

Coping with Ambivalence: The Effect of Removing a Neutral Option on Consumer Attitude and Preference Judgments

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This article examines how the exclusion of a neutral or fence-sitting option changes an expressed attitude or preference judgment. Over a series of six studies, we find that the exclusion of a neutral response option (1) affects the judgment of extreme options (strong positive and negative features) more significantly than the judgment of options that are average on all features, (2) results in respondents favoring the option superior on the more important attribute, and (3) results in more risk aversion. We also provide evidence for the underlying process and show that our findings are moderated by individual differences on need for cognition and tolerance for ambiguity.

The concepts of attitude and preference remain among the most important in consumer and social psychology (Cacioppo, Gardner, and Berntson 1997; Simonson et al. 2001). "Among the reasons the concept of attitudes has occupied a central role in psychology are that attitudes (a) are a pervasive aspect of mental and social life, (b) influence a wide range of decisions and behaviors, (c) act as a summary statistic for knowledge about the reactions to stimuli, and (d) reduce the effort or stress of decision making" (Cacioppo et al. 1997, p. 4). Similarly, preferences are a key construct in consumer research, as they form the basis of subsequent purchase intentions, choice, and consumption satisfaction.

Attitudes are typically based on the consumer's summary evaluation of both positive and negative components about a stimulus (Priester and Petty 1996), and as such are typically conceptualized and measured as lying along a bipolar continuum that ranges from unfavorable to favorable (Eagly

and Chaiken 1993). For example, attitudes and preferences are measured in consumer and marketing research through self-reports in which respondents are asked to indicate their liking toward an object or class of objects on bipolar scales, such as Likert (or summated ratings) scales, semantic differential scales, or itemized ratings scales (Lehmann, Gupta, and Steckel 1998). One of the critical issues in survey and marketing research is whether or not to allow respondents the option of sitting on the fence (i.e., not committing to a positive or negative position). In attitude measurement, allowing respondents to sit on the fence corresponds to the use of odd-point scales, where there is a middle response alternative (hereafter referred to as a neutral position). In contrast, the use of even-point scales, where a neutral point is not offered, is akin to forcing respondents to choose a position, or to jump off the fence. The traditional view suggests that the qualitative results between the two scales will be unaffected since if the respondents are truly neutral, then they will randomly choose one or the other side of the issue, so forcing them to choose should not bias the overall results (Krosnick 2002; Presser and Schumann 1980).

In contrast to this traditional viewpoint, we identify the conditions under which the exclusion of a neutral position will shift the relative distribution of responses in a systematic manner. As long as the evoked reactions are neither positive nor negative (i.e., close to indifference), then using these bipolar scales with or without a neutral position may be appropriate and the traditional assumptions behind using odd or even scales may be acceptable. However, if respondents feel strongly conflicted between the positive and neg-

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ative aspects of an object, then we hypothesize that the decision regarding whether or not to include a neutral option becomes more important. In such instances, the exclusion of the neutral position may result in a predictable, systematic bias in the expression of attitudes. This conclusion results in the uncomfortable suggestion that attitude measurement can be systematically manipulated by changing the scale from odd to even.

We hypothesize that if consumers are experiencing ambivalence or feeling conflicted about making trade-offs between the positive and negative beliefs involved in attitude or preference formation, they are likely to alleviate this discomfort by engaging in effort- or conflict-reducing heuristics if the neutral position is unavailable. In particular, if an attitude or preference evaluation requires making difficult trade-offs, consumers forced to express an opinion are likely to resort to a lexicographic rule (Hogarth 1987; Kahn and Baron 1995) and rely more on the more important attribute in their evaluations. To understand this relationship more fully, we examine factors that moderate it as well as provide evidence for the underlying process.

In the remainder of the article, we first review prior research relevant to understanding the effect of a fence-sitting alternative on attitude response. This analysis leads to several hypotheses that are tested across a series of six studies, which compare the distribution of responses when there is a neutral position or a middle option in an odd-point scale to the distribution of opinions when the middle option is not present in an even-point scale. We report the findings and conclude with a discussion on the implications for consumer research.

ABSENCE OR PRESENCE OF A NEUTRAL POSITION IN ATTITUDE AND PREFERENCE MEASUREMENT

As stated previously, survey researchers (Krosnick 2002) and marketing researchers (Lehmann et al. 1998) have investigated the question of whether or not the presence of a neutral position affects attitude response. However, this research has mostly investigated methodological factors and has not studied why the removal of the neutral position may affect attitudes. For example, in the survey and polling literatures, one area of research has focused on identifying the antecedents that lead to the selection of a middle response alternative. It has been shown that people are more likely to select a middle response alternative on an issue when it is explicitly offered to them as opposed to allowing them to volunteer that information spontaneously (Kalton, Robert, and Holt 1980; Schumann and Presser 1981). Respondents are also more likely to select a middle response alternative if it is merely mentioned in the preface of a question and not ever explicitly offered (Bishop 1987), and they are more likely to use the middle option if they are uninformed with the issue (Bishop 1990). Finally, the likelihood of respondents selecting a middle response has been shown to differ by culture (Si and Cullen 1998).

In addition to the methodological investigation, survey research has examined whether the inclusion of a no-opinion category improves the quality of data obtained by an attitude measure (Buchanan and Henderson 1992; Hawkins and Coney 1981; Schneider 1985). However, the evidence in favor of using a no-opinion response as an effective filtering device has been mixed (Krosnick 2002). Some marketing researchers have found that differences in results between studies using odd- or even-numbered categories are not significant (e.g., Lehmann et al. 1998). In a similar vein, polling/survey research has failed to reject the null hypothesis that there are no systematic differences in univariate distributions once middle responses are excluded (e.g., Presser and Schumann 1980). However, there is some limited evidence that whether or not a middle response alternative is offered does affect responses to polling attitude questions (Bishop 1987). One limitation to most of this research is that it is generally based on field settings and not guided by psychological principles that highlight the process by which, and the conditions under which, a neutral position will shift the distribution of responses. Furthermore, these surveys offered additional response categories such as "don't know," which are potentially substitutable with the middle response, thus making the findings difficult to interpret and open to alternative explanations (Glucksberg and McCloskey 1981).

REASONS FOR FENCE SITTING: INDIFFERENCE VERSUS AMBIVALENCE

In order to understand why the exclusion of a neutral, or fence-sitting, option may shift the distribution of responses, we first must consider why respondents choose to indicate neutrality. As discussed above, one reason is that the respondent truly has a neutral attitude toward the object. In this case, there is low activation of either positive or negative evaluations and one can characterize the respondent's attitude as truly being neither positive nor negative. As such, a singular bipolar attitude scale should accurately reflect the attitude regardless of whether or not a neutral position exists. While the inclusion of the neutral option itself will reflect real neutrality, its exclusion would shift response slightly in either direction to the closest category similar to range effects (Parducci 1965). More generally, if the beliefs are primarily in one direction, either negative or positive, changing the response categories will merely lead to a scale adjustment in response.

A second reason, however, for selecting the neutral position occurs if the respondent has ambivalent feelings toward the object. In this case, the respondent may in fact have beliefs simultaneously at both ends of the attitude scale. If a respondent's attitude reflects both significant positive and negative aspects it may be difficult to select a single positive or negative response (Krosnick 2002) and to elicit a response on a bipolar scale (Cacioppo et al. 1997). In this case, the choice of a neutral position represents the inability or unwillingness to make the trade-offs rather than indif-

ference per se. Although past researchers (Kaplan 1972; Presser and Schumann 1980) have noted the distinction between those who choose the neutral position because they are indifferent (i.e., neither good nor bad) or are ambivalent (i.e., both good and bad), the consequence of this distinction for the expression of attitude judgments has not been explored systematically.

