

**GOING WITH YOUR “GUT FEELING”:  
THE IMPORTANCE AND FUNCTIONAL SIGNIFICANCE  
OF AFFECTIVE CUES IN  
CONSUMER JUDGMENT AND CHOICE**

by

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Going With Your “Gut Feeling”: The Importance and Functional Significance of Affective Cues in  
Consumer Judgment and Choice

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We suggest that existing research does not fully recognize the potential importance of affective experience in consumer decision-making and judgment. The dominant view suggests that affective cues tend to have an impact on judgment primarily when consumers are either less *motivated* to be accurate, or when they have diminished *ability* to judge products (i.e., primarily under low elaboration conditions). Furthermore, affectively based choices are commonly viewed as impulsive decisions which consumers ultimately regret. Using a dual process perspective, the research reported here expands on these views in a number of important ways. First, we show that affective experience can influence choice even when highly motivated consumers are fully capable of making decisions on the basis of tangible product features (i.e., under high elaboration conditions). In particular, affect served as a heuristic cue for decisions made under both high and low elaboration. We also showed that consumers adjusted their use of affective cues in choice for different product categories, depending on whether such cues seemed relevant to satisfaction. Finally, affective purchases made in a natural setting were associated with greater long-term satisfaction, especially when the purchases were important. Overall, affective cues were shown to have much broader effects on consumer decision-making and judgment than has previously been demonstrated, and there was evidence that consumers are unaware of the influence of affective cues on their decisions. As well, the evidence suggests that the use of affective cues can be considered relatively functional, in the sense that it led to increased satisfaction rather than regret.

This research examines how affective cues derived from the experiential aspects of a product can influence consumer evaluations, choice, and purchase satisfaction. Anecdotal evidence suggests that the feelings consumers have about the products they consider buying can have an important influence on choice. For instance, consumers may purchase automobiles partly on the basis of the feelings they have when test driving the vehicle, rather than solely on the basis of the tangible product features. Trucks and sports utility vehicles may make consumers feel powerful, sports cars may provide feelings of exhilaration, and luxury cars, feelings of comfort. Indeed, well-known advertising slogans such as, “Pontiac—driving excitement,” or “It just feels right—Toyota,” seem to explicitly associate products with feelings. Of course, in addition to positive experiences, automobiles also offer consumers a wide range of tangible features from which to choose. Overall, consumers can make decisions in a number of ways: they can base their choice on feelings (affective cues)<sup>1</sup> derived from their product experiences, information (informational cues) relating to the tangible features of the product, or perhaps both. This observation raises important questions about the 1) manner in which consumers weigh such qualitatively different decision cues, 2) conditions under which informational versus affective cues are likely to influence choice, and 3) types of decisions that ultimately lead to greater purchase satisfaction.

Our research addresses these questions by investigating the influence of affective product experiences on information processing and decision-making within a dual process framework (Chaiken and Trope 1999). While the existing literature shows that affect tends to influence choice primarily under conditions of low elaboration, when consumers are not particularly motivated to make the correct decision or when it is difficult to process information about product features (e.g., Batra and Ray 1986; Batra and Stayman 1990; Eagly and Chaiken 1993; Gorn 1982; Pham 1998; Winkielman, Zajonc and Schwartz 1997), we show that

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<sup>1</sup> As noted below, we examine the research questions within a dual process framework (e.g., Chen and Chaiken 1999; Petty and Wegner 1999). We use the term ‘affective cue’ from that literature to avoid confusion.

consumers also make affectively based choices when decisions are important and relatively clear information about product features is available. We also demonstrate that affectively based choices can lead to increased satisfaction, and that such choices are particularly likely to be made when affective cues are relevant to satisfaction.

Our research contributes to the literature both conceptually and substantively. First, we draw on and extend the dual process framework to encompass not only initial product evaluations, but also choice and satisfaction judgments. In addition, we provide evidence that affective cues have broad effects on consumer evaluation, choice, and satisfaction, under both high and low elaboration conditions. We also identify the information processing involved when affective cues influence choice under varying levels of cognitive elaboration. Importantly, our studies provide an answer as to why consumers might be willing to base even important product decisions on their affective experiences. Rather than necessarily considering such decisions to be errors, our evidence suggests that affective choice is often more functional, in that it can lead to long-term purchase satisfaction. We thus expand on existing evidence concerning the scope, process and consequences of using affective cues in consumer choice.

The current findings also have practical implications. From a managerial standpoint, a variety of planning grids in the domain of advertising have long recommended the use of affective cues to influence consumer choice, even under high involvement conditions, e.g., the FCB grid (Vaughn, 1980) and the Rossiter and Percy grid (Rossiter, Percy and Donovan 1991). Our research lends support to such prescriptions, and suggests that firms should develop initiatives to elicit affective responses towards their brands, especially when consumers have important affective or transformational purchase goals, as in such contexts consumer choice and long term satisfaction are strongly influenced by the affective cues associated with the brand.

