Consumer Preference for a No-Choice Option

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The traditional focus in the decision-making literature has been on understanding how consumers choose among a given set of alternatives. The notion that preference uncertainty may lead to choice deferral when no single alternative has a decisive advantage is tested in seven studies. Building on recent research, the article shows that the decision to defer choice is influenced by the absolute difference in attractiveness among the alternatives provided and is not consistent with trade-off difficulty or the theory of search. These findings are then extended to show that choice deferral can also be modified for the same alternatives by manipulations that make them appear more similar in attractiveness, or that decrease the need to differentiate among them. The results are consistent with the notion that preference uncertainty results in a hesitation to commit to any single action since small differences in attractiveness among the alternatives are potentially reversible. Consistent with this premise, the effect of attractiveness difference on choice deferral decreased significantly when subjects were first allowed to practice making monetary trade-offs among the available alternatives.

Consumers often face situations that require choosing among several alternatives in the marketplace. The traditional focus in the decision-making literature has been on understanding how people choose among a given set of alternatives. In reality, many decisions involving choice among several desirable alternatives can be difficult and give way to a more fundamental kind of preference—the decision whether or not to choose. A recent analysis of a sample of consumers finds that the difficulty of selecting a single alternative was one of the most important causes for delaying a number of purchase decisions (Greenleaf and Lehmann 1995). The uncertainty of determining the most preferred alternative plays no role in the rational theory of choice, which assumes that prior to choice, the vector of attributes is reduced to a scalar value, "utility." In contrast, a number of other researchers argue that defensive avoidance is a likely response to difficult choices (Beattie and Barlas 1992; Festinger 1964; Janis and Mann 1977).

Since the timing of many purchase decisions is neither fixed nor predictable, consumers usually have the option of not choosing. In the real world, decision makers exercise a variety of defer-choice options including seeking more information on existing alternatives and searching for new alternatives (Corbin 1980). In a recent study, Tversky and Shafir (1992) show that the tendency to not choose was greater from choice sets where neither alternative dominated than from choice sets where one of the alternatives was clearly superior. Several factors may influence the preference for a no-choice option from different choice sets. Rational theory of search suggests that the no-choice option should be chosen when none of the alternatives are seen as attractive, or when there are benefits to further search (Karni and Schwarz 1977). Conversely, psychological research in the area of predecisional processes suggests that consumers may decide not to choose in order to avoid making difficult trade-offs (Tversky and Shafir 1992). Thus, the two viewpoints differ in the source of the reasons and potential situations that result in the decision to defer choice.

This research investigates the cause and effect of task and context, as well as the processes by which uncertain preferences can influence the preference for a no-choice option. More generally, I propose that the decision maker focuses on the difference in preference among the alternatives provided before making a choice. Building on the notion of preference uncertainty (Payne, Bettman, and Johnson 1992; Slovic 1995), I suggest that the tendency to defer choice is greater when the difference in attractiveness among the available alternatives is small than when it is large. Such a viewpoint broadens the type of choices that lead to decision deferral and makes it less sensitive to the size as well as the number of attribute differences among the alternatives provided—factors that affect both the trade-off difficulty and the potential bene-

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fits from further search. Further, since the difference in attractiveness among the alternatives is potentially sensitive to the manner in which preferences are constructed, choice deferral can also be increased or decreased by manipulating the decision task for the same alternatives under consideration.

THE PREFERENCE FOR A NO-CHOICE OPTION

The determinants of the decision to defer choice have not received much attention in traditional formulations of decision making (Beattie and Barlas 1992). Since the classical theory of choice assumes that preferences are complete and that information processing is costless, the no-purchase decision depends only on the utility of the most preferred option. In such cases, the preference for not choosing can be rationalized by a more complete inventory of preferences, one that captures the utility of maintaining the status quo. Such a specification of not buying can easily be incorporated into the more general framework of utility theory by treating no choice as just another option.

The above description assumes that the consumer considers all possible alternatives before making a choice. In reality, since information on all possible brands is either unavailable or simply impossible to process, the assumption of completeness is rarely satisfied. In light of cognitive limitations and search costs that may either be monetary (Stigler 1961) or result from limited cognitive resources (Shugan 1980), more recent formulations of utility theory do not imply the identification of all possible options and their relevant consequences before choice. Thus, consumers may choose one of the alternatives currently observed or continue to search for better alternatives by optimizing the trade-off between benefits of further search and the cost of search (Ratchford 1982).

A more refined class of search models allows for the fact that consumers may not be aware of the distribution of potential alternatives that affect the gains from search. In such cases, the decision maker learns about the population distribution from the alternatives that are viewed. For example, if consumers viewed different choice sets that led to potentially different inferences about the population distribution, two consumers with the same utility function may yet differ in their reservation utility and, consequently, their likelihood of search (Karni and Schwarz 1977). In summary, the no-choice option may be chosen when none of the alternatives appears attractive, or when the decision maker expects to find better alternatives by continuing to search. Further, if consumers are initially unaware of the range of potential alternatives, the alternatives that are viewed may update the mean and variance of their prior expectations, influencing the gains from search, and the decision to continue to look for other alternatives.

The above description of decision making implicitly assumes that consumers are able to determine which alter-

native provides the highest utility independent of the choice context. The assumption of ''preference ordering'' implies that consumers have a definitive preference ranking between any two options such that it allows them to know whether one alternative is at least as good as the other. A source of choice uncertainty arises from the emerging consensus of viewing preferences as constructive (Slovic 1995). In practice, one often arrives at decisions not with well-established and clearly ranked preferences but, rather, with the need to determine one's preferences as a result of being forced to choose. The process of taking into account the comparative characteristics of alternatives may create situations in which one's choice is narrowed to a few alternatives such that one is unable to discriminate or incapable of weighing the relevant differences among them. In such situations, not knowing which of the alternatives is most preferred, while not being certain that one wants them equally, may result in indecision and a tendency to avoid commitment.

Although the reasons for not choosing are not directly observable like preference, the undecided consumer may defer choice or choose randomly from the alternatives.[1] Although the relationship between differences in attractiveness among the available options and choice deferral has not been examined, previous researchers have noted that it is problematic for a decision maker to maintain the intention to act when there are competing wishes or temptations (Kuhl 1986; Sjoberg 1980). Similarly, Montgomery (1989) suggests that the decision maker may give up or postpone choice if she fails in an attempt to find a dominance structure for a promising alternative. Thus, if a choice emerges only after an individual has managed to build up a sufficiently stable intention, when the decision situation offers many equally acceptable alternatives and none that can easily be verified as the best, it may create feelings of confusion leading to a reluctance to commit to an action (Scholnick and Wing 1988).

The proposition is also consistent with recent studies that find a systematic bias toward inaction in consumer decision making (Baron and Ritov 1994; Ritov and Baron 1990; Spranca, Minsk, and Baron 1991). Baron and his colleagues report that people prefer consequences that arise out of inaction over action since the decision to stay with the status quo has certain psychological advantages. For instance, inaction allows one to maintain flexibility of future choice by doing nothing as well as avoiding responsibility and regret associated with making a poor choice. While omission bias implies a general tendency toward preserving the status quo, it may be enhanced when there are small differences among the available actions.