If an indifferent and an ambivalent attitude toward an object map onto the same neutral point on an odd-point bipolar scale, how does the exclusion of the opportunity to sit on the fence (i.e., an even-point scale) affect responses? Consistent with previous findings (see Krosnick [2002] for a review), we believe that if respondents feel no conflict characterized by low activation of positive and negative aspects toward an object, then exclusion of the neutral position on an attitude response scale will contribute to some random error but will not change the distribution of responses. However, if respondents are ambivalent or experience high activation of positive and negative thoughts about the object, then the exclusion of the neutral point will significantly change the distribution of opinions and, further, the shift will be in a biased, predictable manner. Specifically, ambivalence toward an object generates task-related negative emotion and consumers' likely coping strategies may yield predictable reactions to the presence or absence of a neutral position on a response scale. In order to formulate these hypotheses, we first briefly review the literature on task-related trade-offs.

AMBIVALENCE AND TASK-RELATED TRADE-OFFS

A fundamental aspect of most choices is the need to make trade-offs among the attribute values of the different alternatives. Luce, Bettman, and Payne (2001) argue that choices that force respondents to forgo some attractive benefits in favor of others generate negative task-related emotion. Consumers may experience this task-related negative emotion because of the actual task of thinking about the trade-offs involved in the judgment (Bettman, Luce, and Payne 1998) or because of fear of unfavorable evaluations from others resulting from the ultimate decision (Janis and Mann 1977). In order to deal with task-related emotion associated with trade-offs, consumers sometimes respond by processing simply or not at all (Keinan 1987) and, more generally, may seek to avoid the relevant choice task (Luce et al. 2001; Mick and Fournier 1998). Such an effort-minimizing strategy is likely to be affected by cognitive and task-related factors, such that the presence of a neutral or fence-sitting option in low involvement tasks may function as a salient coping mechanism encouraging the avoidance of commitment to any position.

In contrast to thinking about the selection of a fence-sitting option as an effort-minimizing strategy, as expressed above, respondents who feel ambivalently might also choose the fence-sitting option as a result of a more effortful processing strategy to reduce the conflict. In this conflict-reducing ap-

proach, it is assumed that respondents carefully process information and consequently select the neutral position to alleviate negative affect. For example, Dhar (1997) showed that individuals who expressed a similar number of favorable thoughts about each alternative in a choice task were most likely to choose the no-choice option, that is, choose to decide not to choose. In sum, both the effort-minimizing and the conflict-reducing approaches suggest that the neutral position on an odd-point scale is likely to be selected by respondents in order to minimize the negative affect associated with ambivalent judgments. The exact process underlying the selection of the neutral position will depend on the measurement settings. While Tourangeau and Rasinski (1988) note that few respondents have the motive or opportunity to process carefully in survey settings, Bettman et al. (1998) state that the motivation to process the information provided exceeds the cognitive ability that is required in carrying out these simple tasks.

However, the absence of a neutral position on an even-point scale makes strict avoidance impossible and consumers are forced to confront the ambivalence activated in making difficult trade-offs and express an attitude. In such instances, decision makers may search for alternative avoidance strategies. It has been found in other domains that when respondents want to avoid making explicit trade-offs, they resort to a lexicographic decision rule (Dhar 1996; Kahn and Baron 1995) where alternatives are preferred that have the highest value on the most important attributes. The use of such strategies is consistent with reducing conflict as well as cognitive effort. This type of conflict- or effort-reducing heuristic could favor the option that is best on the most emotion-laden attribute, such as safety or quality over price (Luce, Bettman, and Payne 1997), on the most easily justifiable dimension (Simonson 1989), or choosing against taking risks (Fischhoff, Bostrom, and Quadrel 1993; Viscusi, Magat, and Huber 1987).

In conclusion, we assume that if consumers are asked to make attitudinal judgments or preferences that evoke ambivalence, consumers are likely to respond in a manner that alleviates task-related negative emotion. If a neutral or fence-sitting option does exist, such as in an odd-point scale, consumers can avoid conflict and effort by choosing that option. However, if no fence-sitting option exists, such as on an even-point scale, they may shift the response in the direction that offers secondary avoidance.

EMPIRICAL STUDIES

We conducted six studies to investigate the effects of excluding a fence-sitting option or neutral position on attitude and preference measurement. In study 1, we show that the exclusion of a neutral position (i.e., comparisons between an odd- and an even-point scale) affects overall attitude judgment more when the stimulus comprises strongly positive and negative attributes (high ambivalence) in comparison to a stimulus that is average on all dimensions (low ambivalence). Further, we show that when respondents are forced to use an even-point scale to evaluate extreme

options, the shift in attitude is consistent with respondents assigning greater weight to the more important attribute. Study 2 replicates the basic finding that attitudes toward extreme options are susceptible to whether an even or an odd scale is used and also provides empirical support for the hypothesized process by measuring attitude ambivalence (Priester and Petty 1996) and showing how this ambivalence affects attitudes toward extreme options. Further, tolerance for ambiguity, an individual-difference measure, moderates our results, such that respondents with high tolerance for ambiguity are less likely to be affected by the removal of the neutral point than are those with low tolerance.

Study 3 extends the findings to a preference task where respondents tend to favor a high-quality, high-price item more over a low-price, low-quality item when they evaluate a stimulus on even-point scales and the fence-sitting option is not available. This study finds further support for the conflict-reducing strategies by demonstrating that need for cognition moderates this process and providing evidence for the greater use of a lexicographic choice rule response when the neutral position is excluded. Study 4 uses an external manipulation of attribute importance to more precisely demonstrate that subjects prefer the item that is better on the most important attribute when using an even-point scale. Study 5 extends the results to the risky choice environment. We predict and find that an even-point scale results in a shift toward more risk aversion in comparison to an odd-point scale. Finally, in study 6, we show another way respondents can choose to sit on the fence. Here we show that choosing the neutral point on an odd-point scale is implicitly choosing to stay with the status quo. This experiment shows that respondents understand that a neutral point is not just an option to not process information but rather is, in this case, a conscious vote in and of itself.

STUDY 1: EFFECTS OF A NEUTRAL POSITION ON ATTITUDINAL RESPONSE

In study 1, we test the basic hypothesis that an attitude toward an ambivalent object is more likely to result in significant effects from the presence or absence of a middle option than an attitude toward an object that does not induce ambivalence. In general, objects that have average values on all dimensions (Dhar and Simonson 2002) are not likely to result in ambivalence because of the absence of strong positive or negative features. In addition, choices of all-average options are less likely to be negatively evaluated by others (Simonson and Nowlis 2000) so they are less likely to cause task-related distress. In contrast, items that are more extreme and similar on good and bad attributes (hereafter called extreme options) are likely to cause ambivalence and fear of negative evaluation and, thus, are more likely to result in negative task-related emotion (Shafir 1993; Thompson, Zanna, and Griffin 1995). We constructed our stimuli based on prior research that empirically verified that extreme options, with conflicting positive and negative evaluations,

are more ambivalent than options that are average on everything (Priester and Petty 1996). Hence we hypothesize:

H1a: There will be significant differences in the distribution of opinions for an extreme option using an even-point scale as compared to using an odd-point scale (with a neutral point). No such differences in the distribution of opinions will exist for an all-average option.

Further, when forced to express an attitude for an extreme option, those who feel ambivalent are more likely to engage in conflict- or effort-reducing decision rules that favor the most important attribute, which in this experiment is quality over price or other costs (see Method section below for how we constructed these stimuli). This ordering of importance of attributes is consistent with previous research (e.g., Simonson 1992) that showed that consumers who considered the possibility of regret resulting from the choice of a wrong option were more likely to choose a high-price, high-quality option over a low-price, low-quality option. Similarly, Simonson and Tversky (1992) showed a systematic bias in favor of high-quality, high-price options. In addition, Shafir (1993) demonstrated a greater focus on the positive attributes of the extreme option in a choice task. Hence, we hypothesize:

H1b: When forced to express an attitude toward an extreme option in the case of an even-point scale, respondents will be more favorable toward the option when it excels on the more important dimension (e.g., quality over costs).