### Conceptual Background

Traditional theories of product choice have generally viewed the consumer as an information processor who analyzes the tangible features of the products in a choice set when making purchase decisions (see Bettman, Johnson, and Payne 1991; Meyer and Kahn 1991). According to these theories, decisions are made on the basis of either a full cost-benefit analysis of the available products in the choice set, or through heuristic decision rules that simplify the processing required to evaluate product features. This research provides a nice account of the ways in which consumers use product attributes to make decisions, however, with some exceptions (e.g., Luce et al. 1999), standard decision theories have had little to say about the role affective experience might play in consumer choice (Holbrook and Hirschman 1982; see also Pham 1998).<sup>2</sup> Furthermore, in cases where a role has been specified for affect in this literature, it has typically been viewed as a source of error, maladaptive behavior, or impulsiveness (e.g., Hoch and Loewenstein 1991, Luce et al. 1999, Shiv and Fedorikhin 1999). Research in the domain of attitude judgment has a somewhat longer history of recognizing the importance of affect in judgment, and the existing research largely suggests that affective cues act as simple heuristics in determining attitude judgment. The standard view in this literature is that affect influences attitudes under low elaboration conditions, where the motivation to make accurate judgments is low and/or consumers lack the capacity to engage in effortful information processing. While there is a good deal of evidence to support each of the above perspectives, we believe that they underestimate the role that affect plays in consumer choice.

The research described here expands the role of affect by examining whether affective cues are likely to be used to make choices under high elaboration conditions, the processes by which affective cues (preferences based on feelings) and informational cues (preferences based on features) jointly influence decision-making, and whether affect might play more of a

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<sup>2</sup> The majority of the studies that have examined consumer decision-making tend to provide subjects with only written or verbal information about products, and very little in the way of actual product experiences, thus precluding the possibility of examining the role of affect.

functional role in everyday consumer choice. We begin our theoretical development by first defining what is meant by affective cue, in contrast to other forms of affect. We then discuss dual process theory and use this framework to examine the existing evidence concerning the role of affect in judgment and decision-making (e.g., Chaiken and Trope 1999). Finally, we focus on more recent suggestions of dual process theories which considerably expand on the potential role of affect in judgment, but which, as yet, have not been empirically tested. We use these ideas as the basis for making our predictions, which we empirically test in the studies reported in this paper.

### Affect and Consumer Judgment

In keeping with previous work (Cohen and Areni 1991), we use the term affect to describe general feelings of positivity or negativity, while the terms mood and affective cue are used to denote more specific forms of affect. Mood refers to a broad state of positivity or negativity that arises gradually over time (Isen 1984; Schwarz 1990). In contrast, the term affective cue refers to more discrete feelings of positivity or negativity that can become attached to, or paired with, specific products (Leventhal 1980; Zajonc 1980). This is an important distinction that has not always been made clearly. The vast majority of existing studies concerning the impact of affect on judgment have employed mood state manipulations (i.e., inducing individuals into either a positive or negative mood prior to the judgment task). These mood state manipulations not only produce mood congruent effects on judgment (Schwarz and Clore 1983; Meloy 2000; Gardner 1985; Goldberg and Gorn 1987), but can also alter the amount of information processing that occurs by lowering cognitive capacity (Mackie and Worth 1989) or by affecting motivation to process information (Batra and Stayman 1990; Bless et al. 1990; but see Wegner et al. 1995). In contrast, our research is concerned with the extent to which consumer decisions are influenced by the relative valence of discrete affective cues associated with different alternatives in the same choice set (e.g., a positive affective cue associated with one option versus a negative affective cue associated with another option). We

show that these affective cues can influence judgment without lowering the overall level of information processing (pilot study, and studies 1 and 2).

### Dual Process Framework For Affective Choice

The current investigation adopted a dual process framework for the purposes of making our predictions (see Chaiken and Trope 1999). This framework includes a number of theories (e.g., Chen and Chaiken 1999; Epstein and Pacini 1999; Petty and Wegner 1999) sharing the common view that judgment may occur through two qualitatively different processes: a relatively simple process in which judgment is determined through the use of heuristic cues (peripheral cues) or associations; and a more systematic process (central process) where judgment is determined through effortful, deliberative thought. The systematic process is capacity limited, and tends to occur only when consumers both have the capacity and are motivated to make judgments (i.e., under high elaboration conditions). When motivation is low, or when the capacity to process information is limited, consumers are more likely to use heuristic cues to make judgments. Moreover, dual process theories suggest that consumers may use heuristic and systematic processing to pursue a number of different goals. These include not only accuracy goals, but also affective goals (Petty and Wegner 1999) and self-expressive goals (Chaiken et al. 1996). The idea is that individuals are somewhat flexible in their use of heuristic and systematic processing, and will engage in whatever form of processing that allows them to achieve their goals.

Dual process models have traditionally viewed affect as a simple heuristic cue that should influence judgment primarily under conditions of low elaboration (Eagly and Chaiken 1993).<sup>3</sup> In fact, some dual process theories consider affective and heuristic processing to be virtually synonymous. For instance, the cognitive-experiential model (Epstein and Pacini 1999) proposes that affect is the primary basis of experiential judgment, which is said to occur

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<sup>3</sup> As mentioned, there is also a considerable research literature that shows affect can influence the level of information processing as well. However, these effects pertain to general mood states, rather than the more discrete affective cues we examine here.

automatically through a process of simple association. The heuristic processing mechanism is also consistent with classical conditioning (Staats and Staats 1957) and mere exposure (Zajonc 1980) accounts of affective judgment, as well as the more recent ideas expressed in Schwarz's (1990) how-do-I-feel-about-it heuristic. In the latter case, individuals are said to use their feelings as a basis of judgment, primarily in situations where pertinent information is lacking or vague (i.e., when capacity is low). The idea that affect should influence judgment under low elaboration conditions has also been supported in numerous empirical studies in marketing and psychology (e.g., Batra and Ray 1986; Batra and Stayman 1990; Chattopadhyay and Nedungadi 1992; Gorn 1982; Gorn et al. 1993; Murphy and Zajonc 1993; Pallak et al 1983; Schwarz and Clore 1983; Winkielman et al. 1997). For instance, Gorn (1982) showed that subjects used affective cues (positive versus negative music) to form preferences when there was no information available about product features, as well as when subjects were less motivated. Also, Shiv and Fedorikhin (1999) found that consumers based their decisions on affective associations (vs. cognitive responses) when cognitive capacity was limited, and not when cognitive capacity was high.