In summary, since different reasons may underlie no-choice response, it is important to distinguish between

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[1]One can distinguish indifference where one does not care which outcome is obtained, leading to random choice, from indecision, where one is not yet ready to make a commitment.

no-choice preference that is based on rational search, trade-off difficulty, and preference uncertainty. The first study demonstrates that the composition of the choice set has a systematic effect on the preference for a no-choice option that is not consistent with an account based on trade-off difficulty or classical search theory. The second study replicates these findings while controlling for the possibility of inferring differential gains from search. The third study tests for the mediating role of attractiveness difference by examining the verbal protocols. In four additional studies that do not vary the composition of choice set, the proposed theory is tested by showing an effect of changing the task on the no-choice option. The article concludes with a discussion of theoretical and managerial implications, a statement of research limitations, and with suggestions for directions for future research.

CONTEXTUAL DETERMINANTS OF THE PREFERENCE FOR A NO-CHOICE OPTION

The notion of preference uncertainty suggests certain differences from an account based on decision conflict and rational search on the effect of the composition of the choice set on deciding to purchase. Specifically, if the decision to choose is determined by comparing the difference in the attractiveness among the alternatives provided, adding a new alternative could increase or decrease the no-choice preference by influencing commitment to any one option.

In a recent study, Tversky and Shafir (1992) examined the effect the composition of the choice set had on the no-choice option. In a decision about apartments that included the option of waiting, they find that the proportion of subjects that prefer to wait and learn about the apartments increased when a second apartment with a different price and distance from the campus was also provided. The authors attribute the results to the notion that consumers experience conflict when choice involves trade-offs among different attributes.[2] In this vein, Shepard (1964) notes that although people experience little difficulty in evaluating alternatives with respect to any one attribute, their ability to weigh or combine separate attributes is less impressive. Although there is no precise definition of conflict, it is generally assumed to depend on the degree to which the alternatives under consideration have different advantages and disadvantages (Kiesler 1966; Miller 1944).

Two alternatives that are equally attractive can differ on few or many dimensions. For example, in addition to rent and distance from the campus, two apartments may also differ on their general condition, size, neighborhood, and the security deposit. Further, the alternatives can differ in the size of their difference on rent and distance. I use ''choice set heterogeneity'' to refer to the *number* of attributes, or the *size* of the attribute difference, on which the alternatives in the choice set are different. While Tversky and Shafir (1992) did not examine the effect of the number of attribute trade-offs, an account based on conflict implies a higher incidence of choice deferral when the added alternative involves more trade-offs. In contrast, an account of choice deferral based on difference in overall attractiveness predicts no differential effect due to an increase in the number of attribute trade-offs.

The heterogeneity among the options provided can also be varied on the basis of the difference in their attribute values. For example, the added apartment may be approximately the same distance from the campus and involve similar rents, or it may vary greatly in its distance from campus and rent relative to the first apartment. Again, alternative perspectives make different predictions about the effect of the size of attribute differences on deciding to defer choice. Festinger (1957) suggests that the degree of conflict in choice should decrease with the similarity of the choice set. Since greater overlap among the alternatives implies smaller attribute differences, the result should be that a lower level of conflict is generated. Thus, the decision to defer choice should remain unaffected when the choice set is enlarged by adding an alternative with similar attribute values. In contrast, if choice uncertainty is based on the difference in overall attractiveness as a result of comparing the two alternatives, choice deferral should increase as a result of enlarging the alternative set, even when the added alternative has minor differences compared to the first alternative.[3]

The effect of comparing alternatives and using the attractiveness difference in order to determine choice suggests another effect. Specifically, the addition of a new alternative to the first alternative may increase the likelihood of not deferring a choice if the attractiveness difference between them is large. Since the addition of an inferior alternative does not generate additional conflict, an explanation based on dissonance or conflict makes no systematic prediction on its effect on the decision to defer choice. In contrast, the large difference in attractiveness makes it easier to arrive at a decisive choice. In this vein, Janis and Mann (1977) report that medical patients tend to rapidly terminate the decision-making process without seeking additional opinions when the recommendation comes from a dominant source. In addition, past research has demonstrated that a dominating or a relatively inferior alternative increases the choice probability of the dominating option (Huber, Payne, and Puto 1982). Simonson and Tversky (1992) posit that confronted with the uncertainty of which alternative to choose, the inferior option enhances the attractiveness of the dominating alternative. While the focus in their study was on relative choice

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[2]Early studies that examined conflict focused on the decision's response time (Festinger 1964; Kiesler 1966; Tyebjee 1979).

[3]When the attribute overlap is complete and the choices have minor consequences, as in a choice between two cans of Coke, the choice becomes trivial, leading to indifference.

shares and not choice incidence, it suggests that if there is uncertainty about whether or not to choose, adding an inferior option could indeed increase the overall purchase incidence.

In summary, I study the effect of enlarging a single-option choice set by introducing a second alternative. I show that consumers' choice deferral increases even when the enlarged choice set is homogeneous and the attribute differences between the alternatives available are small. I also show that there is no significant effect of the number of features on which the two alternatives are different. Although search theory as well as decision conflict theory predict an increase in the preference for a no-choice option with an increase in the heterogeneity of the choice set, an account based on preference uncertainty focuses only on the difference in preference between the alternatives in the choice set.[4] This further suggests that the addition of a clearly inferior alternative may increase choice incidence even though there is no decrease in conflict. Finally, I also expect to find that decision processes that lead to the no-choice response are longer and result in a relatively equal number of favorable evaluations toward each option, which is consistent with the notion of preference uncertainty. On the basis of this discussion, my first set of hypotheses is as follows.

> **H1:** The preference for a no-choice option increases with the introduction of a new alternative that is relatively equal in overall attractiveness.
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> **H2:** The preference for a no-choice option decreases with the introduction of a new alternative that is clearly inferior in overall attractiveness.
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> **H3:** Decision processes that result in the no-choice response will result in a greater number of total thoughts and have relatively equal numbers of favorable evaluations toward each option.

STUDY 1: THE EFFECT OF CHOICE SET COMPOSITION ON DECISION DEFERRAL

Method

Procedure. Subjects were 190 students enrolled in a core marketing course at a West Coast university. The task involved making purchase decisions in several product categories. The cover story stated that the researcher was interested in understanding consumers' purchase decisions. Subjects were asked to imagine that they were thinking of making a purchase in the categories described.

The alternatives shown were described as being on a special sale. The task instructions emphasized that there were no right answers and that they should choose the option that best reflected their response to the situation described. Subjects were told that, as in real choice situations, they also had the option to not make a choice. Two no-choice options were represented by (1) the option to collect more information and (2) the option to look for new alternatives. Subjects were also told that in the event that they chose to look for other alternatives, the alternatives shown may or may not be available.

A between-subjects design was used, with the four conditions differing in terms of the composition of the choice set. The control set consisted of a single attractive alternative. In all other conditions, subjects saw a second alternative in addition to the one in the control set. In the second and third conditions, the new option was relatively equally attractive but differed on either two or four attributes from the first alternative (low and high choice heterogeneity, respectively). In the fourth condition, the new alternative was inferior to the first alternative. Between 45 and 50 subjects were randomly assigned to each of the treatment conditions.

Choice Sets. The effect of choice context on the decision to defer choice was tested using four different choice problems. Various domains that involve relatively costly decisions were pretested to determine their general attractiveness. The product categories used to test the hypotheses were similar to previous context effects studies, with the only criterion being reasonable familiarity with the product class on the part of the student subjects.

