RAVI DHAR and ITAMAR SIMONSON*

Whereas most academic and industry studies of consumer preferences and decision making involve forced choice (i.e., participants are told to choose one of the presented product or service alternatives), buyers usually also have the option not to select any alternative. An implicit assumption in the experimental practice of forcing choice is that the no-choice option draws proportionately from the various available alternatives, such that the qualitative conclusions are unaffected. However, the authors propose that the no-choice option competes most directly with alternatives that buyers tend to select when they are uncertain about their preferences. Building on this general proposition, the authors show that the introduction of the no-choice option strengthens the attraction effect, weakens the compromise effect, and decreases the relative share of an option that is "average" on all dimensions. They also examine the mechanisms underlying the impact of having the option not to choose and the conditions under which the no-choice option is likely to affect relative option shares. The results are consistent with the notion that the no-choice option provides an alternative way of resolving difficult choices that is not available when subjects are forced to choose. The authors discuss the theoretical and practical implications of this research.

The Effect of Forced Choice on Choice

Most studies of consumer choice and marketing research techniques employing a choice task (e.g., certain conjoint applications) present respondents with two or more options and ask them to select the one they prefer (or would have purchased). Such studies have provided insights regarding the determinants of consumer choice, and there is evidence that experimental choice-based methodologies can provide accurate predictions of actual purchase decisions (e.g., Burke et al. 1992; Huber and Zwerina 1996).

When making actual purchase decisions, consumers are in some cases forced to choose one of the available options (e.g., because the cost of delay is high or the product is needed urgently), similar to studies involving forced choice. However, in many real-world situations, buyers are not forced to choose from any particular set presented to them, and they have the option not to purchase at all, defer purchase, or purchase elsewhere (hereafter, the no-choice or deferral option). Reasons for choosing the no-choice option relate both to the perceived attractiveness of the considered options in comparison with other alternatives or expectations and to the preference uncertainty or difficulty in identifying the best option. For example, recent research (e.g., Dhar 1997) suggests that the decision not to choose is sensitive to the relations among the presented alternatives, resulting in a greater tendency to select the no-choice option when the choice set offers several attractive alternatives but none that can be easily justified as the best.

Although the inclusion of a no-choice option is clearly relevant when the focus is on the absolute level of consumer demand, it may also affect the relative preferences among the available options. An implicit assumption in experimental studies of forced choice is that the no-choice option would take share proportionately from the various available alternatives, consistent with the assumption of independence of irrelevant alternatives (IIA), such that the qualitative conclusions in understanding the trade-offs consumers make among options are unaffected. However, if this assumption does not hold, any experimental findings may be systematically biased and lead to incorrect predictions about relative shares when consumers have the option not to choose (for a related discussion regarding interactions between background factors and experimental conditions, see Lynch 1982). For example, if a no-choice option tends to take greater share away from high price, high quality options, forced-choice experiments will consistently overestimate the relative share of such options. Thus, from both theoretical and practical perspectives, it is important to examine whether the option not to choose tends to compete with some options more than with others, thereby violating the IIA assumption. Such an investigation can improve our abil-

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ity to predict consumer preferences and to provide insights into any systematic differences between (actual) purchases that are made when the buyer must make a purchase compared with when the option not to make a purchase is available.

This research relates to prior work (e.g., Festinger 1964; Janis and Mann 1977; Lewin 1951) indicating that forced choice under preference uncertainty can produce conflict and psychological discomfort, leading to the selection of options that reduce the need to make “hard choices” and are associated with a lower likelihood of error and conflict (e.g., Luce 1998). In an experimental setting, in which a choice task might be less involving than a corresponding (actual) purchase task, preference uncertainty and possible concerns about being evaluated are also expected to enhance the tendency to select default options that are less likely to be perceived as errors (e.g., Simonson 1989, 1992). Accordingly, when the no-choice option is available, the relative shares of options that buyers and market research study respondents tend to select given preference uncertainty are likely to decrease more than the shares of other options in the choice set. This, in turn, could lead to systematic differences in comparison with the pattern of relative choice shares obtained under forced choice.

We demonstrate the implications of our analysis with respect to the impact of a no-choice option on the magnitude of context effects and show that the attraction effect (Huber, Payne, and Puto 1982) becomes stronger, the compromise effect (Simonson 1989) becomes weaker, and an option that is average on all dimensions loses (relative) share. To further understand the mechanisms underlying the impact of the no-choice option and the conditions under which it affects relative option shares, we examine (1) the impact of manipulating the level of uncertainty about attribute values and (2) the effect of introducing a no-choice option after an initial forced choice. We discuss the theoretical and practical implications of the findings.

**THE EFFECT OF A NO-CHOICE OPTION ON CONSUMER PREFERENCES**

An analysis of the differences between consumer preferences with and without a no-choice option requires us to examine how consumers who are uncertain about their preferences resolve choice when forced to make a selection. In particular, if we can determine which options consumers tend to choose when they are forced to make a selection from a choice set, we will be able to predict the types of options that will lose disproportionately when the no-choice option is introduced.

Identifying the best option from an available set is often difficult because of uncertainty about the options’ attribute values and consumers’ preferences for those values (e.g., March 1978), especially if two or more options are similar in terms of overall attractiveness. Such decisions involve conflict and can be emotionally stressful (e.g., Hogarth 1982; Luce 1998), because choosing one alternative implies that other alternatives and their attractive features should be forgone (e.g., Festinger 1964; for a review, see Bettman, Luce, and Payne 1998). A period of anticipatory regret may occur as consumers mentally project how they will feel if the selected option turns out to be disappointing (e.g., Janis and Mann 1977).

Simulating the emotional stress associated with difficult decisions in the laboratory can be challenging because experimental subjects are often less involved with the task than they would be if actual purchases and payments were involved. However, research on cognitive dissonance has shown (e.g., Festinger 1964) that such effects can be successfully captured with suitable experimental procedures. For example, Luce, Bettman, and Payne (1997; Luce 1998) use laboratory experiments to examine the choice processes involved in emotionally difficult decisions.

Although a great deal of research has examined decision processes and the types of trade-offs that decision makers perform to reach resolution under preference uncertainty (see Bettman, Luce, and Payne 1998), there has not been much work regarding the impact of conflict on the types of options that consumers select. Tversky, Sattath, and Slovic (1988, Slovic 1975) show that in a choice involving relatively equally attractive alternatives, decision makers tend to resolve their conflict by selecting the option that is superior on the more prominent dimension. Simonson (1989), using think-aloud protocols, finds that people who experience greater preference uncertainty and decision conflict are more susceptible to context effects. Specifically, he shows that the decision protocols of people selecting compromise alternatives (i.e., options with intermediate attribute values relative to the choice set) and dominating alternatives (i.e., options that are superior to another option in the set) are (1) longer, (2) more likely to consider the relative advantages and disadvantages of all options, (3) more likely to mention explicitly the difficulty of the decisions, and (4) more likely to appear inconsistent with previously stated attribute importance weights. Simonson’s findings also indicate that dominating options are easier to justify and less susceptible to criticism and that compromise options are less susceptible to criticism but not easier to justify.

These findings provide some guidelines with respect to the types of options that consumers who are uncertain about their preferences select when forced to choose. Specifically, when no option has a decisive advantage, forced choice under preference uncertainty is expected to favor options that are easier to justify and are associated with a lower likelihood of error and regret, such as compromise and asymmetrically dominating options.