Impact of affect under high elaboration conditions. However, the more recent literature on dual process models (Chen and Chaiken 1999; Petty et al, 1991; Petty and Wegner 1999) speculates that the use of affective cues may not be limited to situations where elaboration likelihood is low. This is partly because affective experience is said to possess a kind of self-evident validity (Epstein and Pacini 1999; Zajonc 1980), which compels individuals to act in accordance with their feelings, despite what a careful and objective analysis of the situation would suggest, and even when substantial consequences are involved (Kirkpatrick and Epstein 1992). This is also consistent with Petty's suggestion (Petty et al. 1991; Petty and Wegner 1999) that it is possible for affective cues to influence judgment under high elaboration, as long as they are perceived to be central or inherently relevant to the merits of the judgment being made (see also Chen and Chaiken 1999). It therefore seems possible that affective cues might

influence product choice under high elaboration conditions as well. However, there has been no clear empirical evidence to support this hypothesis.<sup>4</sup> Empirical evidence consistent with this would considerably expand the importance of affective experience in consumer choice. This is one of the key objectives of the studies reported here.

Processes underlying affective decisions. The current studies also examined the information processing that is involved in affective decisions. Under high elaboration, Chaiken et al. (1996) speculate about a number of different potential mechanisms by which affective cues might influence consumer judgment. For instance, affective cues could bias or guide systematic processing, leading to cognitive responses that are consistent with the valence of initial feelings. This could include further elaboration on the feelings or product experiences themselves, or thoughts about specific product features (Giner-Sorolla 1999). In addition, affective experiences could more directly influence judgment under high elaboration through simple heuristic processing that occurs in parallel with systematic processing (Chaiken et al. 1996). This possibility recognizes that heuristic processing need not be limited to low elaboration conditions, especially when the heuristic cue is perceived to be valid and reliable (Darke et al. 1998). While little is known about the processing of affective cues under high elaboration conditions, some studies have examined the effects of other heuristic cues such as source expertise (Chaiken and Maheshwaran 1994) and consensus information (Darke et al. 1998) under high elaboration. These studies show evidence of both biased systematic

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<sup>4</sup> Petty et al. (1993) provide at least suggestive evidence that a positive (vs neutral) mood can lead to more positive attitudes through biased systematic processing. However, their findings were weak and somewhat unreliable, and, as acknowledged by Petty et al., it was also possible to explain the results in terms of a reduction in cognitive capacity produced by the mood state manipulation they used. In contrast, we provide direct evidence that the affectively based decisions observed here are not simply due to lower cognitive capacity (see Studies 1 and 2). In addition, Pham et al.'s (2001) studies showing that affective experiences can lead to congruent thoughts about print and television ads might also be viewed as evidence of biased elaboration. However, it is difficult to clearly interpret their data in this way for a number of reasons. For instance, subjects in the Pham studies were under some amount of time pressure, and had no obvious incentive for thinking carefully about the ads, which should have limited elaboration. In addition, no distinction was made between simple evaluative/affect statements versus true elaborations that go beyond the specific content of the ads. (Our own studies make this distinction when coding elaborative thoughts.) Under these circumstances, Pham et al.'s thought listing data might be better viewed as open-ended affective/evaluative responses rather than measures of elaboration per se.

processing and parallel heuristic/systematic information processing. Based on these findings, we hypothesize that in high elaboration conditions, affective cues will influence decisions directly by acting as a heuristic cue, and indirectly by biasing processing to be consistent with the valence of the affective cue.

#### Functional Role of Affectively Based Choice

The second major goal of the current research was to examine why consumers might be willing to base even important decisions on affective cues, and in particular to determine whether there might be some adaptive or functional basis for affective decisions. As mentioned, the typical view seems to be just the opposite. Studies that find affect has an influence on consumer judgment usually interpret these effects in terms of bias or error (e.g., Howard and Gengler 2001; Meloy 2000; Shiv and Fedorikhin 1999). Affective purchases are also commonly viewed as impulsive in nature, and as likely to lead to regret (Hoch and Loewenstein 1991; Loewenstein 1996; Shiv and Fedorikhin 1999; Rook 1987). As a result, the suggestion has been that consumers should avoid using their feelings as the basis of choice, and it has even been said that marketers could attempt to manipulate affect in order to bias consumer decision making (e.g., Shiv and Fedorikhin 1999).