Four different product categories were used: bookshelf speakers, answering machine, laptop computer, and electric shaver. A concern that arises, particularly for studying no-choice decisions, is the subjects' ability to meaningfully evaluate alternatives. Thus, the alternatives were taken from *Consumer Reports* and mail-order catalogs and were described by a list of their characteristic features and brand names. Figure 1 presents sample stimuli for the answering machine alternatives for the conditions that involved trade-offs among two and four features. The bookshelf speakers were described on features such as power, bass rating, treble rating, price, and gross weight. The laptop computers were described on features such as hard-disk capacity, memory, speed, price, and gross weight. Finally, the brands in the electric shaver category were described on cutting foils, comfort settings, charge time, trimmer, and the number of voltage settings.

Results

Pretest. In order to validate the attractiveness manipulation, a separate group of 50 subjects rated the alternatives in terms of their attractiveness on a nine-point scale. As expected, the inferior alternative was seen as significantly less attractive ($F(1, 49) = 16.4$, $p < .001$). In the choice sets with two attractive alternatives, there were no

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[4] In practice, support for the effect of attribute dispersion on search in experimental studies is mixed. According to Urbany (1986), studies that find evidence for the variability-search relationship include Claxton, Fry, and Portis (1974), whereas Dickson (1981) and Goldman and Johansson (1978) do not observe this relationship.

FIGURE 1

EXAMPLES OF TESTS OF ADDING AN EQUALLY ATTRACTIVE ALTERNATIVE

Answering Machine

Panasonic   **AT & T**

Picture Here

30 Min. Incoming Messages   15 Min. Incoming Messages
1 Outgoing Message   2 Out going Messages
Voice Time / Day Stamp   Voice Time / Day Stamp
Digital Messaging System   Digital Messaging System
Remote Access   Remote Access

Special Price: $39.95   Special Price: $39.95
Last Day   Last Day

Answering Machine

Panasonic   **AT & T**

Picture Here

30 Min. Incoming Messages   15 Min. Incoming Messages
1 Outgoing Message   2 Out going Messages
Voice Time / Day Stamp   Electronic Volume Control
Digital Messaging System   Message Transfer System
Remote Access   Remote Access

Special Price: $39.95   Special Price: $39.95
Last Day   Last Day

NOTE.—Top, The alternative differs on two features. Bottom, The alternative differs on four features.

significant differences between the mean attractiveness ratings of the two options for the choice problems tested ($F(1, 49) = 1.4$, not significant [NS]). Finally, the attractiveness ratings did not vary with the heterogeneity of the choice set (the detailed ratings for the pretest are not presented because they are not discussed further). Thus, the construction of attractiveness difference manipulation for the alternatives in the choice set was successful.

Hypothesis 1 predicted that the attractiveness difference between the alternatives in the choice set would influence the preference for a no-choice option. The results are presented in Table 1 and are illustrated in the text for the bookshelf speakers problem. Consistent with

the hypothesis, the percentage of subjects who deferred choice increased by 12 percent when a second attractive brand was added to the choice set. Also as predicted, the numbers in columns 2 and 3 of Table 1 indicate that an increase in the number of attribute trade-offs did not significantly increase choice deferral; the difference in purchase incidence between the two conditions was only 2 percent. As seen in Table 1, similar results were obtained for the other three categories. Across the four problems, the mean share of the two no-choice options increased by 11 percent ($\chi^2(1) = 6.7$, $p < .01$) when a relatively equally attractive alternative was added.

Study 1 also examined the preference for a no-choice

TABLE 1

STUDY 1: THE DISTRIBUTION OF PURCHASE AND NO-CHOICE
RESPONSE IN DIFFERENT CHOICE SETS

| | | Adding a second alternative | | |
| | | Number of trade-offs | | |
Product category	Single alternative ($n = 45$)	High ($n = 58$)	Low ($n = 48$)	Inferior ($n = 48$)
Bookshelf speakers:				
Purchase (%)	62	50*	52*	69
Need for more information (%)	25	8	12	17
Search for other brands (%)	13	42	36	12
Answering machine:				
Purchase (%)	58	45+	42+	77*
Need for more information (%)	7	5	7	2
Search for other brands (%)	35	49	51	19
Laptop computer:				
Purchase (%)	58	52	50	70+
Need for more information (%)	9	11	8	9
Search for other brands (%)	32	37	42	21
Electric shaver:				
Purchase (%)	58	48	44	74+
Need for more information (%)	9	7	12	4
Search for other brands (%)	33	45	44	21

NOTE.—The chi-square value is for the comparison of purchase response between the single alternative case with the modified choice context.
+ The chi-square is significant at the .10 level.
* The chi-square is significant at the .05 level.

option when the attractiveness difference between alternatives in the choice set was large. The results are reported in Table 1. As predicted, purchase incidence increased by 14 percent ($\chi^2(1) = 8.7$, $p < .01$) when an inferior alternative was added to the core set. An overall test of the attractiveness difference hypothesis was conducted using a binary logit regression. The dependent variable was 0–1 dummy variable, where 1 denotes choice incidence. The independent variables were as follows: (1) a dummy variable ALT, which had a value of 1 if the choice set had two attractive alternatives, (2) a dummy variable TRADE, which had a value of 1 if the two alternatives differed on four features, and (3) two-way interactions between the context manipulation and the four product categories. Consistent with the hypothesis, the coefficient for ALT was highly statistically significant ($\chi^2(1) = 6.7$, $p < .01$), but the coefficient for TRADE was not ($\chi^2(1) = 0.7$, NS). Finally, the coefficients for the interaction between choice context and product-category-specific dummies were nonsignificant ($\chi^2(3) = 1.1$, NS), indicating that the effect was similar across the four product categories.

A second set of four choice problems were used to test for the effect of choice set heterogeneity by manipulating the size of the attribute difference and are described briefly. The different alternatives were constructed such that the difference in attribute values among the alternatives provided were relatively minor. For example, in a choice involving auto-focus cameras, the different cameras that were described had small differences in their shutter speed, focal lengths, and weight. As in the previous study, subjects saw either a single alternative only or in conjunction with a second alternative that differed from it only in minor ways.

The effect of enlarging the choice set by introducing a second alternative replicated the results of the first study. Specifically, the percentage of subjects that preferred the no-choice option increased significantly when a comparable alternative with minor attribute differences was added to the core set. Across the four problems, the preference for a no-choice option increased by 11 percent ($\chi^2(1) = 7.7$, $p < .01$) when the two alternatives with minor attribute differences were presented together compared to when they were presented individually.

In summary, the results support the notion that subjects compare the alternatives in the choice set and that the attractiveness difference between them influences choice incidence. The effect of choice set heterogeneity was not consistent with the predictions based on conflict theory, or theory of search with a known distribution of the population of alternatives. Although an increase in the number of attribute trade-offs and size of the attribute differences among the alternatives should increase conflict as well as search due to increased attribute dispersion, subjects' no-choice response did not differ across these choice sets. Conversely, the addition of an inferior alternative that does not decrease the degree of conflict did result in an increase in purchase incidence.

An alternative explanation for the results arises when subjects' priors about the set of alternatives are somewhat weak relative to the contextual information (Karni and Schwarz 1977). In such cases, subjects who saw two attractive alternatives may have formed different expectations of the potential alternatives in relation to subjects who saw a choice set containing a dominated alternative. In a similar vein, subjects who saw two alternatives on sale may have inferred a higher frequency of sale events than those who saw only a single alternative on sale. Thus, if prior beliefs about the alternatives available are weak, search theory that allows for updating of expectations about the potential alternatives in response to the choice context can also make similar predictions about the effect of context on choice deferral.