Consider now the impact of introducing a no-choice option. Prior research has examined the conditions that might cause buyers to delay action at different stages of the decision-making process (Greenleaf and Lehmann 1995). Other researchers have focused more narrowly on the effect of choice-set composition on the decision to defer choice. These studies find that the proportion of subjects who defer choice increases when they are presented with a choice set containing two alternatives that are relatively equally attractive than when one of the alternatives is clearly superior (Dhar 1997; Tversky and Shafir 1992). The results suggest that the no-choice option is selected when there is no compelling rationale for choice, either because the selection is difficult or because neither alternative stands out in comparison. Consistent with this premise, Dhar’s (1997) analysis of think-aloud protocols shows that respondents who expressed a similar number of favorable thoughts about each alternative were more likely to select the no-choice option.

In summary, when consumers are uncertain about their preferences but are forced to make a choice, they tend to
select options that are easy to justify and are associated with a lower likelihood of error and regret (e.g., compromise and average options that do not have glaring weaknesses). Conversely, when the option not to choose any of the alternatives is available, consumers may prefer it to an alternative that is associated with a lower likelihood of criticism and regret but is not strongly preferred.

However, not all options that are used to resolve difficult choices are affected by the no-choice option to the same extent. In particular, some options are transparently selected as a way to resolve a difficult decision, whereas other conflict-reducing choices may be erroneously attributed to other factors. For example, Simonson (1989) finds that many of those who selected a compromise alternative explicitly explain their choice as a way to resolve preference in the face of two competing goals. In contrast, few respondents recognized the effect of a dominance relationship on their preferences and instead tended to explain their choice of asymmetrically dominating options on the basis of attribute importance or a reference to the overall attractiveness of the selected option. Thus, when the no-choice option becomes available, options whose status as conflict resolution mechanisms is transparent (and therefore not based on strong commitment) are expected to lose the most share. For example, we expect options that have average values on all dimensions and compromise alternatives to be most vulnerable to competition from the no-choice option. Conversely, options that appear to be selected because of the decision maker's underlying preferences should be affected to a much lesser degree by the no-choice option (the implications of this distinction for the effects of a no-choice option are discussed further subsequently).

In addition to the within-respondent processes discussed so far, the impact of a no-choice option might reflect between-respondent differences (i.e., heterogeneity; see, e.g., Hutchinson, Kamakura, and Lynch 2000). In particular, the personality and other characteristics of certain consumers may cause them to consider either safe options (e.g., compromise, average alternative) or the no-choice option, but not other alternatives. If there is a significant segment of such consumers, the introduction of a no-choice option would cannibalize the safe options more than other alternatives. Note, however, that the within and between explanations are likely to relate to similar psychological factors. Specifically, the most likely reason that certain consumers consider only the no-choice or safe options is a tendency to avoid conflict and a susceptibility to preference uncertainty.

In summary, our basic proposition can be stated as follows: Free choice (i.e., having the no-choice option) provides an alternative route for reducing the psychological discomfort associated with forced choice under preference uncertainty. If the option not to choose is unavailable, consumers resolve the (forced) choice problem by selecting other available options that are associated with the least potential for a significant error. We test this proposition in a series of five studies, as shown in Figure 1. In Studies 1 and 2, we test the assumption that the no-choice option competes with other preference uncertainty solutions (e.g., an option with no significant disadvantages, a compromise). In Study 3, we directly manipulate preference uncertainty and examine its effect on the share of the no-choice option. In Studies 4 and 5, we investigate the theoretical rationale underlying the effect of forced choice using task variations that affect the level of psychological discomfort of choice under uncertainty.

**STUDY 1: THE EFFECT OF INTRODUCING A NO-CHOICE OPTION ON THE SHARE OF ALL-AVERAGE OPTIONS**

In Study 1, we test the prediction that an "all-average" (or impoverished) option will lose more share to a no-choice option than will a "mixed" (enriched) alternative that has advantages on some dimensions and disadvantages on others. The two-option choice sets are similar to those previ-
ously used by Shafir (1993). For example, in a choice between two restaurants, one option might have average values with respect to quality, wait time, selection, and atmosphere. In contrast, a second restaurant might have superior (above-average) values on quality and atmosphere and inferior values on wait time and selection.

Simonson and Nowlis (2000) show that the all-average option is more likely to be selected when consumers are concerned about being evaluated and criticized by others, which suggests that such an option is perceived as a safer choice when neither option has a decisive advantage. However, consistent with our previous analysis, when the no-choice option is introduced, respondents no longer need to settle on the all-average option, so this option should lose relatively greater share.

\( H_1: \) The choice share of an all-average option relative to a mixed option is lower when the no-choice option is available.

**Method**

Respondents were 140 visitors to a science museum, who were paid $2 each for participating. The cover story stated that the researchers were interested in understanding how consumers make choices, and the task involved making (hypothetical) purchase decisions in several product categories. It was emphasized that there were no right or wrong answers and that the respondents should consider only their personal preferences. In the condition in which the no-choice option was available, respondents were told that, as in normal purchase situations, they had the option of not choosing either of the two alternatives and looking for other options. Subjects were randomly assigned to the forced-choice (without the no-choice option) or free-choice (with the no-choice option) condition, and approximately 70 respondents were in each group.

The effect of having a no-choice option on the preference between a mixed and an all-average option was tested in four choice categories: camcorder, portable computer, calculator, and restaurant. The stimuli used to test the hypotheses were similar to other studies that have examined choice between mixed and all-average options (Dhar, Nowlis, and Sherman 2000; Shafir 1993; Simonson and Nowlis 2000). For example, in the camcorder category, the mixed option was described as having the following features: superior zoom, long-life battery, high price, and relatively heavy weight. The all-average alternative was described as being average on zoom, battery life, price, and weight.

**Results**

We conducted an overall test of \( H_1 \) across the four categories using a logit model. The dependent variable was a 0–1 dummy variable, where 1 denotes the choice of an all-average option. The independent variables included (1) a dummy variable that had a value of 1 if the no-choice option was provided and (2) two-way interactions between the no-choice manipulation and the product categories. As shown in Table 1 and consistent with \( H_1 \), the mean share of the all-average options relative to the mixed option was 14\% lower when the no-choice option was available (\( \chi^2(1) = 6.0, p < .01 \)). In other words, as we expected, compared with the mixed option, the all-average alternative lost a significantly higher share to the no-choice option. For example, in the camcorder category, the relative share of the mixed camcorder was 56\% in the forced-choice task compared with 73\% in the group that had the option not to choose. Similar results were obtained for the other three product categories (see Table 1).

In summary, consistent with the proposition that the no-choice option is a substitute for error-minimizing, safe options that consumers (and respondents) select under preference uncertainty, the all-average option lost disproportionately more share than the mixed option when the no-choice option was available. To determine whether this pattern generalizes to other choice phenomena, we examine the impact of a no-choice option on attraction and compromise effects.

**THE IMPACT OF THE NO-CHOICE OPTION ON THE COMPROMISE AND ATTRACTION EFFECTS**

As illustrated in Figure 2, the compromise effect occurs if the choice share of one option, \( b \), relative to another existing alternative, \( a \), is enhanced when a third option, \( c \), which makes \( b \) a compromise option, is added to the set. Thus, we test the compromise effect by comparing the relative share of the middle option with and without the third option in the set (see, e.g., the camera example in Simonson and Tversky 1992). Simonson (1989; see also Huber and Puto 1983) shows that compromise options are perceived as safer and as less likely to be criticized by others and that such options are more likely to be selected by consumers who are uncertain about their preferences.