While acknowledging that it can certainly be harmful for consumers to base judgment on affective cues in some instances, others have suggested that affective judgment may also serve a more functional purpose (Pham 1998). For example, affective cues can be processed quickly, with little effort, and minimal thought (e.g., Pham et al. 2001), which is a major advantage to consumers when processing capacity is low, or when trying to conserve effort. This is consistent with the efficiency view of heuristic processing specified by dual process theories (Chen and Chaiken 1999). Pham (1998) also suggests that the use of affective cues in judgment can be considered functional to the degree that consumers show appropriate concern for the reliability of such cues. In support of this view, a number of studies have found that consumers attempt to correct judgment for irrelevant sources of affect (e.g., Gorn et al. 1993;

Pham 1998; Schwarz and Clore 1983). This form of adaptive behavior is consistent with the dual process view that heuristic cues should be used as the basis of judgment only when they are perceived to be reliable and valid (Darke et al. 1998).

While the above arguments suggest affective judgment can be functional under conditions of low elaboration (when capacity or motivation is low), this form of judgment is potentially more harmful when significant consequences are involved. However, we propose that the use of affective cues can also be considered functional for important decisions, so long as these decisions satisfy important hedonic goals. This is consistent with the multiple motives perspective of the dual process framework (Chaiken et al. 1996; Petty and Wegner 1999), which states that highly motivated consumers may adjust their evaluations to satisfy other important goals, besides accuracy goals (i.e., choosing the product with the best features). For instance, consumers may be concerned with social goals such as self-expression, or satisfying the requirements of social roles (Belk 1988; Solomon 1983); and/or they may be concerned with hedonic goals such as simply having fun, or feeling good (Holbrook and Hirschman 1982; Petty and Wegner 1999). These ideas also bear similarity to those of Katz (1960), who claimed that judgment should be understood in terms of the actual goals of the consumer, not only according to whether it is perfectly accurate in a knowledge based or objective sense. In particular, Katz proposed that judgment is functional to the degree it leads to the satisfaction of important goals.

In light of these ideas, we propose that, while affective judgments may be viewed as biased from an accuracy point of view, such judgments may still be functional to the degree that other important goals are satisfied, especially affective goals (Holbrook and Hirschman 1982). This possibility was investigated by examining whether consumers would adjust their use of affective cues in making decisions according to whether an affectively based choice seemed likely to lead to satisfaction (study 3), and examining whether affective purchases might actually lead to greater purchase satisfaction in the long run (study 4).

In summary, in this paper we report five studies that examine the extent to which affective experience might influence product choice under high elaboration conditions, and whether affective choices can be functional in the sense that they can often lead to greater purchase satisfaction. Despite the intuitive appeal of the above ideas, there has been little in the way of empirical evidence to directly support the proposed influences of affective experience on judgment.

### **Pilot Study**

An initial experiment was completed to examine whether consumers would base their decision on affective cues when they were highly motivated to make decisions, and there was clear information available about the product features (i.e., under high elaboration conditions). In particular, we predicted that a significant proportion of consumers would base their choices on affective cues under these conditions.

#### Method

##### Participants and Overview

Sixty-five students were recruited from a large West Coast university in return for course credit. The experiment was a one-factor between-subject design with three experimental conditions: affective-cue-only, informational-cue-only, and both affective-and-informational-cues. All participants were asked to choose between two different portable CD players. Subjects in the affective-and-informational cue condition first listened to music on each of the CD players (which provided the affective cue), then read some information about the product features (which provided the informational cue), and then made their choice. Subjects in the affective-cue-only condition listened to the CD players but did not receive product information, while subjects in the informational-cue-only condition read the information, but did not listen to the CD players. The affective cue was provided by listening to positive music on one CD player and negative music on the other. The informational cue was created by providing subjects with product descriptions indicating that one CD player had superior features to the other. The

affective and informational decision cues were pitted against each other in the affect-and-information condition (i.e., superior features paired with negative music, and inferior features paired with positive music). To create a high level of elaboration in all conditions the product information was provided in a simplified form (high ability to process), and by providing incentives to create high personal relevance (high motivation to process). Further details are provided below.

Affective cue. Music was used to manipulate the affective cue associated with each CD player. Positive music was played on the affectively superior option, and negative music was played on the affectively inferior option. Subjects in a pretest rated the extent to which each of twelve songs made them feel either negative or positive (-3 to +3). The two most positive songs (Spice Girls and Gypsy Kings,  $M = 1.99$ ) and the two most negative songs (Nina Simone and The Smiths,  $M = -1.76$ ) were selected for use in the pilot study. The intensity of positive feelings generated by the positive songs differed significantly from that generated by the negative songs ( $t(33) = 13.78, p < .001$ ). In the affective cue conditions, subjects heard one of the two positive songs (randomly determined) on the affectively superior CD player, and one of the two negative songs (randomly determined) on the affectively inferior player. This meant there were four possible combinations of positive and negative songs.

Informational cue. The product information listed ten attributes that are commonly displayed on the packaging of portable CD players. Subjects were told this information was taken from the current Consumer Guide Magazine, which was an independent and authoritative source of information. Table 1 shows the comparative information exactly as it was given to subjects. This information was meant to make it relatively easy for subjects to appreciate the differences that existed between the two CD players. The players were the same on all but two attributes. The informationally superior CD player had a longer battery life (20-hours) and weighed less (220 grams) than the informationally inferior CD player (15-hour battery life and 280 grams). These differences were designed to be relatively large given the actual level of

differentiation that existed in the market for CD players in the same price range. Pretesting showed that subjects considered the battery life and weight features to be relatively important ( $M_s = 5.27$  and  $5.27$ ,  $t_s = 4.18$ ,  $p_s < .001$ , compared to scale midpoint: 4 on a 1-7 scale). Furthermore, 100% of the pretest subjects chose the informationally superior CD player when given only the product information, and they also indicated this preference was reasonably strong ( $M = 2.27$ ,  $t = 7.47$ ,  $p < .001$ , compared to scale midpoint: 4 on a 1-7 scale).