Method

Subjects were 68 undergraduate marketing students who completed the paper and pencil questionnaires as part of a class requirement for the introductory marketing course. Each subject indicated their attitudes toward an all-average and an extreme option in three separate product categories (restaurants, calculators, and personal computers). For example, with restaurants, subjects evaluated an all-average option with average quality (two and a half stars), average wait, average selection, and average atmosphere. They also evaluated an extreme option with high quality (four stars), long wait, wide selection, and dull atmosphere. Each option was evaluated on a separate page of the survey. The questions for calculators and personal computers were similar in structure to those for restaurants. The order of preference ratings was counterbalanced across respondents.

We constructed the alternatives so that the extreme options would be superior on the more important attributes. To do that, we had a separate group of 30 student subjects rate each attribute of each alternative by answering the following question: "How important is (attribute) in deciding how much you like or dislike (option)?" and they responded on a seven-point scale anchored from "Not at all important" to "Very important." We found that subjects rated certain attributes as more important than others ($p < .05$ for all cases),

and these attributes were the ones favored when subjects responded on an even-point scale (hypothesis 1b). We tested the attributes of the alternatives used in studies 2 and 3 in a similar manner.

Subjects were randomly assigned to one of two between-subjects condition. In one condition, subjects used a four-point attitude scale, with each of the four points labeled as following: 1 = dislike very much, 2 = dislike somewhat, 3 = like somewhat, and 4 = like very much. In the second condition, subjects used a five-point scale that also included a neutral point labeled as such.

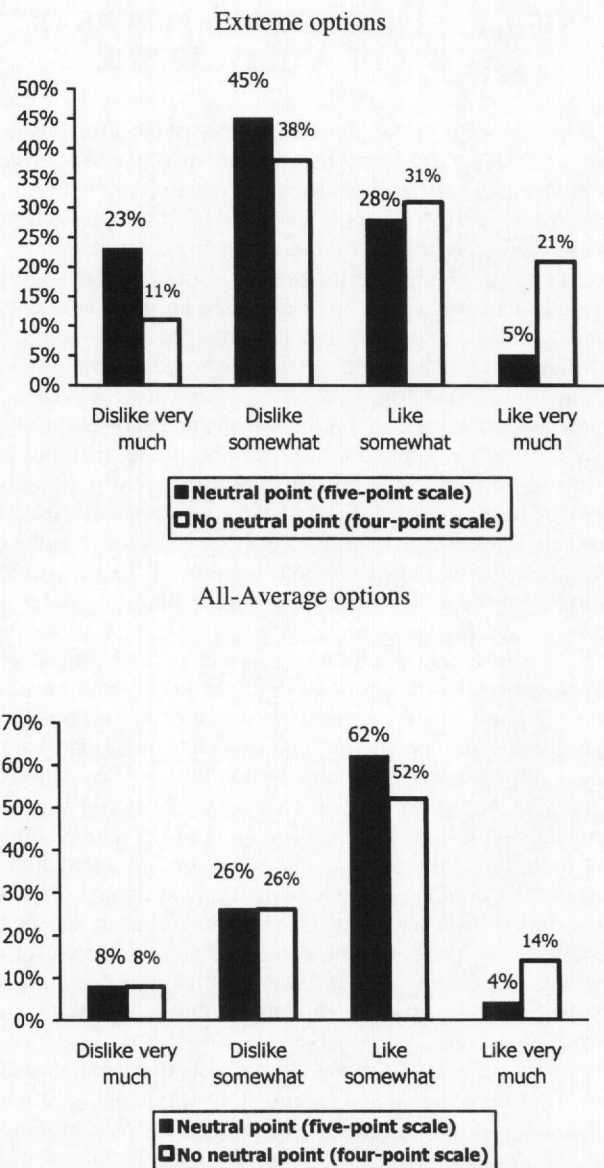
Results

To test the hypotheses, we rescaled the data into a form where direct comparisons could be made across conditions. We followed other research by rescaling the responses in the odd-point scale by dropping the responses to the neutral point, leaving the remaining four points, which we then compared directly to the same four points in the even-point scale (e.g., Bishop 1987; Presser and Schumann 1980).¹ For example, in figure 1, looking at the average across the three tested categories, 33% liked the extreme options (28% liked somewhat and 5% liked very much), while 68% did not, after rescaling these values when the neutral point was removed. Without removing the neutral point, 26% liked the extreme options, 55% did not, and 18% chose the middle response.

Hypothesis 1a predicts that there will be a significant effect of the scale on the distribution of responses for extreme options but not for all-average options. As mentioned above, 33% liked the extreme options when using the odd-point scale. When using the even-point scale, 52% preferred the extreme options (which were better on the more important attributes), for an increase of 19%. For the average options, 66% liked these alternatives with both the even- and odd-point scales, and thus there was no change. We tested hypothesis 1a and hypothesis 1b with a logistic regression model, where the responses were modeled as a function of the following independent dummy variables: (1) a variable indicating whether the odd or even scale was used, (2) a variable indicating whether subjects evaluated extreme or average options, (3) a two-way interaction between these variables, which tests hypothesis 1a, (4) an interaction between the scale manipulation and the categories testing all-average options, and (5) an interaction between the scale manipulation and categories testing the extreme options. The last two interactions test to see if there are significant differences across the tested product categories (e.g., Chernev 1997; Dhar 1997). Hypothesis 1b was tested

¹ The hypotheses can also be tested in a different manner. Specifically, we can test the average value of the response across the scale manipulation. For example, a response of "like very much" would receive a score of "2," a response of "neutral" would receive a score of "0," and a response of "dislike somewhat" would receive a score of "-1," etc. We can then average the scores across either the even- or odd-point scales, and compare the scores with a *t*-test. When we analyzed the data using this method, we found similar results.

FIGURE 1
STUDY 1: PREFERENCE FOR EXTREME AND ALL-AVERAGE OPTIONS (% CHOOSING EACH RESPONSE)



NOTE.—We followed other research by rescaling the responses in the odd-point scale by dropping the responses to the neutral point, leaving the remaining four points, which we then compared directly to the same four points in the even scale.

with coefficient 1 above when looking only at the response to the extreme options.

First, we found that the interaction between coefficients 1 and 2 was significant ($\chi^2(1) = 5.51, p < .05$), supporting hypothesis 1a. Next, hypothesis 1b was supported as there was a significant effect of the scale manipulation for the extreme options ($\chi^2(1) = 8.25, p < .01$). Finally, we found that there were no significant differences in the effects across

the categories, for both all-average ($\chi^2(2) = 0.24$, NS) and extreme options ($\chi^2(2) = 1.2$, NS).

STUDY 2: PROCESSING EFFECTS OF ATTITUDE AMBIVALENCE

The first study shows that the absence of a neutral position influences the attitude response toward an object that evokes ambivalence. Our predictions were based on the notion that an extreme option elicits a tendency to both approach and avoid the same object. Furthermore, the difficulty of integrating these conflicting judgments in order to arrive at an overall evaluation leads to task-related emotion and a conflict-reducing strategy of emphasizing the more important attribute when even-point scales are provided. The absence of such an effect for an average option also serves as a boundary condition. A limitation of the study is that ambivalence was not measured directly but rather manipulated using different stimuli. The next study uses questions developed by Priester and Petty (1996) to directly measure the amount of subjective ambivalence felt by each subject. Based on the earlier discussion, we predict that consumers who feel more ambivalent will be more likely to prefer the extreme alternatives.