To understand the impact of introducing the no-choice option on the magnitude of the compromise effect, we must consider separately the two-option set \( \{ a, b \} \) and the expanded three-option set \( \{ a, b, c \} \). In both sets, consumers may select the no-choice option if they do not find the provided options sufficiently attractive or if they are uncertain

<table>
<thead>
<tr>
<th>Table 1</th>
<th>STUDY 1: THE EFFECT OF THE NO-CHOICE OPTION ON THE RELATIVE PREFERENCE FOR THE ALL-AVERAGE ALTERNATIVE (N = 140)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Share of Option</strong></td>
<td><strong>Forced Choice</strong></td>
</tr>
<tr>
<td><strong>Camcorder</strong></td>
<td></td>
</tr>
<tr>
<td>a</td>
<td>56%</td>
</tr>
<tr>
<td>b</td>
<td>44%</td>
</tr>
<tr>
<td>No-choice</td>
<td></td>
</tr>
<tr>
<td><strong>Calculator</strong></td>
<td></td>
</tr>
<tr>
<td>a</td>
<td>42%</td>
</tr>
<tr>
<td>b</td>
<td>58%</td>
</tr>
<tr>
<td>No-choice</td>
<td></td>
</tr>
<tr>
<td><strong>Portable Computer</strong></td>
<td></td>
</tr>
<tr>
<td>a</td>
<td>59%</td>
</tr>
<tr>
<td>b</td>
<td>41%</td>
</tr>
<tr>
<td>No-choice</td>
<td></td>
</tr>
<tr>
<td><strong>Restaurant</strong></td>
<td></td>
</tr>
<tr>
<td>a</td>
<td>32%</td>
</tr>
<tr>
<td>b</td>
<td>68%</td>
</tr>
<tr>
<td>No-choice</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
</tr>
<tr>
<td>a</td>
<td>47%</td>
</tr>
<tr>
<td>b</td>
<td>53%</td>
</tr>
<tr>
<td>No-choice</td>
<td></td>
</tr>
</tbody>
</table>

Notes: In all choice problems, \( a \) represents the mixed alternative and \( b \) the all-average option.
about their preferences among the available options. In addition, our prior analysis suggests that in the three-option set, the compromise option is likely to lose a relatively large share to the no-choice option because (1) the compromise option is most likely to be selected by those who have difficulty determining their preference on the basis of attribute values, and (2) when the no-choice option is available, it is more difficult to justify selecting a compromise option that is not the best on any dimension. As indicated previously, this process might also operate across consumers if those who choose the compromise option are relatively more likely to select the no-choice option. Thus, because the no-choice option serves as a substitute to the compromise option in the three-option set for those who are uncertain about their preferences, the magnitude of the compromise effect (i.e., the increase in the relative share of the compromise option in the three-option set) is expected to be smaller when the no-choice option is available. Relatedly, the effect of the no-choice option on the compromise effect might reflect consumer heterogeneity, with a segment of respondents whose consideration set is limited to the no-choice option and compromise alternative. However, as explained previously, such between-respondent differences are likely to result from the same psychological processes as the within-respondent account (i.e., predisposition to preference uncertainty and certain conflict avoidance strategies).

H2: The compromise effect will be smaller when consumers have the no-choice option.

Huber, Payne, and Puto (1982; Huber and Puto 1983) demonstrate the attraction effect (see Figure 3), whereby the addition of an asymmetrically dominated third alternative, c, to a core set of two alternatives {a, b} increases the (absolute) share of the dominating alternative in violation of the property of regularity. This effect has received a great deal of attention, and several different explanations have been proposed (e.g., Dhar and Glazer 1996; Sen 1998; Simonson 1989; Simonson and Tversky 1992).

As indicated, Simonson (1989) finds that whereas respondents often explained the choice of a middle option on the basis of its compromise position, few justified the choice of an asymmetrically dominating option on the basis of its advantage relative to the dominated option. Instead, most explanations focused on the superiority of that option on one dimension (e.g., “Television B has better picture quality”). This finding is consistent with the notion that there is a fundamental difference between the compromise and attraction effects, in that the former is more cognitive, and the latter is more perceptual. In the compromise set, a choice of the middle option seems like a compromise and tends to be explained on the basis of its position between two extremes. Conversely, although people uncertain about their preferences gravitate to the asymmetrically dominating option, this more perceptual effect is not at all transparent, and most buyers do not use the asymmetric dominance relation to explain their choices (though, when explicitly asked, most rate asymmetrically dominating options as easier to justify; see Simonson 1989). That is, even when the no-choice option is available, buyers are unlikely to perceive it as an attractive alternative to the asymmetrically dominating option because they believe that their preferences for that option are based on its superior values on one of the dimensions.

Furthermore, in the three-option set, the perceived attractiveness of an asymmetrically dominating option is likely to enhance consumers’ confidence that the dominating option is a good choice and above the threshold for making a selection in the category (e.g., Dhar 1996; Huber and Klein 1991; Simonson and Tversky 1992). Conversely, in a two-option set, each option has an advantage on one dimension and a disadvantage on another, which often enhances preference uncertainty and decision conflict, suggesting that a no-choice option will be relatively popular. Thus, we expect that the share of the no-choice option will be higher in the two-option set than in the three-option set and that the share of the asymmetrically dominating option in the three-option set will not be significantly affected by the no-choice option. This, in turn, indicates that (1) the attraction effect (i.e., the increase in the share of the dominating option in the three-option set) will be stronger when the no-choice option is available and (2) the share of the no-choice option is smaller when the choice set includes an asymmetrically dominating alternative.
The Effect of Forced Choice

H3: The attraction effect will be stronger when consumers have the no-choice option.

H4: The proportion of respondents who choose the no-choice option decreases when a choice set is enlarged by adding an asymmetrically dominated alternative.

We test H2–H4 in Study 2. We later extend the analysis and examine whether the impact of a no-choice option on the magnitude of the compromise and attraction effects is moderated by the position of the options on the price and quality dimensions.

STUDY 2: THE EFFECT OF A NO-CHOICE OPTION ON THE ATTRACTION AND COMPROMISE EFFECTS

Method

The respondents were 322 visitors to a popular science museum. The study employed a 2 (choice-set version) × 2 (no-choice option available or not) between-subjects design. Each respondent made choices in six categories. Three of the choice categories were designed to test H2 with regard to the compromise effect (35 mm cameras, compact disc [CD] players, and barbecue grills), and the other three problems tested H3 and H4 with regard to the attraction effect (binoculars, microwave ovens, and cassette players). As described previously (see Figures 2 and 3), each category had a two-option and a three-option version, as needed for testing the compromise and attraction effects. Respondents were randomly assigned to the forced-choice or free-choice (i.e., no-choice option available) tasks, and they received the two-option version in three categories and the three-option version in the other three. Approximately 80 respondents evaluated each choice-set version (two- or three-option choice set, with or without a no-choice option). We constructed the choice sets using information from Consumer Reports and mail-order catalogs (see example in the Appendix).