### Procedure

Subjects were run in pairs in the same room, but were separated by a partition. Each pair was randomly assigned to one of the three conditions. Two different brands of CD player were used in this study (Panasonic and JVC); however these machines were actually produced by the same manufacturer. In order to eliminate any pre-existing brand preferences, subjects were not told the brand names, and any brand information on the CD players was covered using masking tape. The appearance of the machines was virtually identical, with slight differences in color and the appearance of the control buttons. Pretest subjects who examined the two CD players, and listened to the same neutral music on each machine, showed no difference in their likelihood of choosing one over the other ( $\chi^2(1) = 1.53$ ,  $p > .20$ ). Thus, despite the fact they were different brands, the two CD players were equally preferred in the absence of affective and informational cues.

A number of procedures were included in the study to create a high elaboration context, across all conditions. Based on previous research (e.g., Petty, Cacioppo and Schumann 1983), we made the product choice personally relevant by informing subjects they would actually have a chance to win the CD player they chose in a lottery. The presentation format for the product information also was simplified by using a comparative table, and subjects were given as much time as they needed to examine this information and make their decision. Overall, these procedures are consistent with high elaboration conditions that have been used in previous studies (see Petty and Cacioppo 1986).

In the two conditions including affective cues, subjects listened to 90 seconds of positive music on the affectively superior CD player, as well as 90 seconds of negative music on the other CD player. The order of positive and negative music was randomized. Subjects in the affective conditions were also allowed to see and handle each of the CD players to create a situation that would more closely resemble a normal purchase (As noted above, pretesting indicated there were no initial differences in preference based on the general appearance of the two machines.) Subjects in the affect-and-information condition next read over the information about the two CD players and indicated their choice. Subjects in the information-only condition read the same product information, without listening to the CD players beforehand. Those in the affect-only condition were not given any additional information about the CD players. Finally, subjects were asked to indicate their choice of CD player on a separate slip of paper, and deposit this into a lottery box. The slips were coded, enabling us to later identify the responses of each subject. This procedure reduced experimental demands that might have otherwise been placed on subjects, and made the chance of winning more salient.

### Results and Discussion

The dependent measure was subjects' choice of CD player (Figure 1). An overall chi-squared test showed that the experimental condition had a significant effect on choice ( $\chi^2(2) = 26.66, p < .001, \phi_C = .64$ ). Examination of the data showed that 100% of the subjects in the information-only condition chose the informationally superior option on the basis of the product features alone. Thus, subjects clearly understood that the features of the informational option dominated the features of the affective option. Nevertheless, when subjects received both affective and informational cues, the affective cue created a significant shift in preference towards the affectively positive option ( $\chi^2(2) = 14.67, p < .001, \phi_C = .58$ ). A full 50% of the subjects in the affect-and-information condition chose the option associated with the positive affective cue over the superior features of the informational option. The affect-and-information

group was also marginally different from the affect-only group ( $\chi^2(2) = 3.15, p < .10, \phi_c = .27$ ), where 76% of subjects chose the affectively positive option.

The results of this study seemed promising: A substantial proportion of subjects preferred the affectively positive option to the informationally superior option, despite the fact that the difference in the relative features was quite clear. Furthermore, these choices had important consequences for subjects, given that their choice determined which of the CD players they might win. Additional studies were undertaken in order to further examine these effects, and to better establish the conditions under which consumers were willing to make affectively based choices.

### **Study 1: Influence of Affective Cues on Choice Under High and Low Elaboration**

This experiment replicated and extended the findings of the pilot experiment by examining the influence of affective experiences under both high and low elaboration conditions, in order to identify the process(es) by which affective cues influence choice. As in the pilot study, in this and the following experiment, we used positive and negative music to manipulate the valence of affective cues.

Dual process theories suggest that affective cues should have a heuristic effect under low elaboration, and therefore influence decisions without involving cognitive mediation (CUE—CHOICE path; e.g., Eagly and Chaiken 1993; Petty and Cacioppo 1986). However, in the case of high elaboration, a number of mechanisms may be involved (Chaiken and Maheshwaran 1994, Darke et al. 1998). For instance, affective cues may lead to biased systematic processing of the product features in favor of the affective option (CUE—THOUGHTS—CHOICE path). It was also possible that affective cues (CUE—CHOICE path) and thoughts (THOUGHTS—CHOICE path) would have relatively independent (parallel) effects on choice. In addition, we examine whether consumers would elaborate primarily on their affective experiences concerning the CD players, the objective features of the CD players, or both (Giner-Sorolla 1999). Based on studies, which examined other types of heuristic cues (Chaiken and

Maheshwaran 1994; Darke et al. 1998), we expected to observe a combination of parallel heuristic/systematic processing and/or heuristically biased systematic processing under high elaboration.

### Method

One-hundred-and-fifty-seven students were recruited. The experiment was a 3 (Condition: informational-cue-only, affective-and-informational cues, and affective-and-modified-informational cues) x 2 (Elaboration: high, low) between-subjects design. The affective-cue-only condition was not included in this study in order to simplify the design.