The next study used a slightly modified procedure to rule out potential differences in learning from the choice set as an explanation for the no-choice results of the first study. First, subjects in the different conditions were shown the same master list of alternatives from which the subsequent choice set was created. Thus, the priors should be similar for all subjects and no new learning should occur from the local choice set. Second, since the optimal search response depends on the continued availability of the alternatives that were observed, subjects in the first study may have been more likely to search as they had been told that the previously seen alternatives may be available. The uncertainty of recall is normatively irrelevant when situations do not involve learning (Karni and Schwarz 1977). Since all the subjects were aware of the set of alternatives that were on sale, the optimal search strategy does not depend on the notion that subjects in different treatment conditions may have associated a different degree of uncertainty with the availability of previously viewed alternatives.

STUDY 2: REPLICATION OF CHOICE SET COMPOSITION EFFECT AFTER VIEWING THE SAME SET OF POTENTIAL OPTIONS

Method

Procedure. The subjects were 300 students at a northeastern university, and they were paid $2.00 for their participation. The task and instructions were the same as in study 1. In order to control for learning effects, subjects in all conditions first reviewed the same set of five alternatives before the decision task. They were told to carefully examine these alternatives that were on a special sale at one or more outlets of a local chain store that they would be visiting. On the next page, a choice set with one or two alternatives was presented, with the instruction that the first outlet that they visit has only the following sale alternative(s). Subjects had to choose one of the alternative(s) or go to a different store and look for other alternatives, including the alternatives reviewed previously. In

order to check whether the expectation of finding additional alternatives on sale varied with the choice set, subjects also indicated the likelihood of finding a sale on their other trips on a nine-point scale.

A between-subjects design was used, with the four treatment conditions differing in terms of the choice set that was provided. In each condition, subjects saw alternatives that were chosen from the set of five alternatives shown previously. In the first condition, subjects saw one of three attractive alternatives, by itself, that were used to construct the choice sets with equally attractive alternatives (i.e., {A}, {B}, or {C}). In two other conditions, subjects saw a choice set with two alternatives that were relatively equally attractive but differed on the size of attribute differences replicating low versus high choice set heterogeneity (i.e., {A, B} or {A, C}). In the fourth condition, each of the single alternatives in the first condition was paired with a relatively inferior alternative (i.e., {A, D}, {B, D}, {C, D}). Between 74 and 76 subjects were randomly assigned to each of the four conditions.

Results

The main purpose of this study was to replicate the findings of study 1 when all subjects reviewed the same alternatives before making a choice. The hypotheses were tested using four choice problems: cordless phone, headphones for portable radio/cassette player, laptop computer, and auto-focus camera. The results for the individual problems, averaged across the different choice sets in each condition, are reported in Table 2.

Consistent with the hypotheses, there was an overall increase in the decision to defer choice when the choice set contained two attractive alternatives. The mean increase in the no-choice option for the four problems was 12 percent ($\chi^2(1) = 6.6$, $p < .01$) when a relatively equally attractive alternative was added, and the increase was significant for three of the four choice problems. As in the previous study, the difference in choice incidence between the high and low trade-off conditions was nonsignificant. Also as predicted, the addition of an inferior alternative increased choice incidence by 19 percent ($\chi^2(1) = 26.2$, $p < .01$) in relation to the case where subjects saw a single alternative. The rating on expectation of a sale did not vary across the different choice sets ($F(3, 298) = 1.3$, NS), thus not supporting an explanation based on the differential likelihood of finding a better sale in the different choice sets. In sum, although the problems and subjects were different, the effect of choice context on choice deferral persisted even when the subjects had previously seen the same set of alternatives.

Studies 1 and 2 show that the decision to defer choice is potentially influenced by the difference in attractiveness between the available alternatives. Further, the preference for a no-choice option was not influenced by heterogeneity of the choice set, an accepted manipulation of decision conflict. These studies, however, did not allow for direct observation of the decision processes that led to the pre-

TABLE 2

STUDY 2: THE EFFECT OF THE LOCAL CHOICE CONTEXT ON NO-CHOICE
RESPONSE AFTER VIEWING THE SAME GLOBAL SET (N = 300)

Product category	Single alternative[a] (n = 76)	Adding a second alternative		Inferior[a] (n = 75)
		Equally attractive		
		High (n = 74)	Low (n = 75)	
Cordless phone:				
A (%)	64	36	18	77
B (%)		16	30	2
No choice (%)	36	48[+]	48[+]	21[+]
Headphones for portable radio/cassette player:				
A (%)	60	36	28	70
B (%)		16	22	12
No choice (%)	40	48[+]	50[+]	18*
Laptop computer:				
A (%)	68	24	27	82
B (%)		28	27	6
No choice (%)	32	48*	46	12*
Auto-focus camera:				
A (%)	66	29	28	68
B (%)		27	27	10
No choice (%)	34	46[+]	45[+]	22

[a]The columns represent the mean share for the three single alternative conditions and the three dominated choice set conditions, respectively.
[+]The difference in the mean number of subjects selecting the no-choice option in relation to the first choice set is statistically significant at the .10 level.
*The difference in the mean number of subjects selecting the no-choice option in relation to the first choice set is statistically significant at the .05 level.

dicted behavior. Verbal protocols have been used in a variety of ways in decision research (Ericsson and Simon 1980) and appear particularly suitable to support and extend the interpretation of the choice data. Study 3 uses think-aloud protocols to test the premise that the decision to defer choice is mediated by the absolute difference in favorable evaluations toward each alternative that is provided.

STUDY 3: THE MEDIATING EFFECT OF PREFERENCE UNCERTAINTY ON DECISION DEFERRAL

Method

Procedure. Subjects were 30 undergraduate students enrolled in an introductory marketing course. I conducted the study personally; participation was part of a course requirement. The task structure was generally similar to that of the previous studies, the only difference being that subjects were asked to think out loud as they made their decisions. Each subject received detailed instructions about the task and the importance of thinking aloud (Russo, Johnson, and Stephens 1989). Before starting the actual task, subjects were given one problem on which to practice thinking aloud while being recorded.

Subjects saw six choice problems in one of two choice sets—they saw either a choice set {A, B} in which A and B were equal in attractiveness or a set {A, C} in which A was clearly superior to C. The protocols were analyzed by two independent judges, who counted the number of favorable thoughts that were expressed toward each alternative in each choice set. Choice uncertainty was measured by computing the absolute difference in the number of favorable thoughts expressed toward each alternative. The interjudge reliability was 86 percent across all items, and disagreements were resolved by discussion.