Results

Compromise effect. The effect of providing a no-choice option on the compromise effect was tested in the following manner: Let P(b|a) be the proportion of consumers who choose b from the choice set {a, b} and P(b|a, nc) be the proportion of consumers who choose b from the set {a, b} when the no-choice option is provided. Further let P(c|a) and P(c|b, nc) represent the proportion of consumers who choose c relative to a from the set {a, b, c} in the forced-choice and free-choice conditions, respectively. As Simonson and Tversky (1992) describe, the compromise effect is tested by examining whether [P(b|a) – P(b|a, nc)] is positive and statistically significant. In this study, to test H3, we determine whether the difference in the magnitude of the compromise effect with the no-choice option is statistically significantly smaller than without the no-choice option.

Consistent with the compromise effect, in the forced-choice condition, the (relative) share of the middle option increased in the three-option set by an average of 20% across the three compromise categories. Conversely, when the no-choice option was available, the relative share of the middle option decreased by an average of 13% in the same three categories. For example, as shown in Table 2, for 35 mm cameras, the addition of c increased the popularity of b relative to a from 57% to 71% in the forced-choice version ($P_c(b|a) - P(b|a) = .14, p < .10$). In contrast, when the no-choice option was provided, the addition of c decreased the share of b relative to a from 70% to 39% ($P_c(b|a, nc) - P(b|a, nc) = -.31, p < .01$). This difference between the forced-choice and free-choice versions in terms of the magnitude of the compromise effect is statistically significant and supports H2 ($t = 6.5, p < .001$). Similar results were obtained for the other two product categories (see Table 2).

As we discussed previously, these findings might reflect both within- and between-responder differences, though both are likely to be related to the same basic psychological aspects (i.e., preference uncertainty and conflict avoidance strategies). Further research might try to disentangle the role of within- and between-responder factors in moderating the impact of the no-choice option on the compromise effect.

Attraction effect. H4 predicts that the attraction effect is stronger when the no-choice option is available. The attraction effect is tested on the basis of the increase in the absolute share of the asymmetrically dominating option when the dominated option is added to the set (see Huber, Payne, and Puto 1982). The results support H4; whereas the attraction effect was not statistically significant in the forced-choice condition (across the three problems, $\chi^2(1) = .9, p = .3$), the choice share of the target brand increased in the free-choice condition by an average of 24% ($\chi^2(1) = 19.7, p < .001$). For example, as shown in Table 3, for microwaves, the market share of the target brand is 54% in the two-option choice set. It goes up to 58% when the choice set is enlarged by adding a third brand that is dominated by the target brand. In contrast, when the no-choice option was provided, the increase in the target-brand share was significantly more with the addition of a more extreme option.

Table 2

<table>
<thead>
<tr>
<th>Option</th>
<th>Core Set</th>
<th>Option Set</th>
<th>Core Set</th>
<th>Option Set</th>
</tr>
</thead>
<tbody>
<tr>
<td>Problem 1: 35 mm Camera</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a</td>
<td>43%</td>
<td>19%</td>
<td>a</td>
<td>20%</td>
</tr>
<tr>
<td>b</td>
<td>57%</td>
<td>46%</td>
<td>b</td>
<td>46%</td>
</tr>
<tr>
<td>c</td>
<td>35%</td>
<td>35%</td>
<td>c</td>
<td>34%</td>
</tr>
<tr>
<td>Problem 2: CD Player</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a</td>
<td>46%</td>
<td>12%</td>
<td>a</td>
<td>26%</td>
</tr>
<tr>
<td>b</td>
<td>54%</td>
<td>44%</td>
<td>b</td>
<td>44%</td>
</tr>
<tr>
<td>c</td>
<td>44%</td>
<td>44%</td>
<td>c</td>
<td>40%</td>
</tr>
<tr>
<td>Problem 3: Barbecue Grills</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a</td>
<td>60%</td>
<td>24%</td>
<td>a</td>
<td>35%</td>
</tr>
<tr>
<td>b</td>
<td>40%</td>
<td>49%</td>
<td>b</td>
<td>50%</td>
</tr>
<tr>
<td>c</td>
<td>27%</td>
<td>27%</td>
<td>c</td>
<td>26%</td>
</tr>
<tr>
<td>Average Across Categories</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a</td>
<td>50%</td>
<td>18%</td>
<td>a</td>
<td>27%</td>
</tr>
<tr>
<td>b</td>
<td>50%</td>
<td>46%</td>
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<td>46%</td>
</tr>
<tr>
<td>c</td>
<td>35%</td>
<td>35%</td>
<td>c</td>
<td>33%</td>
</tr>
</tbody>
</table>

Notes: a, b, and c refer to the options, as provided in Figure 2.
Table 3

STUDY 2: THE EFFECT OF THE NO-CHOICE OPTION ON THE ATTRACTION EFFECT (N = 322)

<table>
<thead>
<tr>
<th>Forced-Choice Condition</th>
<th>No-Choice Option Provided</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Three-Option Core Set</td>
</tr>
<tr>
<td></td>
<td>Three-Option Core Set</td>
</tr>
<tr>
<td><strong>Option</strong></td>
<td><strong>Core Set</strong></td>
</tr>
<tr>
<td>Problem 1: Microwave Oven</td>
<td>a</td>
</tr>
<tr>
<td></td>
<td>c</td>
</tr>
<tr>
<td></td>
<td>b</td>
</tr>
<tr>
<td>Problem 2: AM/FM Cassette Player</td>
<td>a</td>
</tr>
<tr>
<td></td>
<td>c</td>
</tr>
<tr>
<td></td>
<td>b</td>
</tr>
<tr>
<td>Problem 3: Binoculars</td>
<td>a</td>
</tr>
<tr>
<td></td>
<td>c</td>
</tr>
<tr>
<td></td>
<td>b</td>
</tr>
<tr>
<td>Average Across Categories</td>
<td>a</td>
</tr>
<tr>
<td></td>
<td>c</td>
</tr>
<tr>
<td></td>
<td>b</td>
</tr>
<tr>
<td></td>
<td>No-choice</td>
</tr>
</tbody>
</table>

Notes: a, b, and c refer to the options, as provided in Figure 3.

(22% to 48%). This difference between the forced-choice and free-choice versions in terms of the magnitude of the attraction effect is statistically significant and supports H3 (t = 4.5, p < .001).

H4 predicts that the percentage of subjects who would make a choice increases with the addition of a dominated alternative. Across the three problems, the mean choice deferral (i.e., the share of the no-choice option) decreased by 18% (χ²(1) = 18.7, p < .001) when an asymmetrically inferior option was introduced, consistent with the notion that an asymmetrically dominated option helps alleviate uncertainty about selecting the target (dominating) alternative.

Discussion

Consistent with H2–H4, the results of Study 2 support the prediction that the compromise effect will be weaker and the attraction effect will be stronger when consumers have the option not to choose. Because of the significant implications of the finding that a no-choice option systematically moderates the magnitude of context effects, we conducted a follow-up study to test whether these results can be replicated and to gain further insights into the conditions under which a no-choice option strengthens the attraction effect and weakens the compromise effect. Briefly, 310 respondents (science museum visitors) made choices in four product categories. The options varied in terms of price and a key quality dimension (e.g., magnification power of a pair of binoculars). There were five choice-set versions in each category (using a between-subjects design), including (1) the core set of two options; (2) two sets that were designed to test the attraction effect, with the third added option asymmetically inferior compared with the higher quality or lower quality core option; and (3) two sets that were designed to test the compromise effect, with the third option representing an extreme high or extreme low quality option.