The procedure resembled the pilot study, but with a number of important improvements. First, we replaced one of the positive songs from the pilot study (Spice Girls), due to the concern there may have been some change in the popularity of this song. A pretest on twelve songs (including the original four), using the same 7-point measure of how positive or negative each song made them feel, used in the pilot study, led us to substitute the Spice Girls song with a recording of Louis Armstrong. The pair of positive songs was judged as significantly more positive than the two negative songs ( $M_s = 2.23$  vs  $-2.66$ ,  $t(30) = 17.58$ ,  $p < .001$ ,  $\omega^2 = .91$ ). Importantly, these songs were not rated as different in perceived recording quality ( $M_s = .97$  vs  $.53$ ,  $t(30) = 1.23$ ,  $p > .20$ ,  $\omega^2 = .02$ ). Second, identical CD players were used to play the music in this study. Both CD players were covered by identical carrying cases to disguise the fact that they were the same model and brand.

We also changed the information given about the CD players somewhat, so that we could determine whether low elaboration subjects would simply count the number of superior attributes as a means of making their decision. Specifically, we added two additional product features (optic cleaning brush and the adaptor cord length) to the information table. Pretesting showed these new features were less important than the two attributes (battery life and weight) that favored the informational option (combined  $M_s = 4.52$  vs  $5.81$ ,  $F(1,30) = 21.39$ ,  $p < .001$ ,  $\omega^2 = .39$ ). In the affect-and-modified-information condition, the two unimportant features favored

the experientially superior option, while the two important features (battery life and weight) favored the informationally superior option. Pretesting showed that the informational option was still superior even after adding the new information about the two weak attributes favoring the other option (32 of 33 pretest subjects preferred the informational option). In the information-only and the affect-and-information conditions, the informationally superior CD player was better on the important attributes, but did not differ on the unimportant attributes. We could determine whether subjects were simply counting the differences in the features by comparing the modified information condition (2 important features vs. 2 unimportant features) to the standard affect-and-information condition (2 important features vs. 0 unimportant features).

### Procedure

In the high elaboration condition, the procedure was identical to the pilot study. The low elaboration condition was similar to the high elaboration condition except that subjects did not have the opportunity to enter into the lottery. Furthermore, they were allowed only 20 seconds to read the information table. Pretesting showed that this was just enough time for all subjects to read through the table. These procedures were aimed at making it difficult or unlikely that subjects would think carefully about the product features. After subjects had made their choice, they completed a questionnaire and then were debriefed.

### Measures

Following their choice, subjects were asked to rate their attitude towards each CD player on two dimensions (positive—negative, favorable—unfavorable). All ratings in the questionnaire were seven-point scales. These two ratings were averaged to form an overall measure of attitude for each option. Subjects' implied choice was determined according to which of the products was rated higher on the attitude measures. On this basis, implied choices were classified as affective, informational, or indifferent. These data allowed us to examine subjects' relative preference, and whether these preferences corresponded to choice.

Subjects then had two minutes to list any thoughts they had while they were making their decision. These thoughts were coded in terms of whether they were experiential or informational thoughts, and further coded in terms of whether they favored the affectively or the informationally superior option. Statements that simply repeated product features were not coded as elaborations, since these do not go beyond the actual information given directly to subjects. Restatements of attitudes or choice were also not coded as thoughts, in order to maintain a distinction between these constructs. Informational thoughts were those that elaborated upon or undermined the attributes of one or other of the CD players that were given in the product description. Experiential thoughts were those thoughts that elaborated upon some aspect of their experience when listening to the CD players, i.e., their feelings about the CD players or the listening experience. For both experiential and informational thoughts, those in support of the informational option were subtracted from those in support of the affective option. This produced a valenced experiential thought measure and a valenced informational thought measure, where positive values indicated more thoughts in support of the affective option for both measures.

We also checked subjects' memory for the differences in the attributes. For each attribute, subjects were asked to indicate which CD player was superior, or whether both CD players were the same. Subjects were also asked to rate how much they attended to the music and/or information, and what they thought was the purpose of the study.

## Results and Discussion

### Manipulation Checks

The self-reported attention measure, memory for the target attributes, and the total number of thoughts that subjects indicated served as measures of elaboration (see Chaiken and Maheshwaran 1994; Petty and Cacioppo 1986, p.36-40). Subjects in the high elaboration condition reported being more attentive than those in the low elaboration condition ( $F(1,105) = 4.29, p < .05, \omega^2 = .03; Ms = 5.15$  and  $4.77$ ). In contrast, the condition manipulation had no

significant impact on attention ( $F < 1$ ). For the memory measure, high elaboration subjects were more accurate in identifying the correct information for the four target attributes than low elaboration subjects ( $M_s = 3.53$  vs.  $3.22$ ;  $F(1,147) = 5.56$ ,  $p < .05$ ,  $\omega^2 = .02$ ). There was also a main effect of condition in this case ( $F(2,147) = 40.94$ ,  $p < .01$ ,  $\omega^2 = .34$ ), which indicated that memory scores were lower in the modified-information condition ( $M = 2.55$ ) compared to the other two conditions ( $p_s < .05$ ). Importantly, there was no difference between the information-only and affect-and-information condition ( $M_s = 3.94$  vs  $3.63$ ,  $p > .20$ ). Finally, the total number of thoughts listed by participants showed more thoughts were generated under high elaboration ( $M = 2.12$ ) than low elaboration ( $M = 1.53$ ;  $F(1,151) = 9.09$ ,  $p < .01$ ,  $\omega^2 = .04$ ). There was also a main effect of condition ( $F(2,151) = 14.07$ ,  $p < .01$ ,  $\omega^2 = .13$ ) that indicated there were more thoughts in the two music conditions ( $M_s = 2.19$  and  $2.19$ ) than the information only condition ( $M = 1.08$ ,  $p_s < .01$ ). Note that this finding suggests affective cues actually raised the level of information processing somewhat, rather than reducing it.