Results

The effect of the choice set composition on decision deferral replicated the results of the previous studies. The mean difference in the proportion of subjects who selected the no-choice option between the two choice sets was 22 percent ($\chi^2(1) = 9.7$, $p < .01$). The verbal protocols also supported the hypothesis that the number of thoughts will be greater when the choice set has equally attractive alternatives. The protocols indicate that the average number of thoughts was significantly higher for the {A, B} choice set ($\bar{X} = 4.6$) compared to the {A, C} choice set ($\bar{X} = 2.8$, $t = 2.9$, $p < .01$). Since the difference in the number of

TABLE 3

STUDY 3: THE MEAN NUMBER OF THOUGHTS DERIVED
FROM THOUGHT PROTOCOL ANALYSIS (N = 30)

	Choice context			
	Choice set {A, B}		Choice set {A, C}	
Thought protocols	Choice	Defer choice	Choice	Defer choice
Chosen alternative	2.6[a]	2.6[b]	2.5	1.3
Nonchosen alternative	1.4	2.4	.5	.4
Other thoughts	.2	.2	.2	.5
Total number of thoughts	4.2	5.2	3.2	2.2
Pro Chosen/Nonchosen	1.8	1.1	5.0	3.2
Percent in each condition	56	44	78	22

[a]The mean number of thoughts that were coded as being favorable toward the chosen alternative or unfavorable toward the nonchosen alternative.
[b]Since neither alternative was chosen, the numbers denote the mean number of thoughts toward the first and second alternative, respectively.

thoughts can be attributed to the fact that information was more valuable when the choice set had two attractive alternatives, of particular interest is the interaction between protocol length for the choosers and nonchoosers for each choice set composition (Table 3). The results from the analysis confirmed the prediction of a significant interaction between the no-choice option and choice context ($F(1, 58) = 290.2$, $p < .001$). Thus, subjects who deferred choice had significantly longer protocols in relation to those who made a choice only when the alternatives in the choice set provided were close in attractiveness.

A second measure of decision uncertainty used was the absolute difference between the number of thoughts coded as favorable versus the number of thoughts coded as unfavorable for each alternative. If the difficulty of choosing a single alternative increases deferral, I expect subjects who are undecided to be more balanced in their evaluations. When faced with the choice set {A, B} subjects selecting the defer choice option stated similar numbers of favorable thoughts toward each alternative ($\bar{X}_A = 2.6$ vs. $\bar{X}_B = 2.4$) compared to subjects who chose one of the alternatives ($\bar{X} = 2.6$ for the chosen alternative, $\bar{X} = 1.4$ for the nonchosen alternative, $t = 2.6$, $p < .05$).

Mediational tests for the effect of attractiveness difference were conducted according to Baron and Kenny's (1986) method. They state that three regression equations must be estimated to establish a mediational model, and the following effects must hold: (1) there must be a significant effect of regressing the mediator on the independent variable, (2) there must be a significant effect of regressing the dependent variable on the independent variable, and (3) when the dependent variable is regressed on both the mediator and the independent variable, the effect of the independent variable must be weaker than that in the second regression equation (i.e., when the independent variable is by itself). If all three of these condi-

tions hold, the mediational hypothesis is supported. The choice context had a significant effect on the choice uncertainty construct ($t = 2.8$, $p < .05$). The choice context also had a significant effect on choice incidence ($\chi^2(1) = 9.7$, $p < .01$). Finally, regressing choice incidence on context and uncertainty (i.e., the mediator variable) resulted in a significant effect for uncertainty ($\chi^2(1) = 22.7$, $p < .01$) and only marginally significant effect for the context ($\chi^2(1) = 2.6$, $p < .10$). Overall, the results of the mediation analysis are consistent with the notion that the no-choice response differed on the basis of the underlying differences in the ability to arrive at a clear preference between the alternatives in the choice set provided.

Studies 1, 2, and 3 support the hypotheses that the attractiveness difference between the alternatives provided can influence the decision to defer choice. This suggests that a manipulation that enhances the similarity in attractiveness of the alternatives should increase the observed effect. Further, if the difference in attractiveness between the same two alternatives can be decreased, it rules out an alternative explanation based on the argument that the first alternative appeared more attractive when it was paired with an inferior one than when it was paired with an alternative that was equally attractive. Thus, modifying the task in order to make the same two alternatives appear similar in attractiveness provides stronger support for the attractiveness-difference hypothesis.

The task manipulation used here was first reported by Wilson and Schooler (1991), who, in a study on preference for college courses, showed that the mean attractiveness ratings for the alternatives were more similar to each other when subjects were asked to evaluate each attribute of every course. The task of rating how each attribute influences their preference for an alternative should decrease the difference in attractiveness between the two alternatives and increase the preference for a no-choice option. In a similar vein, Dhar (1996) reported

that forcing subjects to use decision rules that focus on the competing benefits of each alternative increased the choice deferral by making both alternatives look more similar in attractiveness. On the basis of this discussion, I arrive at the following hypothesis.

H4: Subjects are more likely to defer choice if they are first asked to make an evaluation of the competing features of the two attractive alternatives.

STUDY 4: THE EFFECT OF A TASK MANIPULATION TO DECREASE THE ATTRACTIVENESS DIFFERENCE ON CHOICE DEFERRAL

Method

Procedure. Subjects were 190 undergraduate students at a northeastern university, and they were paid $2.00 for their participation. The task and instructions were similar to those in the previous studies. In the ''rate all'' information condition, subjects were asked to think about each feature for the two alternatives and then to rate the extent to which it made them more or less likely to choose that alternative. Following Wilson and Schooler (1991), subjects rated each piece of information on a nine-point scale ranging from ''makes me much less likely to choose it'' (1) to ''makes me much more likely to choose it'' (9). Subjects in the control condition were only instructed to read the information about the alternatives carefully before making their decisions. Subjects were randomly assigned to one of two experimental conditions within each session. In addition to entering their choice, subjects used a nine-point scale to rate the attractiveness of each alternative (1 = not at all attractive to 9 = very attractive) and the similarity between the two alternatives (1 = not at all similar to 9 = very similar).

Choice Sets. Subjects saw a choice set with two nondominated alternatives for four different choice problems. The alternatives, presented side by side on the same page, were described on five features, three good and two bad. Descriptive feature lists for all four problems (vacation spot, blind date, apartments, and a college course) were taken from a study conducted by the author for an unrelated research project. An example of the stimulus material provided in the rate-all condition is shown in Figure 2.

Results

I predicted that asking the subjects to evaluate each feature would make the two alternatives appear more similar in attractiveness and increase the decision to defer choice in relation to the control condition. The data support this premise. The results are reported in Table 4 and are described in the text for the vacation problem. For this problem, 40 percent of the subjects decided to look for other alternatives in the control condition; this number increased to 54 percent when subjects were first asked to rate the importance of each feature on their choice. The mean increase in the no-choice option in the rate-all condition across the four choice problems was 17 percent ($\chi^2(1) = 20.6, p < .01$). Thus, study 4 demonstrates that choice incidence can also be reduced for the same two alternatives by using a manipulation that increases the similarity in attractiveness of the two alternatives.

The effect of the task manipulation used suggests an alternative explanation for the results based on trade-off difficulty. To the extent that the task manipulation increased the focus on perceptual differences between the two alternatives by forcing subjects to consider each feature, it may have led to increased choice deferral in order to avoid making multiple trade-offs. Tests were run comparing the size of the absolute attractive difference and pairwise similarity as rival mediators. I used a 2 (nature of task: with or without the rate-all manipulation) × 4 (four product categories) design where the task was manipulated between subjects and the different alternatives were a within-subjects factor. As predicted, the main effect of task variable was significant on the attractiveness difference rating ($F(1, 188) = 223.7, p < .01$) but not on the similarity rating. The main and interaction effects for product categories were not significant ($F(3, 564) = 1.07, F(3, 564) = 1.22$, NS). The task condition also had a significant effect on the choice incidence ($\chi^2(1) = 20.6, p < .01$). Finally, regressing choice incidence on task conditions and both rival mediators revealed only a significant effect for the attractiveness difference variable ($\chi^2(1) = 22.3, p < .01$). Further, the task variable was reduced to non-significance ($\chi^2(1) = 1.96, p = .16$), and the similarity construct failed to enter the model.