Building on previous research (e.g., Heath and Chatterjee 1995; Prelec, Wernerfelt, and Zettelmeyer 1997; Simonson and Tversky 1992), we expected that both the increase in the magnitude of the attraction effect and the decrease in the magnitude of the compromise effect would occur primarily when the third option was added at the high quality, high price end of the choice set. The results of the study, consistent with the findings of Study 2, indicate that the attraction effect was stronger and the compromise effect was weaker when the no-choice option was available compared with the forced-choice condition. Furthermore, as was predicted, these effects of the no-choice option occurred to a significantly greater degree when the third option was added at the high quality end.1

Overall, the evidence presented so far is consistent with the proposition that the no-choice option competes most directly with options that consumers tend to select when they are forced to make a choice despite experiencing decision conflict and uncertainty about their preferences. Specifically, all-average options and compromise options tend to lose greater share to the no-choice option. Consequently, market research studies involving such options and forced choice can produce systematically biased results about relative preferences.

The notion that the no-choice option competes most directly with options selected under preference uncertainty is consistent with process data that indicate that compromise and asymmetrically dominating options are more likely to be chosen when consumers are uncertain about their preferences (Simonson 1989) and that the no-choice option is more likely to be chosen when the decision is difficult (Dhar 1997). However, to further understand the underlying mechanism and boundaries of our basic proposition, it is important to examine the impact of the no-choice option under different conditions that create preference uncertainty. In Study 3, we manipulate preference uncertainty by providing a range of attribute values rather than one specific value, as described next.

STUDY 3: THE EFFECT OF ATTRIBUTE VALUE UNCERTAINTY ON CHOOSING NOT TO CHOOSE

In Studies 1 and 2, we assume that particular options are selected in forced-choice settings under preference uncertainty because of their attribute values or positions in a particular choice set. Another way to create uncertainty in the evaluation of options is by presenting attribute values as a range rather than as specific values (Kahn and Meyer 1991). In many real-world situations, there is no precise information about quality and other dimensions. Furthermore, there are often different subjective reviews of the same stimuli, such as movies, cars, and restaurants, which can be translated into a range of possible values.

In the context of this research, we expect that the presentation of attribute ranges, as opposed to specific values, will increase the uncertainty about the true values of the avail-

1More details about the design and results of this study can be obtained from the first author.
able options and thus enhance the share of the no-choice option. Consider, for example, a choice between two restaurants that differ in terms of quality and price. In one case, quality is expressed as a point value (e.g., 3 versus 4 stars), and in another case, quality is presented as a range, with the lowest value of the range identical to the corresponding point value (e.g., 3–3.5 stars versus 4–4.5 stars). Although the attribute values of the two restaurants in the range condition are at least as attractive as the values of the two options with point values, we predict that the range of values will increase the uncertainty about the options and consequently increase the share of the no-choice option.

Note that if the point value is close to the middle of the range (in the attribute value range condition), a greater tendency to select the no-choice option in the range condition will not be surprising. Such behavior can be explained on the basis of risk aversion and/or a belief that the actual values are more likely to be skewed in the negative direction. Therefore, to show that uncertainty about relative valuation underlies an increase in the share of the no-choice option, we construct the options in the no-range condition such that the attribute value is, at most, equal to the lowest end of the range.

H5: The share of the no-choice option will be greater when consumers receive attribute value ranges, as opposed to point values, even though the valuations based on the provided ranges are at least as attractive as the corresponding point values.

Method

Respondents were 120 passengers at a major airport. The task instructions and procedure were similar to those of the previous studies. In addition, respondents were told that because some attributes cannot be determined exactly, they would be given the evaluations of two equally qualified experts. The expert ratings were used to manipulate the difficulty of making relative valuations. In the first condition (no-range condition), the two experts gave each brand the same rating on an attribute. In the second condition, the attribute ratings for the two brands differed between the two equally qualified experts (range condition). Respondents were randomly assigned to the two conditions, with 60 subjects in each group. H5 pertains to the share of respondents who selected the no-choice option in each condition.

We tested the effect of providing an attribute value range on the relative preference for the no-choice option in five product categories: 35 mm camera, personal computer, admission decision, wine, and restaurant. As indicated, the expert ratings were constructed such that the minimum attribute values in the range condition were at least as good as the values in the no-range condition. All respondents had the option not to choose.

Results

H5 suggests that providing subjects with attribute ranges will increase the share of the no-choice option. We conducted an overall test of the hypothesis across the five categories using a logit model. The dependent variable was a 0–1 dummy variable, for which 1 denotes the selection of the no-choice option. The independent variables were as follows: (1) a dummy variable that had a value of 1 if the attribute range was provided and (2) two-way interactions between the attribute range manipulation and the product categories. As shown in Table 4, the mean share of the no-choice option increased by 16% ($\chi^2(1) = 16.7, p < .01$) when subjects were provided with a range for the attribute, even though each alternative in the range condition was at least as good as the corresponding alternative in the no-range condition. For example, in the 35 mm camera category, 16% of the subjects who received a point value on the product quality dimension for the two cameras (82 and 90 on a 100-point scale, respectively) decided to look for other alternatives (i.e., selected the no-choice option) in the no-range condition compared with 36% in the range condition (82–86 and 90–92 on a 100-point scale, respectively). Similar results were obtained in the other four choice categories (see Table 4).

Discussion

In Studies 1 and 2, we show that the no-choice option competes most directly with options that consumers tend to choose when uncertain about their preferences. The results of Study 2 also suggest that the share of the no-choice option decreases when the choice set under consideration expands to include an option that decreases uncertainty about relative valuations, such as an asymmetrically dominating option. We further examine this latter conclusion in Study 3 using the description of attribute values, rather than the position of options in the set, to influence preference uncertainty. As we expected, the results are consistent with the proposition that consumers are more likely to defer purchase decisions (i.e., select the no-choice option) when observing attribute value ranges rather than point values, even when the options described, based on value ranges, are at least as attractive.

So far, we examined the effect of conflict on choice by comparing the relative preferences in the presence or absence of a no-choice option. This effect might also occur through other manipulations that increase conflict experienced by consumers, such as altering the stage at which the no-choice option is available. For example, in many marketing research studies, respondents are forced to make a choice despite preference uncertainty. As discussed previously, forced choices can be unpleasant and generate discomfort, even when there is a way of reducing final conflict, such as selecting a compromise option or an all-average
option that has no significant disadvantages. This, in turn, suggests that consumers who are first forced to choose but are then provided the option not to choose are more likely to try to relieve the discomfort and select the no-choice option. We discuss this prediction next.

**STUDY 4: THE EFFECT OF INITIAL FORCED CHOICE ON THE SHARE OF THE NO-CHOICE OPTION**

In the studies presented so far, the no-choice option was presented to respondents at the same time as other options. Alternatively, marketing surveys might first elicit preferences under forced choice and then inform respondents that they have the option not to choose any of the presented options (e.g., go to another store, delay the purchase). Such a procedure may also reflect real-world situations. For example, consumers might be initially "forced" to make a rush purchase because of an imminent deadline but later find out that they have more time. Or, consumers might initially believe that a product they are looking for is available only in one store but later find out that additional stores carry that product. In the context of voting behavior, such a sequential procedure might be employed in election polls in which all respondents are initially asked to indicate their preferred candidate and are next asked to indicate their likelihood of voting (to assess candidate preferences among likely voters). We propose that respondents are more likely to select the no-choice option when it is preceded by forced choice.

