2 = 10.75, p < .001$). Product category effects were nonsignificant ($\chi^2 = 2.26; p > .2$), which indicated that the dispersion of consumers' brand preferences was similar across the choice options. More important, the data indicated that the effect of common features was similar across products, as evidenced by the nonsignificant interaction between the added common features and product category ($\chi^2 = .07, NS$).

Increasing the salience of common features provided results that were directionally consistent with the predictions made by Hypothesis 2a. In three of the categories the effect was in the predicted direction, whereas in the fourth category increasing the salience had no effect on the relative choice shares (mean shares 90 percent and 10 percent in condition 3). The overall effect of increasing the salience of common features (conditions 2 and 3) did not attain statistical significance ($\chi^2 = 1.54; p > .2$). The effects of product category and interaction effects were nonsignificant as well ($\chi^2 = .36, NS; \chi^2 = 2.2; p > .2$). The overall effect of adding salient common features (conditions 1 and 3) was in the predicted direction and significant ($\chi^2 = 20.45; p < .001$). The product category and the interaction effects were nonsignificant: ($\chi^2 = .56, NS; \chi^2 = 2.02; p > .2$), indicating that adding salient common features produced effects that were significant and directionally consistent for all product categories, thus lending support for Hypothesis 2a.

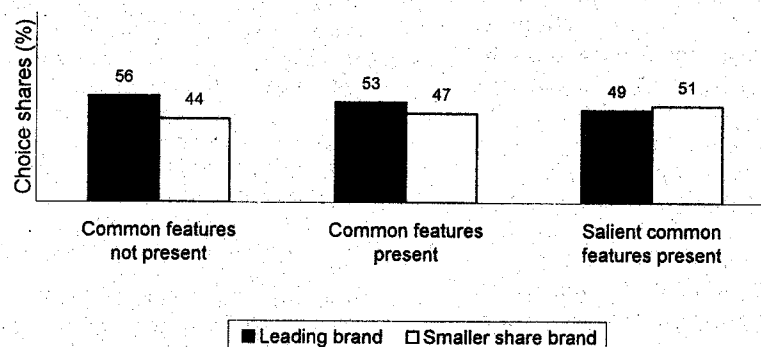
FIGURE 1

THE EFFECT OF COMMON FEATURES ON BRANDS' CHOICE SHARES (AGGREGATED ACROSS PRODUCT CATEGORIES)

PRIMARY IMPORTANCE CONDITION: POLARIZATION OF BRANDS' CHOICE SHARES



SIMILAR IMPORTANCE CONDITION: CONVERGENCE OF BRANDS' CHOICE SHARES



Hypothesis 2b predicted that adding common features in conditions where attributes are perceived to have similar importance will lead to a convergence in brands' choice shares. The experimental data were consistent with this prediction. In three out of four product categories, brands' choice shares converged when common features were added (see Table 2). Furthermore, in the presence of salient common features, a convergence of choice shares was observed in all product categories. The mean shares of the initially dominant brands were 56 percent in the condition without common features, 53 percent when common features were present, and 49 percent in the presence of salient common features (see Fig. 1). This effect, although directionally consistent, did not attain statistical significance. More specifically, adding common features yielded $\chi^2_1 = .90$ (not significant), increasing the salience of the common features yielded $\chi^2_1 = .06$ (not significant), and adding salient common features yielded $\chi^2_1 = 1.40$ ($p > .2$). Thus, this

study provided primarily directional support for the convergence hypothesis.⁴

In sum, this study has shown that the effect of common features on brand choice is moderated by the relative importance of the attributes describing choice options, which is consistent with Hypothesis 1. When one of the attributes was perceived to have primary importance, common features were found to enhance the polarization of consumer preferences, leading to a divergence of

⁴The validity of the convergence hypothesis was also tested in a different manipulation procedure. The subjects were 216 students from the same population. Using the same stimuli, I modified the values of the options on some of the attributes so that their choice shares in the base condition were further apart. This effectively increased the power of the study by leaving more space for options' shares to converge. The data suggested that when both attributes were perceived to be of similar importance, the overall effect of adding common features was significant ($\chi^2_1 = 9.6; p < .01$), thus lending additional support for the convergence hypothesis.

brands' choice shares in support of Hypothesis 2a. This divergence effect was significant when common features were added to the choice set and directionally consistent when the number of attributes was constant and only the salience of the common features was manipulated. The hypothesis that common features will dilute consumer preferences, thus leading to a convergence of brands choice shares (Hypothesis 2b), received directionally consistent support.

DISCUSSION

The data are consistent with the prediction that the effect of common features is moderated by the relative importance of brand attributes. When attributes differed in importance, common features enhanced the choice share of the option with the best value on the most important attribute, leading to a further polarization of brands' choice shares. In contrast, when attributes were similar in importance, common features displayed a trend in the opposite direction, leading to an equalization of choice shares.

This research offers an explanation of the shifts in brands' choice shares that is based on the notion that adding common features increases the information load and makes the decision more difficult. It is argued that subjects in the primary condition who had to evaluate three attributes (the third being the common features) were more likely to choose lexicographically when compared with subjects who had to evaluate only two attributes. Given that subjects in the primary condition were homogeneous in their evaluations of the relative importance of options' attributes, adding common features was likely to polarize aggregate consumer preferences.

In contrast, the tendency of the options' choice shares to converge in the similar condition could have been associated with two factors. First, the lexicographic mechanism described above could have worked here as well. Because of the heterogeneity of consumer preferences, however, the effect is now reversed. At the same time, it is possible that for consumers who are indifferent between the alternatives, common features did reinforce their state of indeterminacy, making the choice process tantamount to a coin toss. Both mechanisms are consistent with the observed aggregate depolarization of subjects' preferences and convergence of options' choice shares.

To summarize, I have reported empirical evidence on how common features affect brands' choice shares. Although I have presented a theoretical account for the data, this article has not established the psychological basis for this effect or its generality. Thus, it is possible that factors other than decision lexicographicity contribute to the observed effects. An alternative explanation is consistent with the notion that dominance on the most important attribute provides consumers with a compelling reason for choice (Tversky, Sattath, and Slovic

1988) and, as a result, their decision processes are biased toward confirming the overall dominance of this option (Chernev 1997; Kunda 1990; Montgomery 1989; Russo, Medvec, and Meloy 1996). In this context, one might argue that adding common features shifts attention away from the deficiencies of the option superior on the most important attribute, thus bolstering its relative attractiveness and ultimately increasing its share. Further research is needed to clarify the psychological mechanisms mediating the effect of common features on brand choice.

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