The results provide additional evidence supporting the notion that the inability to clearly identify the best choice among the alternatives resulted in increases in the decision to defer choice. Implicit in the argument that choice requires the ability to differentiate among alternatives under consideration is the notion that the task entails selecting a single best alternative. In a number of decision situations, consumers have the option of choosing more than one alternative. For instance, imagine a consumer at a department store who decides to purchase two dresses that are on sale and look equally appealing. Just as the timing for a lot of purchase decisions is not fixed, there is also flexibility in the quantity that can be purchased. In the absence of obvious reasons for preferring one alternative over the other, consumers may resolve the uncertainty by choosing more than one acceptable alternative.

The next study modifies the decision task to allow the option of choosing more than one alternative from the choice set provided. When subjects are uncertain of the most preferred alternative, the option to choose both alternatives presents an alternative solution since selecting both items should be easier than selecting a single item

FIGURE 2

AN EXAMPLE OF A TEST OF RATE-ALL MANIPULATION ON THE DECISION
TO DEFER CHOICE FOR THE SAME TWO ALTERNATIVES

<u>**Vacation Spots**</u>

Imagine that you are making plans for a vacation. You have obtained information on two vacation spots with the following attributes. **Please consider all the information** about each vacation spot and **rate the extent to which it makes you more or less** likely to choose that vacation spot. You also have the option of looking for other vacation spots.

<u>Spot A</u>	*Much*	*Less*					*Much*	*More*	
	Likely	*To*	*Go*				*Likely*	*To*	*Go*
Good theaters and clubs	1	2	3	4	5	6	7	8	9
Good restaurants	1	2	3	4	5	6	7	8	9
Attractive beach	1	2	3	4	5	6	7	8	9
Bad weather possible	1	2	3	4	5	6	7	8	9
Frequent traffic jams	1	2	3	4	5	6	7	8	9
<u>Spot B</u>									
Beautiful scenery	1	2	3	4	5	6	7	8	9
Good museums	1	2	3	4	5	6	7	8	9
Plenty of good party spots	1	2	3	4	5	6	7	8	9
Has a pollution problem	1	2	3	4	5	6	7	8	9
Unfriendly to tourists	1	2	3	4	5	6	7	8	9

In the situation described above, I would: (circle one)

A. Look for other vacation spots

B. Choose spot A

C. Choose spot B

from the same choice set. Further, if the alternatives are attractive, choosing both may be an easier decision than rejecting both in order to look for new alternatives. Note that if the no-choice decision was based on the rejection of the alternatives or an inference of finding better alternatives, the task modification should not decrease choice deferral in the condition that allows the option of choosing both alternatives. On the basis of this discussion, I arrive at the following hypothesis.

H5: The preference for a no-choice option will decrease when the task allows the choice of more than one alternative from a choice set with two attractive alternatives.

STUDY 5: THE EFFECT ON DECISION DEFERRAL OF ALLOWING THE CHOICE OF MULTIPLE OPTIONS

Method

Procedure. The subjects were 280 students at a northeastern university, and they were paid $2.00 for their participation. The task and instructions were similar to those in the previous studies. Subjects saw a choice set with a single alternative or one with two relatively equally attractive alternatives. For the subjects who saw the choice set with two alternatives, the basic manipulation was whether subjects were assigned to the condition where they could choose one (choose-1) or both alternatives (choose-2). Between 92 and 95 subjects were randomly assigned to each of the three task conditions.

Choice Set. In order to make the choice of more than one alternative plausible, the stimuli used were different from those in the previous studies. The following four choice problems were used: cassette tapes, elective courses, applicants for admission to college, and Friday night activities. Each represents a situation where decisions often allow for choosing more than one option. Figure 3 presents the scenario used in the cassette tapes problem; the other three are described briefly. The elective courses were described in terms of reading assignment, grading, faculty expertise, and course structure. In the problem on college applicants, the students were described on Scholastic Aptitude Test scores, grade point

TABLE 4

STUDY 4: THE EFFECT OF RATE ALL MANIPULATION ON THE PREFERENCE FOR A NO-CHOICE OPTION (N = 190)

Product category	Control (n = 95)	Rate all (n = 95)
Vacation spot:		
A (%)	30	24
B (%)	30	22
No choice (%)	40	54[+]
Blind date:		
A (%)	32	20
B (%)	30	20
No choice (%)	38	60*
Course elective:		
A (%)	24	12
B (%)	62	52
No choice (%)	14	36*
Apartment:		
A (%)	18	12
B (%)	22	18
No choice (%)	60	70

[+] The difference in the proportion of subjects selecting the no-choice option is statistically significant at the .10 level.

*The difference in the proportion of subjects selecting the no-choice option is statistically significant at the .05 level.

average, and extracurricular activities. Finally, the Friday night activities problem provided subjects with the option of seeing a movie and going out for dinner; the no-choice option was phrased as staying at home in order to work on a term paper that was due in several weeks.

Results

I predicted that subjects in the choose-1 condition will be more likely to defer choice than subjects in the choose-2 condition. The results are reported in Table 5 and are described in the aggregate in the text. Consistent with studies 1 and 2, the preference for a no-choice option increased by 18 percent ($\chi^2(1) = 24.5$, $p < .01$) when a second alternative was provided for the subjects in the choose-1 condition but not for the choose-2 condition. Consistent with Hypothesis 5, the percentage of subjects who deferred choice decreased by 21 percent ($\chi^2(1) = 34.5$, $p < .01$) for subjects in the choose-2 condition in relation to subjects in the choose-1 condition. Overall, these results show that difference in preference among the alternatives influenced choice deferral only when subjects had to make a single best choice.

The results for the effect of task manipulation on the difference in no-choice response suggest an alternative explanation based on regularity. According to this principle, the lower preference for the no-choice option in the choose-2 condition could be due to the fact that this condition provided a new option, the choice of both A and B. However, the choice of both alternatives is not really a new alternative unless the joint consumption of the two options has incremental utility. In other words, according

to this explanation, the only reason why the no-choice option may be less preferred in the choose-2 condition in relation to the choose-1 condition is when the two alternatives provided were complements. The choice problems were constructed to avoid cases that could be construed in this manner. Finally, subjects in the choose-2 condition did not always reject the no-purchase option or choose both alternatives, which indicates that subjects did pay attention to the cost aspects in making their choices.

The results so far confirm the premise that small differences in attractiveness among the alternatives provided enhances the no-choice option. One reason why small differences in attractiveness favor deferral could be that subjects avoid evaluating the alternatives in the same depth, in order to decide, when the choice is difficult. This view was not supported by the protocol analysis, which found that protocols were longer for subjects who deferred choice. I posited that the results arise because of a hesitation of committing to any single action since preference uncertainty makes small differences in attractiveness among alternatives potentially reversible. Note that if preferences are well ordered, say as in a choice between Paris and Paris-plus-dollar, the small difference is not likely to create indecision. Thus, it is possible that asking subjects to consider the value of each feature may clarify the best action and reduce the effect of the size of the attractive difference on choice deferral. To the extent that practicing trade-offs reduces the dispersion in perceived difference in attractiveness of the two alternatives, subjects should find it easier to choose. The next study was conducted to determine whether the effect of choice context on decision deferral is attenuated when subjects first learn to value attributes by practicing trade-offs in monetary terms.