Decision situations that include the no-choice option, even if that option is not exercised, are expected to be associated with less conflict and negative emotion (e.g., Luce 1998). Furthermore, research on reactance indicates that the attractiveness of options may be enhanced when there is freedom of choice (Brehm 1966; Wicklund 1970). Although research on reactance identifies this phenomenon in terms of an increase in the attractiveness of choice alternatives that are deleted, it also suggests that consumers experience greater commitment to an option if it is viewed as being selected freely (i.e., in the presence of a no-choice option). Conversely, respondents who are forced to make a choice and are then given the option to defer choice are expected to take advantage of the offer and thus alleviate the psychological discomfort and negative emotion generated by the forced choice.

This prediction might appear inconsistent with the endowment effect (e.g., Kahneman, Knetsch, and Thaler 1991), whereby consumers instantaneously become attached to and overvalue their possessions, which might include options they have just selected. However, we propose that this effect does not apply to items that consumers are forced to choose and that the discomfort associated with such choices will produce the opposite effect. Furthermore, in this case, there is no clear reference point; it might be either the initial (forced) choice or the no-choice option that is often considered a status quo option (Dhar 1997).

Furthermore, consistent with our previous analysis, we expect that the product options that lose disproportionately to the no-choice option when it becomes available are those that consumers tend to select under preference uncertainty. Specifically, we predict that in the sequential task (i.e., when the no-choice option follows the forced choice), those who switch to the no-choice option are more likely to have selected compromise and all-average options.

**Hypothesis**

H0: The choice share of the no-choice option will be greater when it is offered after a forced choice compared when it is available as an option in the initial choice set.

H1: The no-choice option will draw disproportionately from the all-average and compromise options compared with other options.

**Method**

Respondents were 110 visitors to a science museum. They were randomly assigned to a single- or two-stage decision task. Those in the single-stage task were presented with information about two or three products and then decided whether they would choose either product or defer their choice and go to another store. For example, in the product category of CD players, respondents in the single-stage condition were presented with three options ("Neither CD player," if any, "CD player A," or "CD player B") and asked, "Which CD player would you choose?" Those in the two-stage condition were first asked to choose between the same two or three products (without the no-choice option). After they made their selection, they were told that they had the option of deferring their choices and going to another store; they were asked whether they would stay with the current choice or choose the deferral option. For example, after the first stage, subjects were asked to "Next, think about the two CD players you just saw and the one you chose. If, instead of buying one of these CD players, you had the option of going to another store and deferring your choice, would you (1) go to another store, or (2) stay with the current choice?"

The experimental choice problems were separated by "filler" choices, which were designed to minimize anticipation that each tested category would offer the deferral option following the forced choice. The order in which the product categories were shown was counterbalanced across subjects.

Respondents made choices in a total of six experimental product categories. In three of the categories, there were three options, including a compromise option and two extremes (see Study 2); the other three categories included two options, an all-average alternative and a mixed alternative (as described in Study 1).

**Results**

We predict (per H0) that the preference for the no-choice option will be greater in the two-stage condition in which respondents are initially forced to choose one of the presented alternatives. We conducted an overall test of the hypothesis across the six categories using a logit model. The dependent variable was a 0–1 dummy variable, for which 1 denotes the selection of the no-choice option. The independent variables were as follows: (1) a variable that had a value of 1 if the no-choice option was provided in the second stage and (2) two-way interactions between the no-choice stage manipulation and the six product categories. As shown in Table 5, the mean share of the no-choice option was greater by 31% (χ²(1) = 24.7, p < .01) when subjects were provided with the deferral option after being forced to choose. For example, in the restaurant category, 28% of the respondents decided not to choose any of the presented options and look for other alternatives in the single-stage task compared with 52% who selected the deferral option in the two-stage task. Similar results were obtained in the other five categories, including choice problems with both a compromise option and an all-average option.
Table 5
STUDY 4: THE EFFECT OF INITIAL FORCED CHOICE ON THE
SHARE OF THE NO-CHOICE OPTION (PERCENTAGE OF
RESPONDENTS SELECTING THE NO-CHOICE OPTION)
(N = 110)

<table>
<thead>
<tr>
<th>Product Category</th>
<th>Single-Stage Decision</th>
<th>Two-Stage Decision</th>
</tr>
</thead>
<tbody>
<tr>
<td>Restaurants</td>
<td>28%</td>
<td>52%</td>
</tr>
<tr>
<td>CD player</td>
<td>24%</td>
<td>68%</td>
</tr>
<tr>
<td>Camcorder</td>
<td>16%</td>
<td>60%</td>
</tr>
<tr>
<td>Tires</td>
<td>12%</td>
<td>46%</td>
</tr>
<tr>
<td>Microwave oven</td>
<td>10%</td>
<td>35%</td>
</tr>
<tr>
<td>Tape</td>
<td>15%</td>
<td>36%</td>
</tr>
<tr>
<td>Total</td>
<td>18%</td>
<td>49%</td>
</tr>
</tbody>
</table>

We further predict (H7) that in the two-stage task, the no-choice option will draw disproportionately more from the all-average and compromise options, which are selected when consumers are forced to choose despite preference uncertainty. To test this hypothesis, the proportion of subjects who switched to the no-choice option from the initial selection was compared with a Luce-type null model, which assumes that a new option draws proportionally from the existing options (e.g., Huber and Puto 1983). When the data were pooled across the three two-option choice sets (with an all-average alternative), 63% of the respondents who selected the all-average option switched to the no-choice option. In contrast, only 34% of the respondents who selected the mixed option switched to the no-choice option ($\chi^2(1) = 18.7, p < .01$).

Similarly, the no-choice option drew disproportionately more from the compromise options compared with the two extreme options ($\chi^2(1) = 12.4, p < .01$). Across the three problems, 44% of the respondents who selected the middle option switched to the no-choice option compared with 24% for the two extreme options.

An alternative account for the data could be that the results were not due to any difference in task-induced affect but rather to the differences in the nature of the task in the two conditions. For example, when the no-choice option is presented as part of the choice set, a respondent must take extra steps to determine whether the best option in the set is sufficiently attractive. In contrast, when the respondent is provided with the no-choice option after making a selection, its greater salience increases the likelihood of the respondent exerting the required effort and consequently rejecting the option chosen previously. This account, however, is inconsistent with research that indicates that selections of the no-choice option tend to be associated with more thorough and effortful decisions (Dhar 1997; Luce 1998). Although the no-choice option may be selected to reduce cognitive effort (Iyengar and Lepper 2000), many of these choice problems are simple enough that the motivation to process the information provided far exceeds the cognitive effort required to do so (Bettman, Luce, and Payne 1998). Furthermore, Nowlis, Kahn, and Dhar (2002) demonstrate that respondents experience conflict or ambivalence even for simple tasks that require making trade-offs.

In summary, our results are consistent with the notion that the no-choice option is selected as a means to avoid the psychological discomfort or negative affect associated with having to make a choice despite preference uncertainty. However, considering the nature of the choices involved in the current study and prior research on emotions, task-based affect is likely to be transient and diminish over time (e.g., Gilovich, Medvec, and Kahneman 1998). This suggests that the share of respondents selecting the no-choice option in the two-stage procedure (i.e., with the no-choice option becoming available after a forced choice is made) should decrease if this decision is made after a time delay. To test this proposition, the next study includes a third condition in which the no-choice option is presented after a time delay. This study also addresses a possible concern relating to the somewhat different task instructions in the two conditions of Study 4 that might have induced different considerations. For example, the no-choice option in the single-stage condition was presented as “choose neither CD player,” whereas in the two-stage condition, it read “going to another store.” To make the conditions equivalent, the instructions in the single-stage condition were modified to be the same as the two-stage instructions.