This study also explores the effect of ambivalence by investigating the impact of an individual difference variable that is related to ambivalence. In particular, researchers have identified tolerance for ambiguity (TFA) as an important personality variable that can exert an influence over a wide variety of behaviors (Macdonald 1970; Norton 1975). Individuals with high TFA are less likely to perceive ambiguous stimuli as threatening and hence are less motivated to resolve the conflict using lexicographic strategies. In contrast, individuals with low TFA are unwilling to accept alternative interpretations or outcomes and hence are more likely to engage in conflict-reducing strategies that enhance the preference for the extreme option that is superior on the positive attributes.

In summary, study 2 was designed both to replicate the effects of the removal of a fence-sitting option on the attitude toward an extreme option and also to provide empirical support for the underlying process by measuring attitude ambivalence and exploring its effect on preferences for the extreme alternative. In addition, we tested whether the individual difference measure, TFA, moderated the results. The hypotheses we are testing in this experiment are therefore as follows:

H2a: Consumers who feel more ambivalent will more strongly prefer the extreme alternative.

H2b: Tolerance for ambiguity acts as a moderator. Those who are low in TFA will more strongly prefer the extreme option when using an even-point scale than those who are high in TFA.

Method

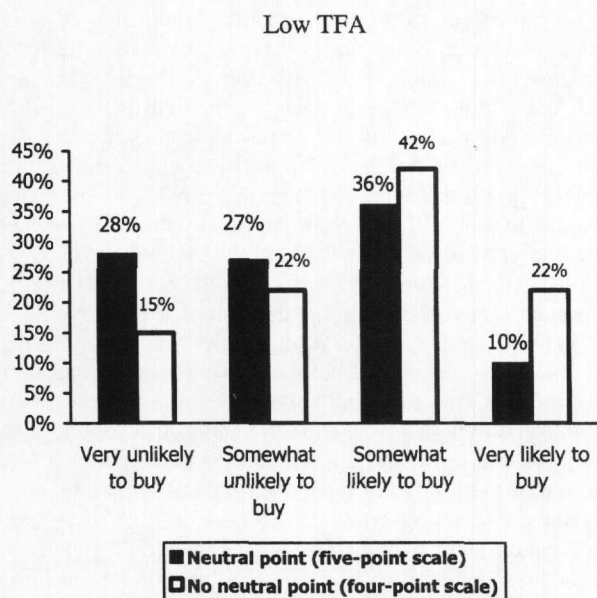
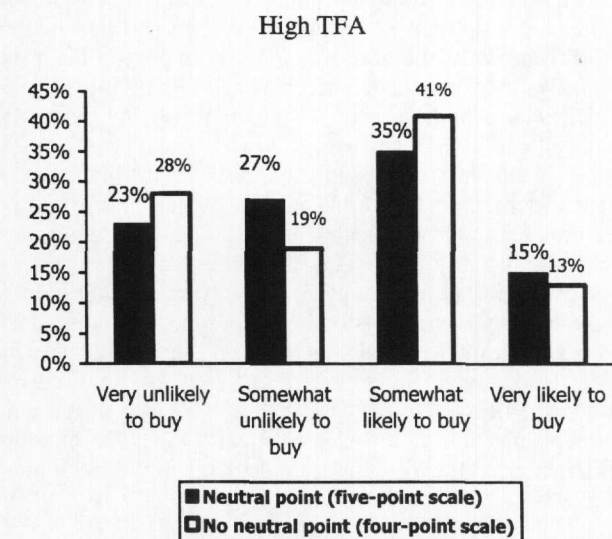
Subjects were 158 undergraduate marketing students who completed the paper and pencil questionnaire as part of a class requirement for the introductory marketing course. Each subject indicated his or her attitude for an extreme product in two separate product categories (restaurants and televisions). For example, as in study 1, subjects evaluated an extreme restaurant with high quality (four stars), long wait, wide selection, and dull atmosphere. Each option was evaluated on a separate page of the survey. The questions for televisions were similar in structure to those for restaurants. We conducted a 2 (four- or five-point scale) \times 2 (high or low in TFA) between-subjects design. In one condition, subjects used a four-point attitude scale, with each of the four points labeled as following: 1 = very unlikely to buy (go to), 2 = somewhat unlikely to buy (go to), 3 = somewhat likely to buy (go to), and 4 = very likely to buy (go to). In the second condition, subjects used a five-point scale that also included a neutral point labeled as such. To measure TFA, we used the 20-item scale developed by MacDonald (1970). For example, those who have a higher TFA are more likely to agree with statements such as "The way to understand complex problems is to be concerned with their larger aspects instead of breaking them into smaller pieces" and disagree with statements such as "I have always felt that there is a clear difference between right and wrong."

Before making their decision, subjects were asked three questions that measured the degree to which they felt ambivalent about their decisions (Priester and Petty 1996). These questions were asked to allow us to test whether greater feelings of ambivalence led to greater preference for the extreme options (hypothesis 2a). In particular, subjects were asked, "How indecisive are you when evaluating these products; How conflicted do you feel when evaluating these products; How much mixed emotion do you feel when evaluating these products?" All responses were made on an 11-point scale (e.g., 0 = feel no indecision at all, 10 = feel very indecisive).

Results

We first examine the results that relate to hypothesis 1b, which we also tested in study 1, and hypothesis 2b. Hypothesis 1b predicts that when subjects are forced to express an attitude toward an extreme option on an even-point scale, they will favor the more important dimension. Averaged across the two categories, 48% (rescaled value after the neutral point was deleted; 18% chose the neutral point) liked the extreme options when using the odd-point scale, while 59% preferred these options (which were better on the more important attributes) when provided with the even-point scale. Hypothesis 2b predicts that those who are low in TFA are more likely to prefer the extreme option when using an even scale than those who are high in TFA. To examine this hypothesis, we followed other research that has used a median split to separate those high and low on a personality variable (e.g., Simonson and Nowlis 2000). As figure 2

FIGURE 2

STUDY 2: THE EFFECT OF TOLERANCE FOR AMBIGUITY
(% CHOOSING EACH RESPONSE)

shows, we find that 64% of those who are low in TFA preferred the extreme option when using the even-point scale, while only 54% of those who are high in TFA preferred the extreme option when using the even-point scale.

We tested hypothesis 1b and hypothesis 2b with a logistic regression model, where the responses were modeled as a function of the following independent dummy variables: (1) a variable indicating whether the odd or even scale was used, which tests hypothesis 1b, (2) a variable indicating

whether the subject was high or low on TFA, (3) a two-way interaction between these variables, and (4) an interaction between the scale manipulation and the two categories, which tests whether the effects were different across the problems. Supporting hypothesis 1b, we found the effect of the scale manipulation to be significant ($\chi^2(1) = 4.54$, $p < .05$). This replicates the effect we found in study 1. We also found that there were no significant differences across the individual categories ($\chi^2(1) = 1.75$, NS). To test hypothesis 2b, we examined the effect of TFA on preference for the extreme option, looking at the responses to the even-point scale. Supporting hypothesis 2b, we found that this effect was significant ($\chi^2(1) = 4.11$, $p < .05$). Finally, the two-way interaction between the scale manipulation and TFA was significant ($\chi^2(1) = 5.01$, $p < .05$).

Next, we examined hypothesis 2a, which tests whether consumers who feel more ambivalent will have a stronger preference for the extreme alternative. Our method of analysis was similar to other research examining process measures (Schwarz et al. 1991). In particular, Schwarz et al. (1991) used a correlational analysis, showing how a processing measure related to a response. Following prior research (Priester and Petty 1996), we averaged the scores for the three questions that measured feelings of ambivalence ($\alpha = 0.92$). We found that, for those subjects who used the even-point scale, there was a significant, positive relationship between feelings of ambiguity and preference for the extreme option ($F(1, 312) = 4.37$, $p < .05$, $r = 0.164$), supporting hypothesis 2a. Furthermore, this relationship was weaker for subjects who used the odd-point scale ($F(1, 312) = 2.43$, $p < .10$, $r = 0.107$).