STUDY 6: THE EFFECT OF PRACTICING TRADE-OFFS ON DECISION DEFERRAL

Method

Procedure. Subjects were 190 undergraduate students at a northeastern university, and they were paid $2.00 for their participation. The task and instructions were similar to those in study 2, in which subjects were initially shown a set of five alternatives. In the ''trade-off practice'' condition, subjects used a measure developed by Simonson and Tversky (1996) to specify a dollar amount that they would be willing to pay for the higher level of a feature. For instance, in the answering machine problem, subjects were asked, ''Based on your preferences, how many extra dollars are you willing to pay for one extra outgoing message?'' Subjects in the control condition were only instructed to read the information about the alternatives carefully before making their decisions. Subjects were randomly assigned to one of two conditions within each session.

<u>**Cassette Tape**</u>

Imagine that you are planning on buying cassettes by some groups to whom you were recently introduced. The local record store has the following offerings by the two groups. They are as described below: [**You also have the option of looking for other cassettes before deciding but may miss the sale.**]

<u>**Cassette by Group A**</u>	<u>**Cassette by Group B**</u>
Live Performance in NYC	Live Performance in LA
10 songs with 3 in the Top 10	8 songs with 4 in the top 10
Sale price $5.99	Sale price $5.99

In the situation described above, I would: (circle one)

A. Buy both Cassettes

B. Buy the Cassette by Group A

C. Buy the Cassette by Group B

D. Wait till I find out more about other cassettes at the store

Choice Sets. Four different types of products were used: answering machine, cordless phone, binoculars, and personal computer. For each of these product categories, subjects saw a choice set with two relatively equally attractive alternatives. The alternatives, presented side by side on the same page, were described on four features and were similar to the ones used in previous studies. In order to keep the task manipulation simple, the alternatives provided differed on only two attributes.

Results

I predicted that allowing the subjects to first practice trade-offs by evaluating each feature in dollar terms would decrease the effect of context on the preference for the no-choice option. The data support this premise. The results are reported in Table 6 and are described for the answering machine problem. For example, 32 percent of the subjects decided to look for other alternatives in the control condition; this number decreased to 16 percent when subjects were first asked to state the value that they attached to the feature in dollar terms. As seen in Table 6, similar results were obtained for the other three categories. The mean share of the no-choice option decreased by 15 percent ($\chi^2(1) = 18.7$, $p < .01$) when the subjects initially evaluated trade-offs among the attributes.

Study 6 demonstrates that choice deferral can be reduced by using a task manipulation that allows subjects to first assign a monetary value to their preference for the different features. As subjects learn to express their preference in terms of a unidimensional measure (e.g., amount of dollars), it makes it easier to choose even when there are small overall differences between the alternatives. An alternative account could be that practicing making monetary trade-offs makes it easier to judge the degree to which each alternative, by itself, exceeds or falls below some reservation utility. If the decrease in decision deferral was caused by reduction in the dispersion of the perceived difference in attractiveness between the two alternatives, then practicing trade-offs should not result in any difference in choice incidence if one of the alternatives was clearly superior. This was directly tested in the next study by providing a choice set where one alternative dominated the other.

STUDY 7: THE EFFECT OF TRADE-OFF PRACTICE WHEN THE CHOICE SET CONTAINS A DOMINATED ALTERNATIVE

Method

Procedure. Subjects were 160 undergraduate students at a midwestern university, and they were paid $2.00 for their participation. The task and instructions were the same as in study 6. The same between-subjects design was used, with the two conditions differing on the opportunity to make monetary trade-offs before making decisions among specific choice sets. Subjects were randomly assigned to one of two conditions within each session, and the order in which the different product categories were viewed was also randomly determined.

Choice Sets. The four product categories from the

TABLE 5

STUDY 5: THE EFFECT OF THE TASK CONDITION ON THE PREFERENCE FOR A NO-CHOICE OPTION ($N = 280$)

Product category	One alternative[a] ($n = 92$)	Two alternatives shown	
		Task condition	
		Choose-1 ($n = 93$)	Choose-2 ($n = 95$)
Cassette tape:			
A (%)	82	42	24
B (%)		22	16
No choice (%)	18	36	26
Both A and B (%)			34
Elective course:			
A (%)	70	25	28
B (%)		15	22
No choice (%)	30	60	25
Both A and B (%)			25
Candidates:			
A (%)	50	18	15
B (%)		16	5
No choice (%)	50	66	38
Both A and B (%)			42
Friday night activity:			
A (%)	92	48	18
B (%)		36	14
No choice (%)	8	16	2
Both A and B (%)			66

[a]The number denotes mean percentage for alternatives A and B when shown individually.

previous study were used to create the choice sets. Subjects were shown two alternatives, one of which was clearly superior, in each product category. As in study 6, the two alternatives differed only on two of the four attributes.

Results

I predicted that allowing the subjects to practice trade-offs by evaluating each feature in dollar terms would not decrease choice deferral when one of the alternatives was clearly superior. The data support this premise. The results are reported in Table 7 and are described for the answering machine problem. For example, 16 percent of the subjects decided to look for other alternatives in the control condition; this number was 12 percent when subjects were first asked to state the value that they attached to the feature in dollar terms. As seen in Table 7, similar results were obtained for the other three product categories. The mean share of the no-choice option differed by 3 percent ($\chi^2(1) = 0.9$, $p = .34$) between the two task conditions. In conjunction with the results of the previous study, the results suggest that practicing trade-offs has a greater effect on reducing choice deferral when there is uncertainty about the best choice among the alternatives provided.

TABLE 6

STUDY 6: THE EFFECT OF PRACTICING TRADE-OFFS ON PREFERENCE FOR A NO-CHOICE OPTION AMONG EQUALLY ATTRACTIVE ALTERNATIVES ($N = 190$)

Product category	Control ($n = 95$)	Practice ($n = 95$)
Answering machine:		
A (%)	24	32
B (%)	44	52
No choice (%)	32	16*
Cordless phone:		
A (%)	42	46
B (%)	26	32
No choice (%)	32	22
Binoculars:		
A (%)	22	30
B (%)	18	26
No choice (%)	58	42*
Personal computer:		
A (%)	24	32
B (%)	20	30
No choice (%)	56	38*

*The difference in the proportion of subjects selecting the no-choice option is statistically significant at the .05 level.

DISCUSSION

Consumers often arrive at a choice situation without being certain whether or not to purchase. By focusing on decision uncertainty and uncertain preferences, this research provides a broader framework that captures the rich content of predecisional states that are usually ignored in the study of consumer choice. In particular, the provision and analysis of a no-choice option allows one to examine the antecedents of preference uncertainty in the decision to defer choice. Building on recent research on this topic by Tversky and Shafir (1992), the studies reported here support the hypotheses that the preference construction process that results in small differences in attractiveness among the alternatives provided increases the preference for a no-choice option.

This research focused on two factors affecting choice deferral: expanding the choice set by adding a new alternative and by changing the nature of the decision task for the same alternatives. The studies examined the role of preference uncertainty in accounting for the effects on the no-choice option by (1) testing predictions regarding purchase incidence for different composition of the choice sets, (2) using verbal protocols to gain insights into decision processes for the effects, and (3) changing the effect size by manipulating the decision task. The seven studies are summarized in the next section.