STUDY 5: THE EFFECT OF INITIAL FORCED CHOICE ON NO-CHOICE WITH TIME DELAY

Method

Respondents were 216 undergraduates at an eastern U.S. university. They were randomly assigned to a single-stage or two-stage decision task. Half of the respondents in the two-stage condition made the second decision after a filler task. The single-stage task and the two-stage task conditions with no time delay were similar to the tasks of Study 4. The task instructions asked subjects to imagine that they were thinking of making a purchase in each of the categories presented. Those in the single-stage task were presented with information about two or three products and then decided whether they would choose either product or defer their choice and go to another store. Those in the two-stage condition with time delay were first asked to choose between the same items. After they made their selections for all the choice problems, they participated in a short filler task that took about five minutes and then were told to turn their attention back to the first questionnaire. Specifically, respondents were asked to go back and reexamine the choices they had made in each product category and assume that, in addition to the option of staying with the item that they had chosen, they also had the option of not choosing any of these items and going instead to another store to purchase that product. Regardless of the no-choice option, respondents were told, “Please consider this option carefully. Then, if you decide to stay with the item that you selected previously, write down 'KEEP CHOICE' next to the category name (for example, next to 'PERSONAL COMPUTER'). If you prefer to go to another store, write down 'ANOTHER STORE.'” These instructions were designed to make the effort associated with keeping the same choice similar to that of changing the choice. We predicted that time delay would decrease the amount of deferral in comparison with the no-delay decision task.

Respondents made choices in a total of six product categories. In three of the categories, there were three (product/service) options, including a compromise option and two

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2The authors thank the anonymous reviewer who proposed this study.
extremes; the other three categories presented two options, an all-average alternative and a mixed alternative (see Study 4).

Results

We predict that the no-choice share will be greater in the two-stage condition when there is little time delay between forced choice and the subsequent option not to choose. Table 6 displays the relative shares of the all-average/compromise alternatives in the three conditions. Consistent with the results of Study 4, the mean share of the no-choice option was greater by 26\% (\chi^2(1) = 24.2, p < .01) when the respondents were provided with the no-choice option immediately after being forced to choose. However, when the no-choice option was presented after a time delay, the mean share of the no-choice option was not significantly different (\chi^2(1) = .7, not significant) from the single-stage task. For example, in the restaurant category, 28\% of the respondents decided to look for other alternatives in the single-stage task compared with 32\% and 51\% of those who selected the deferral option in the two-stage task with and without time delay, respectively. Similar results were obtained in the other five categories, including both problems involving a compromise option and problems with an all-average option.

Table 6 also shows the relative share of the all-average and the compromise alternatives in the three conditions. Consistent with our analysis, the no-choice option in the two-stage conditions draws disproportionately more from the all-average and compromise options. When the data were pooled across the three two-option choice sets (with an all-average alternative), 70\% of the respondents who selected the all-average option switched to the no-choice option. In contrast, only 34\% of the respondents who selected the mixed option switched to the no-choice option (\chi^2(1) = 21.7, p < .01). Similarly, the no-choice option drew disproportionately more from the compromise options compared with the two extreme options (\chi^2(1) = 11.4, p < .01). Across the three problems, 59\% of the respondents who selected the compromise option switched to the no-choice option in comparison with 31\% of the respondents who selected the two extreme options (\chi^2(1) = 6.6, p < .01).

In summary, in Study 5 we used time delay to test the proposition that the no-choice option is selected to alleviate the discomfort and conflict associated with forced choice under preference uncertainty. As we predicted, the results indicate that though a two-stage procedure with no time delay significantly increases the share of the no-choice option, this effect disappears if the deferral option is introduced after a time delay.

DISCUSSION

Choice is one of the most common tasks used in marketing research studies to assess buyer preferences. Furthermore, because purchase decisions usually involve choice, understanding the factors that affect consumer choice has been one of the most researched topics in marketing. In the great majority of these studies of consumer purchase decisions, respondents are forced to select one of the presented options. An implicit assumption in this practice is that the pattern of relative preferences revealed under forced choice mirrors that which would be observed in the marketplace, with the option not to choose taking shares proportionally from the other options. We investigate this assumption in this research. The results of five studies indicate that contrary to the IIA assumption, the no-choice option tends to compete with some options systematically more than with other options, and consequently forced-choice procedures may often produce biased or incomplete findings that lead to incorrect conclusions. In this section, we review the findings and discuss their theoretical and practical implications.
Summary of Findings and Theoretical Implications

If all consumer choices were made on the basis of the utility derived from the attribute values of considered options, there would be no reason to expect the no-choice option to compete disproportionately more with some options than with others. That is, under free choice, each product option might lose a certain share of the buyers who would have preferred it under forced choice, such as those who are unsure that the selected product's utility is greater than their reservation utility. However, consistent with a great deal of recent research (for a review, see Bettman, Luce, and Payne 1998), we propose that consumers who are forced to choose may select options for two basic reasons: their preferred attribute values and/or because the selected options offer a way to resolve choice conflict under preference uncertainty.

Specifically, options that are selected under preference uncertainty to comply with the forced-choice task tend to be those that are "safer" and help alleviate decision conflict, discomfort, and potential regret associated with making a choice despite the lack of a clear preference. In other words, such options are not selected solely or primarily because of the utility embedded in their attribute values, but rather because they help consumers resolve difficult choices. This analysis suggests that options that are selected as a means for choice resolution under preference uncertainty are associated with weaker preferences, and consumers would be unlikely to select these options if they had an alternative, more satisfactory, and convenient way to resolve the forced-choice problem.

Choosing not to choose represents such an alternative choice resolution mechanism, and it is often adopted by consumers. Accordingly, we predicted that the introduction of the no-choice option would take a disproportionately greater share from options that consumers tend to select when forced to make a choice despite preference uncertainty. Consistent with this prediction, we show in Study 1 that the no-choice option takes more share from alternatives that have average values on all dimensions compared with options with advantages and disadvantages. In Study 2, we further demonstrate that the no-choice option takes greater share from compromise options and options without a decisive advantage relative to another option in the set. Consequently, when the no-choice option is available, the attraction effect (Huber, Payne, and Puto 1982) tends to be stronger, whereas the compromise effect (Simonson 1989) tends to be weaker.

These results are consistent with our analysis, which emphasizes the within-respondent competition between options elected under preference uncertainty and the no-choice option. As indicated, consumer heterogeneity might also contribute to these choice patterns, assuming there are consumers who limit their consideration set to the no-choice option and safe alternatives. As we explained, the psychological factors underlying such heterogeneity are likely similar to the hypothesized within-respondent processes. Further research might examine this account more systematimately and attempt to gain a better understanding of the personality and other individual differences that may cause certain consumers to prefer either safe choices or no choices.

In Study 3, we extend the analysis to another source of preference uncertainty, which is not dependent on the product's attribute values relative to other considered products. Here, the uncertainty was produced when a range of possible attribute values rather than a point estimate was provided. As expected, the no-choice option took greater share from options for which range information was provided, even though these options were at least as attractive in terms of their attribute values as options described on the basis of point values. This study further illustrates the uncertainty and conflict avoidance role of the no-choice option.