STUDY 3: EFFECTS OF A NEUTRAL POSITION ON THE PREFERENCE FOR PRICE-QUALITY TRADE-OFFS

As we have shown now in two studies, objects that evoke ambivalence are more likely to reveal significant differences in responses depending upon whether or not an even or odd scale is used to report attitudes. Although our focus in the studies so far was on conflict that highlighted both positive and negative aspects in a single object, conflict or ambivalence can also arise when the decision involves a choice between two attractive outcomes, where none has a systematic advantage. Surveys in marketing research often use bipolar scales to measure the relative strength of preference among pairs of options (e.g., Lehmann et al. 1998). The next study extends our findings to the domain of preferences by having respondents indicate their relative preference between a high-quality, high-price option and a low-price, low-quality option.

When asked to indicate relative preferences for high-quality, high-price options versus low-price, low-quality options, we hypothesize that similar to the previous two experiments, respondents will experience conflict from the trade-offs required to form this relative preference (e.g., Nowlis and Simonson 1996). Hence there will be a significant difference

in the distribution of opinions across an odd- and an even-point scale. Further, we hypothesize that when these respondents are forced to express a preference in one direction in an even-point scale, they will shift their responses toward the high-quality, high-price option. There are several reasons for this prediction. First, Luce et al. (2001) argue that quality attributes are more likely to elicit a wider range of emotional levels because they are associated with a wider range of goals. Price, on the other hand, is associated with one goal, which is saving money. The fungibility of price attributes should also reduce anticipated regret associated with losses on price. As mentioned earlier, both Simonson (1992) and Simonson and Tversky (1992) showed that consumers exhibited systematic biases in favor of high-quality, high-price options at the expense of low-quality, low-price options. Hence, we hypothesize:

H3a: In a preference between a low-price, low-quality (low-tier) brand and a high-price, high-quality (high-tier) brand, the brand that is superior on the more important attribute (e.g., quality) will be relatively more preferred than the other option when a neutral point is excluded.

A second objective of this experiment was to provide additional support for the hypothesized process driving our results. In the earlier studies we found support for the idea that differences between even- and odd-point scales occur because some subjects who are experiencing ambivalence, or task-related negative emotion, cope with this situation by engaging in effort- or conflict-reducing strategies. The degree to which respondents are likely to resolve the conflict is likely to differ across individuals. Thompson et al. (1995) suggest that respondents' need for cognition (NFC; Cacioppo, Petty, and Kao 1984) is negatively related to feelings of ambivalence because individuals high in NFC are more likely to work through or reconcile contradictory information about attitude objects. This suggests that respondents who are high on the NFC scale are more likely to cope in a cognitive or problem-focused way (Lazarus 1999) and are less likely to engage in the heuristic processing that resulted in the systematic biases in attitude formation. In contrast, consumers low on the NFC scale are less likely to reconcile the different trade-offs and more likely to engage in the effort- or conflict-reducing heuristics, such as secondary-avoidance strategies to solve difficult trade-offs. Hence, we hypothesize:

H3b: Need for cognition acts as a moderator. Those who are low in NFC are more likely to be affected by the omission of the neutral point than those who are high in NFC.

Method

Subjects were 165 undergraduate marketing students who completed the paper and pencil questionnaire as part of a class requirement for the introductory marketing course. We conducted a 2 (four- or five-point scale) \times 2 (high or low in NFC) between-subjects design. On each page of the questionnaire, respondents decided between two options, one of which was a high-tier brand (higher price and perceived quality) and the other was a low-tier brand. A pretest ($N = 40$ students) was conducted in which the brands were rated in terms of (1) overall product quality and (2) brand performance. On both scales, the low-quality brands were rated significantly lower than the high-quality brands ($p < .05$ for each scale). In study 3, subjects evaluated products in three categories: televisions, camera films, and computers. For example, when deciding between televisions, respondents evaluated a Sony priced at \$289 and an Emerson priced at \$189. Each was described as a 20-inch model with a sleep timer and a 150-channel quartz tuner. To measure NFC, we used the 18-item scale developed by Cacioppo et al. (1984).

Results

Hypothesis 3a predicts that a high-tier brand will be relatively more preferred over a low-tier brand in even-point compared to odd-point scales. Averaged across the three problems, 44% were likely to prefer the high-tier brands when using the even-point scale, compared to 33% when using the odd-point scale (after rescaling these values due to the deletion of the neutral point; 8% chose the neutral point). Hypothesis 3b predicts that this effect will be greater for those low in NFC. To examine this hypothesis, we used a median split to separate those high and low in NFC. As figure 3 shows, consistent with hypothesis 3b, we find a difference across the scale manipulation of 16% for those low in NFC,² but only a 7% difference for those high in NFC. We also reanalyzed the data, using NFC as a continuous variable, and the results were the same.

We tested hypothesis 3a and hypothesis 3b with a logistic regression model, where the responses were modeled as a function of the following independent dummy variables: (1) a variable indicating whether the odd or even scale was used, which tests hypothesis 3a, (2) a variable indicating whether the subject was classified as high or low in NFC, (3) a two-way interaction between these variables, which tests hypothesis 3b, and (4) an interaction between the scale manipulation and the three categories, which tests whether the effects were different across the problems. Supporting hypothesis 3a, we found the effect of the scale manipulation

²For a total of 48%, 20% of those low in NFC, who used the four-point scale, were much more likely to buy the high-tier brand and 28% were somewhat more likely to buy the high-tier brand. For a total of 32%, 18% of those low in NFC, who used the five-point scale, were much more likely to buy the high-tier brand and 14% were somewhat more likely to buy the high-tier brand. Thus, the difference between 48% and 32% is 16%, which is the effect of the scale manipulation on preferences for those low in NFC.

to be significant ($\chi^2(1) = 8.23, p < .01$). Supporting hypothesis 3b, we found that the two-way interaction was significant ($\chi^2(1) = 5.71, p < .05$). We also found that there were no significant differences across the individual categories ($\chi^2(2) = 1.88, NS$).

STUDY 4: EXTERNAL MANIPULATION OF ATTRIBUTE IMPORTANCE

In study 3 we designed the stimuli such that quality was the more important attribute and this approach was consistent with past research. However, to further generalize our results, and to show that when coping with ambivalence respondents resort to a lexicographic rule and favor the option that is better on the more important dimension, we now seek to manipulate which attribute is more important on average and show that the corresponding option is the one that is favored. Specifically, in this study, we use an external manipulation of attribute importance (Chernev 1997) and show that it is not the particular attribute that is favored but rather the one that is perceived as the more important one. Hence the hypothesis for this study is

- H4:** When forced to express an attitude toward an option in the case of an even-point scale, respondents will favor the option that is better on the more important dimension.