Together, these findings show that the level of information processing is greater under high versus low elaboration. In addition, the fact that the affect-and-information condition was not significantly lower than the information-only condition on the elaboration measures argues against the possibility that the affective cues might have reduced subjects' capacity to engage in information processing. Finally, although there was some suggestion that memory for the target attributes was lower in the modified-information condition, no such differences were observed for the other process measures, suggesting this was not a general deficit in this condition. The deficit in memory was likely due to the simple fact that subjects in the modified-information condition had more attribute differences to remember.

#### Choice and Implied Choice Data

The primary dependent measure was subjects' choice of CD player. The results are shown in Figure 2. A log-linear model was used to analyze the relationships between condition, elaboration, and choice. The simplest model that provided a good fit to the data included only

condition as a predictor of choice ( $\chi^2(6) = 0.55, p > .99$ , for lack of fit). This meant that the condition manipulation had a significant impact on choice, while neither the elaboration manipulation, nor the interactions among the variables, had any impact on choice; a result consistent with our expectations. Additional analyses showed that more people chose the affective option in the two affect-and-information conditions than in the information-only condition ( $\chi^2(1) = 19.62$  and  $22.46, ps < .001, \phi_{cs} = .44$  and  $.46$ ). Additionally, there was no significant difference between the two different versions of the affect-and-information condition ( $\chi^2(1) = 0.16, p > .60, \phi_c = .04$ ).

We also examined the implied-choice data (derived by coding the preferences suggested by the attitude ratings for each CD player). The pattern of these data (see Figure 3) closely paralleled the findings for actual choice. As before, the model with condition as a predictor of choice provided a good fit to the data ( $\chi^2(9)$  fit = 4.30,  $p > 0.85$ , for lack of fit). Also, both of the affect-and-information conditions differed from the information-only condition ( $\chi^2(2) = 31.13$  and  $31.28, ps < .01, \phi_{cs} = .55$  and  $.55$ ), while there was no difference between the affect-and-information conditions ( $\chi^2(2) = 1.26, p < .50, \phi_c = .11$ ). In general, the implied choice data showed that the affective cues influenced choice in the direction of the affectively positive option.

Overall, affective cues led to more affectively superior choices compared to when only information about the products was provided, regardless of the level of elaboration. This pattern was true for both the actual and implied choice data, and, as would be expected, these measures were significantly associated ( $\chi^2(2) = 83.97, p < .001, \phi_c = .73$ ), indicating that attitudes were generally consistent with choice. Finally, there was no support for the notion that subjects would make fewer informational choices in the affect-and-modified-information condition compared to the original affect-and-information condition. This meant there was no evidence that subjects used a counting heuristic under low elaboration.

### Valenced Thoughts

An ANOVA showed a marginal effect of experimental condition on valenced informational thoughts ( $F(1, 151) = 2.54, p < .10, \omega^2 = .02$ ). Consistent with the choice data, contrasts found that informational thoughts were significantly more negative in the information only condition than in the two affect-and-information conditions ( $M_s = -.54$  vs  $-.28$  and  $-.20, p_s < .05$ ), indicating that subjects in the two affect and information conditions generated more thoughts in favor of the affectively superior option, compared to the informationally superior option. Further, the two affect and information conditions did not differ from each other ( $F < 1$ ). The ANOVA for valenced experiential thoughts showed no significant effects ( $F_s < 1.5$ ). These findings suggest that valenced informational thoughts, but not experiential thoughts, were consistent with the findings for the choice data.

### Path Analyses

As the two affect-and-information conditions did not differ significantly on either the thought listings or the choice data, these conditions were combined in the path analyses. The condition variable (COND) was therefore coded as 0 for the information-only condition, and 1 for each of the affect-and-information conditions. The choice data were also coded 0 for informational choices and 1 for affective choices. In addition, high and low elaboration conditions were analyzed separately. Structural equation modeling was used to simultaneously derive maximum likelihood estimates of the model parameters (see Figure 4).

Not surprisingly, under low elaboration, the only significant path from condition to choice was the direct heuristic path (COND—CHOICE,  $\beta = .41, p < .01$ ). This simply suggests that choice was determined heuristically under low elaboration, because subjects were limited in their capacity to think about such information. Under high elaboration, the direct heuristic path was also significant (COND—CHOICE,  $\beta = .36, p < .01$ ), while the THOUGHT—CHOICE paths were significant for both informational and experiential thoughts ( $\beta_s = .44$  and  $.31, p_s < .01$ ). This pattern of results is consistent with parallel heuristic/systematic processing. In addition,

there was no evidence that the affective cue biased or guided systematic processing (i.e., the COND—THOUGHT—CHOICE path was not significant).

### Summary

Overall, the results support the prediction that affect influences choice by acting as a simple heuristic cue under both high and low elaboration. In addition, the total thoughts data showed that subjects were more likely to generate thoughts about the CD players under high (vs. low) elaboration. The systematic processing that occurred in the high elaboration condition operated in parallel to the heuristic effects of the affective cue, and there was no evidence of any biased systematic processing.