More generally, the effect of the no-choice option on relative preference is due to the conflict associated with making a choice. This suggests that the impact of the no-choice option is likely to depend on the decision stage in which the no-choice option is introduced, as we demonstrate in Study 4. Specifically, we test the proposition that because forced choice may be associated with conflict, emotional discomfort, and possibly a lower commitment to the selected option, consumers who are first forced to make a choice and are then given the option not to choose are more likely to take that option than are consumers who have the no-choice option when first making their selection. The results support this prediction and further show that compromise and all-average options selected under forced choice are most likely to lose share to the no-choice option when it becomes available. The findings of Study 5 provide additional support for the notion that forced choice generates negative affect (or discomfort) and suggest that the negative affect dissipates with the passage of time.

The results of these studies and our analysis of the effect of including the no-choice option are based on the assumption that forced choice is associated with conflict and discomfort. However, it is possible that under certain conditions, forced choice might be more satisfactory than free choice. In particular, the no-choice option might be perceived as an easy way out and as inducing procrastination. Accordingly, if consumers believe that a choice must be made sooner or later or that procrastination is damaging, they might prefer not to have the no-choice option. Furthermore, there are probably individual differences, such as the need for closure (e.g., Webster and Kruglanski 1994), that might explain preferences between forced and free choice. Further research might examine these moderators and the conditions under which each choice condition is preferred. It might also be worthwhile to investigate whether the impact on preferences of a transition from free choice to forced choice and from forced choice to free choice (as tested in Study 4) is symmetric.

Finally, the arguments that underlie our account for the effect of a no-choice option on the magnitude of the attraction and compromise effects suggest an important distinction between two types of context effects in choice. Consistent with prior process data (Simonson 1989), when choosing a compromise option, consumers tend to consciously decide that a compromise between two extremes is appropriate. Conversely, when selecting an asymmetrically dominating option (Huber, Payne, and Puto 1982), consumers are typically unaware that the dominance relationship affects their perceptions of the options' attractiveness. In other words, that a compromise option is selected because of preference uncertainty tends to be transparent, whereas the more perceptual mechanism underlying the attraction effect creates the illusion that the asymmetrically dominating option is preferred because of its relatively attractive attribute values.
The current set of studies does not explicitly manipulate the cost of selecting the no-choice option. Rather, the cost and benefits of not making a selection from the provided choice set were left unspecified and similar across the different treatment conditions (for a discussion of the meaning of deferral in hypothetical settings, see Dhar 1997). In the marketplace, the cost of deferral or rejection is a complex interaction of product category, individual preference, and the situational context. If the cost of not choosing from the available set is high, such instances can be considered analogous to forced-choice situations.

**Practical Implications**

Before examining the practical implications of this research, it should be noted that studies based on both forced choice and free choice have limitations, and marketing researchers must select the methodology that is best suited for each study or possibly employ both approaches. Even when respondents have the no-choice option, it is doubtful that its choice share accurately captures the share of consumers who would have opted to delay choice in the marketplace. In particular, choosing not to choose in the context of a survey may reflect the desire to save time and effort or the need to avoid making difficult choices. For example, when asked to evaluate a new and unfamiliar product, respondents may look for an easy way out and select the no-choice option without making the effort necessary to reach a choice resolution. Although such effort considerations also operate in marketplace decisions, the incentives to make or avoid a real purchase decision may not mirror the considerations and motives of a subject in an experiment or survey. Thus, market researchers should consider the likelihood of deferral in marketplace situations to determine whether including the no-choice option is likely to produce more-accurate predictions. For example, forced choice may generate more-accurate and complete results in categories such as bread and milk, in which the deferral option is available but rarely exercised. Conversely, the inclusion of a no-choice option may be useful in purchase settings in which the timing of (re)purchase is not fixed and procrastination is common, such as for many durable goods. In these categories, the prediction of relative shares based on forced choice might bias the outcomes in favor of compromise options and other alternatives that respondents tend to select under preference uncertainty.

More generally, the differences between forced and free choice shown in this research have significant practical implications for managers, market research practitioners, and consumer researchers. One basic implication is that using forced choice among a fixed set of alternatives to forecast choice shares may generate systematically biased predictions. In particular, such studies are likely to lead to an overestimation of the shares of options that are associated with lower decision conflict and regret, which are the options that survey respondents who need to choose despite preference uncertainty tend to select. For example, brand positioning strategies that target a compromise location for a brand may seem more attractive if survey respondents are forced to make a choice from a presented set of options.

The results also apply to other choice domains. For example, polls of voting intentions are sometimes conducted using a design in which voters are given the “no opinion/don’t know” option, whereas in other polls they are forced to express a preference among the available candidates (Krosnick 2000). The current results suggest that the latter forecasts may often be systematically biased. Thus, even when the focus of surveys is understanding the relative preferences between options, the manner in which attribute trade-offs are resolved and survey responses are constructed can be affected by the availability of the no-choice option.

Our results also have implications for choice-based conjoint analysis. For example, the Sawtooth software allows a researcher to include a “choose none” option when conducting a conjoint study. Our results suggest that including such an option can make the choice task more realistic and the experience more pleasant for the respondent and improves the quality of the data. Relatedly, recent research by Haaijer, Kamakura, and Wedel (2001) indicates that the model specification in conjoint choice experiments is sensitive to the different reasons that underlie the selection of a no-choice option. Additional research in this area could examine the impact of including a no-choice option on the relative shares of the different alternatives provided.

Finally, the findings of this research suggest that the practice of forcing respondents to make a choice and then asking them whether they will actually make a choice produces different market share predictions than would have been obtained if the no-choice option had been available initially. Other procedures that manipulate the order in which forced and free choices are made might similarly create bias and misrepresent actual marketplace decisions. Further research might examine the impact of forced choice on choice and the use of marketing research studies with and without the no-choice option on estimates of market share and market size.

**APPENDIX**

**EXAMPLE OF A PROBLEM TESTING THE COMPROMISE EFFECT**

**35 mm Camera**

Imagine that you would like to buy a 35 mm camera and are going to a “Best Store” to check the cameras that they have. Assume that the cameras that you are considering differ in terms of their features and price. You also have the option of not buying any of them and looking for a camera at another store.

Option a: Not buy any of these cameras and go to another store.

Option b: A camera with the following features: Autofocus and auto flash.

Price: $139

Option c: A camera with the following features: Autofocus, auto flash, red-eye reduction, and autofocus handling.

Price: $189

Option d: A camera with the following features: Autofocus, auto flash, red-eye reduction, auto-film handling, zoom, and remote control.

Price: $279
EXAMPLE OF A PROBLEM TESTING THE ATTRACTION EFFECT

Binoculars for Sport Events

Imagine that you would like to buy a pair of binoculars for sport events and are considering the options below. You may also reject these options and go to another store.

Option a: Not buy any of these binoculars and go to another store.

Option b: MINOLTA Model 500
- Features: 15 × (15 times) magnification power, extra wide field of view, very durable.
- Price: $59.95

Option c: MINOLTA Model 200
- Features: 13 × (13 times) magnification power, average field of view.
- Price: $54.95

Option d: JASON Model JX
- Features: 9 × (9 times) magnification power, average field of view.
- Price: $22.95

REFERENCES


Unconventional Choices Based on Reasons,” *Journal of Consumer Research*, 27 (June), 49–68.