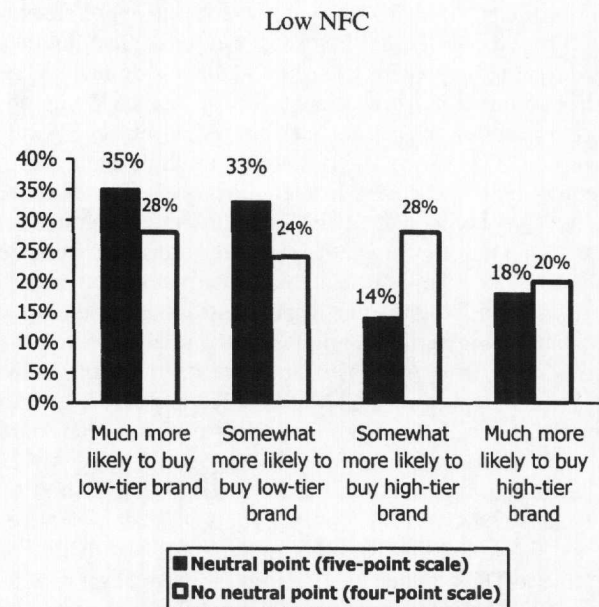
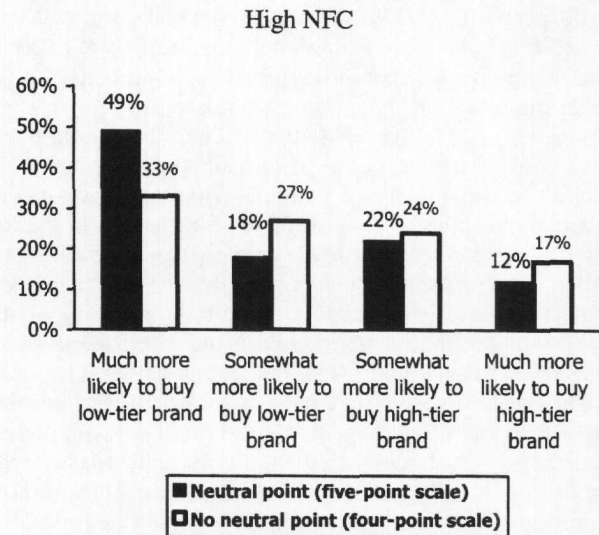
Method

Subjects were 177 undergraduate marketing students who completed the paper and pencil questionnaire as part of a class requirement for the introductory marketing course. We conducted a 2 (four- or five-point scale) \times 2 (which attribute was stated to be the more important) between-subjects design and subjects were randomly assigned to a condition. On each page of the questionnaire, respondents decided between two options. Each option offered five attributes, three of which were at the same level for both options. For the remaining two attributes, each option was better on one of the attributes. For instance, with DVD players, subjects chose between DVD player 1 and DVD player 2. Player 1 offered quality ratings = 80 out of 100, price = \$159, Dolby Digital and DTS output, component-video output, and coaxial and optical digital-audio outputs. Player 2 offered quality ratings = 92 out of 100, price = \$249, Dolby Digital and DTS output, component-video output, and coaxial and optical digital-audio outputs. Subjects evaluated products in three categories: DVD players, credit cards, and portable BBQ grills.

We manipulated attribute importance in a manner similar to Chernev (1997). Specifically, subjects were told that *Consumer Reports* had determined through its research that one of the attributes was more important. For example, when deciding between DVD players, subjects were told that *Consumer Reports*, through its independent research, thinks that

FIGURE 3

STUDY 3: NEED FOR COGNITION AND THE PREFERENCE FOR HIGH-TIER OPTIONS (% CHOOSING EACH RESPONSE)



high-quality ratings (low prices) are more important than low prices (high-quality ratings) when buying DVD players.

Results

Hypothesis 4 predicts that the option that is better on the more important attribute will be relatively more preferred in even-point compared to odd-point scales. Averaged across the three problems, 67% preferred the brand better on the

more important attribute when using the even-point scale, compared to 57% when using the odd-point scale. Conversely, when we reversed which attribute was considered more important, 57% were likely to buy the brand better on the more important attribute when using the even-point scale, compared to 45% when using the odd-point scale. As figure 4 shows, across both conditions, 62% were likely to prefer the brand that was described as being better on the more important attribute when using the even-point scale, compared to 51% (rescaled after deleting the neutral point; 8% chose the neutral point) when using the odd-point scale.

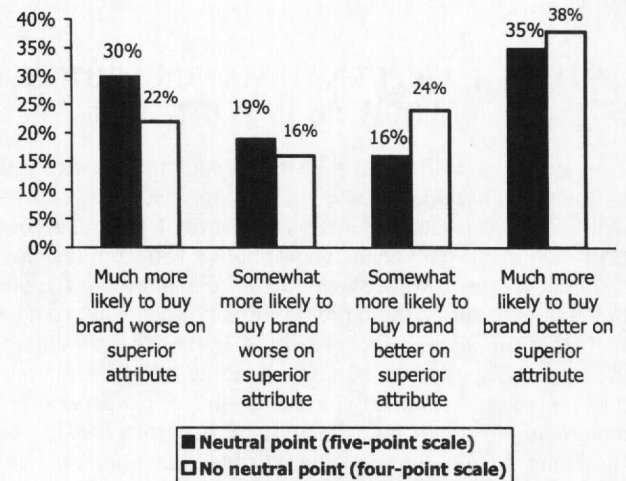
We tested hypothesis 4 with a logistic regression model, where the responses were modeled as a function of the following independent dummy variables: (1) a variable indicating whether the odd or even scale was used, (2) a variable indicating which attribute was stated to be more important, (3) a two-way interaction between these variables, which tests hypothesis 4, and (4) an interaction between the scale manipulation and the three categories, which tests whether the effects were different across the problems. Supporting hypothesis 4, we found that the two-way interaction was significant ($\chi^2(1) = 5.22, p < .05$). Further, there were no significant differences across the individual categories.

Studies 1 and 2 found a difference in the distribution of responses between odd- and even-point scales for stimuli evoking ambivalence. Studies 3 and 4 extended the notion of ambivalence toward a single object to relative preferences between two objects that involved trade-offs. The findings here are consistent with those for attitude judgments. The studies so far demonstrated the effect of a fence-sitting option on attitudes and judgments for riskless objects. A different way of evoking ambivalence is through highlighting potential gains and losses in the context of a risky option. In a recent study, Larsen et al. (2001) tested whether neutral ratings for gambles were better characterized as indifference (as is usually assumed) or ambivalence (as they hypothesized). In their experiments, respondents indicated that they felt positively toward winning but felt neutrally toward disappointing wins (wins that could have been better). Similarly, respondents indicated that they felt negatively toward losing but neutrally toward relieving losses (losses that could have been worse). However, when the neutral ratings were further tested, it turned out the respondents felt both positively and negatively in these disappointing wins and relieving losses conditions, rather than neither positively nor negatively. Thus, rather than feeling indifferent, these neutral ratings of gambles actually indicated conflicting feelings on the part of the respondents. In study 5, we show that risky options with mixed outcomes can also lead to ambivalence, and once again there will be systematic differences in preferences depending upon whether a neutral position is available.

More generally, risk-related trade-offs are difficult and potentially threatening, and consumers have been found to have difficulty weighing even small risk increases against benefits (Fischhoff et al. 1993). Consistent with the strategy described above that consumers use to avoid making difficult

FIGURE 4

STUDY 4: THE EFFECT OF ATTRIBUTE IMPORTANCE
(% CHOOSING EACH RESPONSE)



trade-offs, consumers may be motivated to avoid negative, risk-associated feelings that are induced by being asked to form preferences for risky options (Bauer 1960). Thus, if a neutral category is provided, those who find themselves ambivalent about trading off the risk for the benefit will take that option (Larsen et al. 2001). However, if they are forced to express an evaluation, then they are likely to opt for the lesser emotion-laden attribute, which would be to opt for security (i.e., the more risk-averse alternative). This shift is consistent with past data that have shown that consumers are generally averse to accepting increases in risk (Viscusi et al. 1987), and that increases in risk are generally considered more negative than the corresponding decreases in risk are considered positive. Hence, we hypothesize:

H5: There will be significant differences in the distribution of opinions for a risky option using an even-point scale as compared to using an odd-point scale (with a neutral point). Further, consumers will give a lower rating to a risky ambivalent investment on an even-point scale than on an odd-point scale (with a neutral point).