Choice Set Effect. Studies 1 and 2 demonstrated that expanding the choice set by adding an attractive alternative increased the preference for the no-choice option. The effect on purchase likelihood did not vary with the heterogeneity of the choice set as characterized by the

TABLE 7

STUDY 7: THE EFFECT OF PRACTICING TRADE-OFFS ON PREFERENCE FOR A NO-CHOICE OPTION AMONG CHOICE SETS CONTAINING A DOMINATED ALTERNATIVE ($N = 160$)

Product category	Control ($n = 80$)	Practice ($n = 80$)
Answering machine:		
A (%)	72	76
B (%)	12	12
No choice (%)	16	12
Cordless phone:		
A (%)	82	82
B (%)	8	6
No choice (%)	10	12
Binoculars:		
A (%)	68	76
B (%)	8	4
No choice (%)	24	20
Personal computer:		
A (%)	68	72
B (%)	8	10
No choice (%)	24	18

number and size of the attribute trade-offs. These results suggest that the no-choice option has different implications from those implied by the normative guidelines for search as well as accepted definitions of conflict. Although normative theory as well as trade-off conflict predict search under greater dispersion in the attribute values of the alternatives provided, choice deferral persisted even when the two alternatives were relatively very similar and when no learning from the choice set occurred.

Also as predicted, studies 1 and 2 supported the hypothesis that the preference for a no-choice option can be decreased by adding an inferior alternative to the choice set. Based on trade-off difficulty, adding an inferior alternative should have no systematic effect on choice incidence. However, if the decision is constructed from the choice set under consideration, the presence of a dominating alternative facilitates commitment by making it easier to arrive at a clear choice. The protocols provide additional support for the notion that the decision to purchase is influenced by the need to differentiate decisively among the available alternatives. The mediation analyses in study 3 supported the premise that the absolute difference in attractiveness between the alternatives mediated the preference for a no-choice option.

More generally, the studies suggest that subjects tend to focus more on the comparative characteristics among the alternatives provided than on their own utilities. The decision to look for other brands or to seek more information was generally made only if the available alternatives did not allow for a compelling basis for choice. For instance, when the choice set contained an inferior alternative, subjects tended to focus mainly on the dominating alternative and the inferior alternative was rejected almost immediately. This is consistent with findings elsewhere in the literature that subjects fail to be sufficiently imagi-

native about the possible alternatives (Hogarth 1982). While this may be partly because the alternatives were generally attractive with no obvious disadvantages, it also suggests that, even when a no-choice option is available, subjects do not tend to generate additional alternatives.

Changing the Task. The decision to defer choice was also examined by modifying the nature of the decision task. In a choice between two relatively attractive alternatives, study 4 showed that asking subjects to first rate the extent to which each feature of an alternative made them more likely to choose it increased the decision to defer choice. This manipulation did not change the perceptual similarity among the two alternatives but increased the similarity in overall attractiveness between the alternatives. On a conceptual level, this suggests that any manipulation that decreases the difference in attractiveness between the alternatives provided should increase the preference for a no-choice option. Further, the uncertainty of determining the most preferred alternative is relevant when one is required to make a unique choice. In this vein, study 5 showed that subjects were less likely to defer choice when both attractive items could be selected than when they could choose only a single alternative. This pattern of results is also inconsistent with the interpretation of no-choice as implying outright rejection or even deferral due to an expectation of superior alternatives. Rather, the flexibility of choosing more than one option provides a different strategy by which consumers resolve decision uncertainty.

Finally, studies 6 and 7 provide supporting evidence for the linkage between preference uncertainty and the reasons for choice deferral. If consumers are less likely to choose among alternatives that differ in minor ways because such preferences may be reversible, then a task that reduces the dispersion of perceived difference in attractiveness between them should increase the likelihood of making a choice. Study 6 finds that the percentage of subjects who defer choice among comparable alternatives decreases when the subjects first learn to make trade-offs among the different features. Study 7 extends these results by showing that the effect of practicing monetary trade-offs on the defer-choice option is nonsignificant when the choice between the two alternatives is easy. These results have broader implications for findings relating to context effects in forced choice if it can be shown that those effects also arise due to an inability to choose among alternatives that are relatively close in overall attractiveness.

Marketing Implications

Several general implications follow for retailers and other direct marketers who are mainly concerned with increasing the overall purchase probability. In particular, the choice context may be especially important for products for which decisions are made in the store. Providing an instant special discount on the merchandise may result

in an inferior comparative scenario that makes the purchase decision easier. Anyone who has purchased a house would agree that realtors often use this tactic. For instance, a realtor may show potential owners several houses, many of them unattractive, thereby considerably simplifying the process of making a choice. The results also have implications for executing communication strategies. It is generally believed that comparative advertising is not in the interest of the market leader or the dominant brand (Barry 1993). The results indicate that a dominant brand can increase its share further by comparing itself to a brand that is rated much lower in attractiveness.

However, the findings related to the effect of multiple attractive options are also relevant for retailers who offer wide assortments. Although a large variety enables retailers to satisfy the needs of diverse consumers, additional options may not always increase total purchase. On the contrary, it may turn buyers toward stores that offer fewer choices. In this vein, *Business Week* (September 9, 1996) reported that the confusion of choosing among an increasing variety of brands may provide an edge to manufacturers with narrow offerings. Similarly, Apple announced the reduction in the number of Macintosh personal computer subbrands, hoping to increase sales by decreasing buyer confusion (*Advertising Age* [October 18, 1993]). At the least, the effect of offering greater choice on store traffic needs to be balanced with its effect on potential deferral in sales due to increased customer confusion.

The findings also have implications for the growth rates for new products in emerging markets. One factor influencing penetration rates for new products has been attributed to product externalities in the diffusion literature (Katz and Shapiro 1992). This research suggests that even when these externalities are largely absent, the diffusion process may be slower if several competing technologies are offered. For example, Sony and Philips were reportedly concerned that the simultaneous launch of the Minidisk and Digital Compact Cassette technology would impede growth in the consumer electronics market owing to consumer delay in choosing (*Economist* 1992). Since the utility of the option depends on the survival of the product, waiting in such cases is not irrational if the probability of survival decreases with an increase in the number of different alternatives.

Future Research Directions

The present research utilizes specific means of manipulating the choice set and task characteristics. Clearly, additional research is needed to assess the advantages and limitations of focusing on decision uncertainty in predicting the preference for a no-choice option by using other tasks and contexts. The influence of individual specific factors on decision uncertainty as well as their interaction with the context was not examined and is an important area of future research. Finally, the manipulation of choice heterogeneity was limited to alternatives within a product category. Decision difficulty may also depend

on the noncomparability of alternatives—choice between two schools is not the same as a choice between a graduate school and a job. Future research could examine the effect of incommensurable trade-offs on choice response.

A second limitation of this research relates to the task and choice problems used. In the studies reported here, the choice sets were limited to either one or two alternatives. It is possible that increasing the complexity and realism of the choice task may also weaken the effect. The simplest extension involves looking at the case where the original choice set has two alternatives. As the number of alternatives in the core set increases, the effect of adding a new alternative on purchase incidence needs to be examined. Although an explanation based on conflict would suggest increased deferral, the focus on the size of the attractiveness difference would suggest little increase in the no-choice option for additional alternatives.

A third limitation of the approach here is that it does not specify how the aversive elements of decision making are offset by the positive elements of greater choice to account for the fact that decisions do get made. One possibility is that the heuristics used in order to simplify choices may also increase decision stability. For instance, as the number of options increases, consumers increasingly use noncompensatory choice processes that increase the ease of arriving at a clear choice (Dhar 1996). Choices are also more likely to be made if the cost of not making them by a specific time is high (Meyer 1997). Further, difficult but less important choices may be arbitrarily resolved by flipping a coin (Elster 1980). Clearly, the final word should be deferred until more research is conducted on the topic.

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