STUDY 5: EFFECTS OF A NEUTRAL POSITION ON ATTITUDES TOWARD RISKY OPTIONS

Method

Subjects were 193 undergraduate marketing students who completed the paper and pencil questionnaire as part of a class requirement for the introductory marketing course. Subjects indicated the attractiveness of three different investment opportunities (\$100, \$300, and \$500). Each investment involved the possibility of a gain and a loss. Given

the anticipated risk aversion, the options were constructed so that the gain was higher than the loss, so that the expected value of the gamble was positive. For instance, the \$100 investment was described in the following way: Initially invest \$100. After three months, there is a 50% chance this investment will be worth \$150. But, after three months, there is a 50% chance this investment will be worth \$75. For the \$300 investment, there was a 50% chance of the investment being worth \$500, and a 50% chance of the investment being worth \$200. For the \$500 investment, we not only increased the amount of the gain but also increased the likelihood that the gain would occur by indicating a 75% chance of the investment being worth \$700 and a 25% chance of the investment being worth only \$200. The order of the gambles was counterbalanced across respondents.

Subjects were randomly assigned to one of two between-subjects conditions. In one condition, subjects evaluated each investment on a four-point scale, with 1 = very unattractive, 2 = somewhat unattractive, 3 = somewhat attractive, and 4 = very attractive. In the other condition, we also included a neutral point labeled as such.

Results

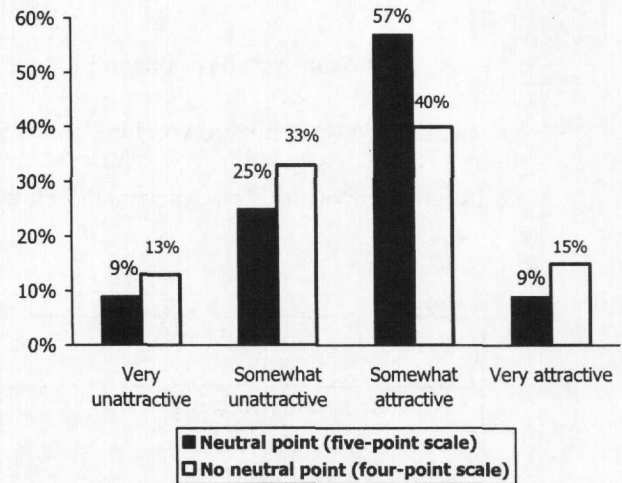
Hypothesis 5 predicts that consumers will give a lower rating to a risky investment with an even-point than with an odd-point scale. Figure 5 shows that, averaged across the three problems, 66% (rescaled after removing the neutral point; 16% chose the neutral point) found the investments to be attractive when using the odd-point scale, and 55% found the investments to be attractive when using the even-point scale. We tested hypothesis 5 with a logistic regression model, where the responses were modeled as a function of the following independent dummy variables: (1) a variable indicating whether the odd or even scale was used, which tests hypothesis 5, and (2) an interaction between the scale manipulation and the three investments, which tests whether the effects were different across the problems. Supporting hypothesis 5, we found the effect of the scale manipulation to be significant ($\chi^2(1) = 9.16, p < .01$). Further, there were no significant differences across the individual investments.

STUDY 6: EFFECT OF A NEUTRAL POSITION ON ATTITUDES TOWARD A STATUS QUO OBJECT

As we have suggested so far, respondents who experience ambivalence and task-related emotion will opt for the neutral position. However, if that neutral rating point does not exist, such as in an even-point scale, then they rely on alternative conflict- or effort-reducing strategies. Another way to accomplish this, other than to choose a neutral point, is to choose the status quo, or keep things the way they are. This is consistent with experimental work that suggests that the choice of a status quo alternative can be viewed as an effort- or conflict-reducing strategy (Luce 1998; Samuelson and Zeckhauser 1988). Thus the choice of the status quo option

FIGURE 5

STUDY 5: ATTITUDE TOWARD RISKY OPTIONS
(% CHOOSING EACH RESPONSE)



in an even-point scale is somewhat equivalent to the choice of a neutral point in an odd-point scale. Hence, we hypothesize:

H6: In a choice that involves choosing a new option or remaining with the status quo, the distribution of response will favor the status quo option when the scale is even-point as compared to an odd-point scale.

Method

Subjects were 244 undergraduate marketing students who completed the paper and pencil questionnaire as part of a class requirement for the introductory marketing course. We conducted a between-subjects design with two conditions (four- and five-point scales) and subjects were randomly assigned to a condition. Respondents decided between two options, one of which was labeled as their current option (see fig. 6), in the categories of apartments, CD players, and televisions. For example, when deciding between apartments, respondents were asked, "Imagine that you have been renting a one-bedroom apartment (Current Apartment below). Your current lease is up and you have the chance to stay in your current apartment or move into a different apartment (New Apartment below). What would you do?" Further, we counterbalanced whether the first or second apartment was designated as the status quo (Current) option. Thus, for example, with apartments, half of the subjects were told that the apartment on the left in figure 6 was the Current Apartment (status quo), while the other half were told that the apartment on the right in figure 6 was the Current Apartment.

Unlike in the other studies described so far, in this study the neutral point really does not equal indifference in be-

FIGURE 6
EXAMPLE PRODUCT CATEGORY FROM STUDY 6

Apartments

Imagine that you have been renting a 1-bedroom apartment (Current Apartment below).
 Your current lease is up and you have the chance to stay in your current apartment or move into
 a different apartment (New Apartment below). What would you do?

Current Apartment	New Apartment
<ul style="list-style-type: none"> • New apartment building • Color TV and cable • New wall-to-wall carpeting • High security deposit 	<ul style="list-style-type: none"> • Has dishwasher and refrigerator • Cost of heat included in rent • Nice new furniture • High security deposit

On the scale below, please indicate your relative preference between the two options
 (please circle one number below):

More Likely to Keep Current Apartment

Much More

2

Slightly More

1

More Likely to Take New Apartment

Neutral

0

Slightly More

1

Much more

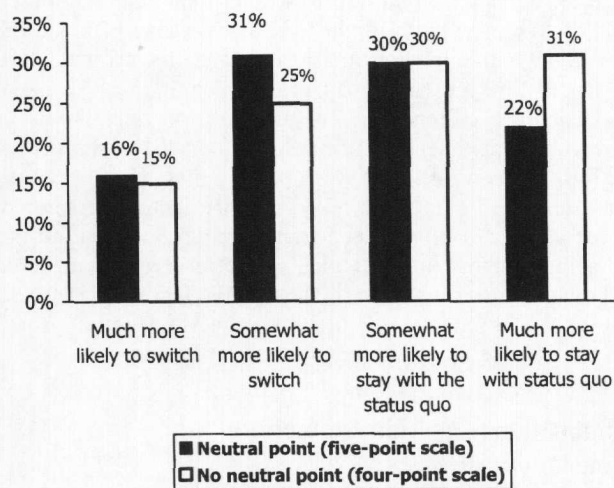
2

havior. Subjects who choose the neutral point here are implicitly choosing to stay with the status quo. Therefore support for the hypothesis here will also provide evidence that subjects understand that a neutral point is not just an option to not process information but rather is, in this case, a conscious vote in and of itself. Thus, as a corollary to show internal validation for our methods, the percentages of subjects who choose the middle response on the five-point scale should approximately equal the advantage that the status quo option receives over the new option on the four-point scale in this between-subjects design.

Results

Hypothesis 6 predicts that the status quo option will be favored when responses are made on the even-point scale. Figure 7 shows that, averaged across the three problems, 52% (rescaled after removing the neutral point; 9% chose the neutral point) preferred the status quo option when using the odd-point scale, compared to 61% with the even-point scale. We tested hypothesis 6 with a logistic regression model, where the responses were modeled as a function of the following independent dummy variables: (1) a variable

FIGURE 7

STUDY 6: ATTITUDE TOWARD A STATUS QUO OBJECT
(% CHOOSING EACH RESPONSE)

indicating whether the odd or even scale was used, (2) a variable indicating whether option A or option B was the status quo item, and (3) an interaction between the scale manipulation and the three tested categories. We found that the coefficient testing the scale manipulation was significant ($\chi^2(1) = 7.03, p < .01$), supporting hypothesis 6. In addition, the coefficient testing whether option A or option B was the status quo item was not significant ($\chi^2(1) = 1.29, NS$), indicating that it did not matter which of the particular options was used as the status quo item. Finally, we found that there were no significant differences in the effects across the categories ($\chi^2(2) = 0.88, NS$). Our corollary here is also supported. In our between-subjects design, 9% of the subjects checked the middle option on the five-point scale and that is equal to the advantage that the status quo option received on the four-point scale.

GENERAL DISCUSSION

Consumers frequently can choose a neutral or fence-sitting option when asked to express their attitudes or preferences. This article examines the consequences of excluding the neutral position on attitude and preference judgments. Although previous survey research examined certain aspects of choosing a neutral position, it did not look at the consequences on preference or attitude toward the object being studied, nor did it provide theory explaining when and why consumers would select that neutral position. Recent research suggests that the neutral position may be chosen because consumers are either indifferent (truly neutral) or because consumers are ambivalent (considering both positive and negative aspects of the object). Building on research on trade-off difficulty and task-related negative emotion, we find that the distribution of responses changes systematically when respondents are forced to express an

opinion on ambivalent stimuli. Our results allowed us to both demonstrate significant effects of excluding a neutral position on the distribution of responses and to clarify the processes that are involved in such effects. Six studies examined the effect of excluding a neutral position on attitude responses by (1) testing predictions regarding the distribution of responses for different objects, which were chosen so that the degree of expected attitude ambivalence would vary in systematic, predictable ways, (2) testing the boundaries under which the predicted effects operate, and (3) examining additional types of trade-offs (e.g., risky objects, status quo alternatives) to show the shift in strategies when a neutral point is excluded. These studies are summarized next.

In study 1, we find that the exclusion of a neutral position affects overall attitude judgment more when the stimulus comprises both positive and negative attributes, which can induce ambivalence, as compared to a stimulus that is average on all dimensions, which is less likely to induce ambivalence. Further, we show that when respondents use an even-point scale to evaluate options with both positive and negative aspects, the shift in attitude is consistent with assigning greater weight to the most important attribute. Study 2 focuses on the underlying process expected to drive the results by measuring the degree of attitude ambivalence that respondents experience rather than manipulating the stimuli to induce ambivalence. We find that respondents who experience more ambivalence will more strongly prefer the extreme alternative when using the even-point scale, which forces respondents to confront the trade-offs. In addition, this study finds that TFA moderates our hypothesis, in that respondents with high tolerance are less affected by the absence of the neutral position than are those with low tolerance.

Study 3 extends our findings to a preference task in which conflict is evoked by asking respondents to choose between high-quality, high-price and low-price, low-quality items. Consistent with our framework, we find that the more important attribute, in this case quality, is assigned more weight when consumers use an even-point scale, which favors the high-quality, high-price items. This study also finds that NFC moderates the process. Study 4 further tests relative preferences by providing a more stringent test of the decision process by manipulating attribute importance. Study 5 extends the results to a risky choice environment, and finds that removing the neutral position results in a bias toward more risk aversion. Finally, in study 6, we show another way respondents can choose to sit on the fence. Here we show that choosing the neutral point is implicitly choosing to stay with the status quo. In light of these findings, we discuss the theoretical and measurement implications.

Theoretical Implications

The choice of a neutral position is not limited to conditions where respondents are ambivalent. Indeed, we find in study 1 that a greater percentage of respondents selected the neutral position for the average options than for the extreme

options. However, in this study and in our other studies, only for the cases in which the stimulus was likely to evoke ambivalence did the absence of a neutral position shift the mean responses in a predictable manner. These findings support the notion that different respondents may choose the neutral position for different reasons, because they are feeling either conflicted or indifferent. However, the effect of excluding a neutral position is only likely if the attitude or preference evokes ambivalence.

The difference between true attitudes and their assessment is an important theoretical issue. The conceptual models often equate attitudes with relatively stable structures in long-term memory but assume that individuals sample from these structures when they respond to questions (Tourangeau and Rasinski 1988). Hence, a stable attitude can result in variability in reported attitudes, depending on which aspect of the knowledge structure is accessed. This is especially the case when an attitude structure includes beliefs about both sides of an issue, such as in our extreme options. Since the current tasks did not prime any particular beliefs, the differences in reported attitudes identified in this article are problematic for the notion of a preexisting and stable attitude structure and more in line with a constructionist viewpoint of using different rules that are most appropriate in a particular decision context to make an evaluation.

We focused on the consequence of including a neutral position on attitudinal response. In addition to influencing the attitudes reported, however, the shift in distribution of responses may also carry over to subsequent differences in purchase intent and choice. Previous research demonstrates that measuring intent has a significant effect on actual behavior (Morwitz, Johnson, and Schmittlein 1993). This suggests that scale differences in reported attitudes may subsequently result in different levels of behavioral response. In particular, because scales that excluded a neutral position typically involve an overweighting of features that are associated with quality, *ceteris paribus* subsequent behavior should favor higher quality items.

Our findings may also have implications for the choice and consumption of technological products. In particular, a new technology may not be adopted because consumers are truly indifferent toward it, or because they are ambivalent in that the product has good features but requires effort to figure out how to use them (Mick and Fournier 1998). Thus, if consumers were encouraged to sample the new product, rather than avoid it, this could lead to greater or lesser preference toward it, depending on whether its positive aspects were more or less important than its negative aspects.

A general implication of our findings is that including a neutral position will systematically distort attitude response distributions when attitude toward an object is ambivalent. However, certain other task manipulations may also evoke greater ambivalence, such as judgments about an object in the future. For example, consider the task of asking respondents to give a judgment about a candidate for an election that is several months down the road. Such a task may lead to a greater distortion between even- and odd-point

scales than for the same candidate if the election were to be held next week. Further, our experiments were confined to scales with four or five categories. Future research should examine whether four- and six-point scales are more similar to each other than they are to a five-point scale. Another line of future research might look at the effect of a neutral position when judgments are made under time pressure. For instance, time pressure may reduce cognitive ability and enhance the preference for a neutral position when the stimuli evoke ambivalence and hence further distort the distribution between odd- and even-point scales. Finally, while we considered a number of personality factors that could moderate our results, other variables might also lead to interesting insights. In particular, future research might look at how other personality variables could affect the preference for default or fence-sitting options, such as need for closure, dogmatism, self-confidence, or overconfidence.

Implications for Measurement of Consumer Attitudes

The studies also have an important practical goal in pointing out new biases in measurement. Our data clearly demonstrate ways in which consumer responses can be significantly altered by excluding a neutral position when respondents are ambivalent. Because few products achieve total dominance in the marketplace, the attitudes toward most objects involve some degree of mixed feelings on the part of respondents. For example, consumer evaluation of new types of fast food that are high in calories and high on taste may evoke different responses on odd- and even-point scales. Moreover, evaluation of consumer satisfaction judgments may also be systematically different across the two types of scales (e.g., Ryan, Buzas, and Ramaswamy 1995).

Although our data suggest that scales that include the neutral selection category produce a different response from the scales that exclude this category, a question that arises is, Which of the two scales is likely to best reflect the underlying attitudes? The answer to this question is further complicated by the notion that there may be no single evaluation in memory but rather these are often constructed when required (Schwarz and Bohner 2000). Therefore, we are reluctant to state which measurement scale will most accurately reflect the truth. Under such circumstances, we suggest that researchers consider their particular goals before deciding which scale is appropriate. For example, excluding the neutral position may be appropriate if the survey is trying to determine the voting patterns for the likely voters as these voters are committed to vote. Alternatively, for categories where respondents have not yet committed to act, the inclusion of a neutral position may be more appropriate. If researchers use odd-point scales, they might want to develop methods to distinguish between the kinds of responses that underlie the selection of a neutral position because of their different implications.

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