One surprising finding was that a large proportion of the experiential thoughts subjects listed were concerned with the sound quality of the CD players (97%). This was surprising because the music was carefully pretested to be similar in sound quality, the CD players were identical, and there was a good deal of information in the product description suggesting that sound quality should not differ. Looking more closely at the thoughts relating to sound quality, 25% favored the sound quality of the affective option, 27% favored the sound quality of the informational option, and 48% said that there was no difference in sound quality. Importantly, the path analyses showed there were no significant effects of experimental condition on experiential thoughts (which were largely comprised of thoughts about sound quality). These findings suggest that although some subjects were thinking about sound quality, these perceptions were not related to the influence that affective cues had on choice. However, we decided to further examine this issue in the next experiment by including explicit information about sound quality, and by having subjects rate their perceptions of sound quality directly.

### **Study 2: Relevance of Affective Cues and Choice**

The main purpose of this experiment was to further specify the mechanism by which affective cues influenced choice. We have shown that affect can serve as a heuristic cue, which is capable of influencing choice even under high elaboration conditions. The affective cue

manipulation we used was irrelevant to the choice, i.e., the likeability of the music had no relevance to the choice between the two CD players. This manipulation was based on previous research relating to the how-do-I-feel-about-it heuristic (Schwarz and Clore 1983), that suggests that irrelevant sources of affect can bias judgment, especially when people lack full awareness of the true source of their feelings. Evidence for the operation of this heuristic has been provided in previous research that manipulates mood state, and shows that subjects will correct mood congruent judgments when they become aware their feelings are irrelevant to the judgment task (e.g., Gorn et al. 1993, Pham 1998). Study 2 used the same approach to provide evidence that the affective cues used in our studies influence product choice by means of a similar mechanism. That is, the influence of the irrelevant cue is outside the decision maker's awareness. Subjects in an attribution condition were asked to rate the music they listened to on the CD players before actually making their choices (based on Gorn et al. 1993). The prediction was that these ratings would make subjects aware of the feelings they had for the music, and thereby cause them to correct for the affective cue when judging the CD players. It should be noted that these predictions are also consistent with the dual process view that consumers should only use heuristic cues to the degree that they are perceived to be a reliable and valid basis for judgment (Chen and Chaiken 1999; Petty et al. 1991).

Finally, this study also further verified that subjects generally understood there were no sound quality differences between the two CD players. As mentioned, participants listened to identical CD players, and pretests showed that the music recordings were the same in terms of sound quality. In addition, the information that described the CD players included three attributes related to sound quality (enhanced bass, frequency response range, and laser type), and the models were identical on these attributes. However, it was still possible that subjects might not have understood the implication these attributes had for sound quality and, thus, it seemed worth exploring perceptions of sound quality further. We did this in two ways: First, we included a condition in which an overall rating of the sound quality was added to the information

table, explicitly indicating that there were no differences on this dimension. Second, we included additional measures to determine whether subjects understood that the information they were given meant there should be no difference in sound quality.

#### Method

One-hundred-forty-six students were recruited for this study. The experiment was a 3 (Condition: affective-and-informational-cue, attribution, information-only) x 2 (Sound quality information: explicit rating, no rating) between-subjects design. All subjects were run under high elaboration. The affective cue manipulation included the same positive and negative music as in the previous study. The product information was identical to the pilot study except that an explicit measure of sound quality was included in the table half of the time. This rating indicated that both CD players received identical sound quality ratings (95 out of 100) from Consumer Guide Magazine.

The attribution condition was identical to the affect-and-information condition except that while subjects were listening to each CD player, they were also asked to rate how the music made them feel. In the affect-and-information condition, subjects rated the music only at the very end of the experimental session, after making their product choices and completing all the other measures.

The measures were the same as in Study 1, along with the following additional measures: Subjects' rated how the music made them feel on three scales (positive—negative, good—bad, happy—sad). These were then averaged into an overall measure of subjects' feelings. In addition, subjects in all conditions completed measures concerning their perceptions of sound quality (subjects in the information only condition were asked what they imagined the sound quality would be like). Finally, subjects were provided with a table showing the attributes of the two CD players again, and were asked to indicate which features were related to sound quality.

## Results and Discussion

### Manipulation Check

The mean self-reported attention rating ( $M = 5.30$ ), memory for target attributes ( $M = 88\%$  correct), and the total number of thoughts listed ( $M = 3.97$ ), were comparable and somewhat higher than the means observed in the high elaboration condition of experiment 1 ( $M_s = 5.15$ ,  $88\%$  correct, and  $2.12$ , for the respective measures). These observations suggest that the high elaboration condition was adequately replicated in the current study.

ANOVAs computed for the memory and total thought measures showed there were no effects of either the condition or the quality factor ( $F$ 's  $< 1$ ). In addition, while there was no effect of the quality information on self-reported attention ( $F < 1$ ), there was a main effect of condition on this measure ( $F(2,139) = 4.45$ ,  $p < .05$ ,  $\omega^2 = .04$ ). Subjects reported being least attentive in the attribution condition ( $M = 4.96$  vs.  $5.57$  and  $5.45$ ). Closer inspection showed subjects in the attribution (vs. music-and-information) condition said they paid less attention to the music ( $M = 4.45$  vs.  $5.38$ ), but there were no condition differences in self-reported attention to the product information ( $F < 1$ ). It seems that when subjects in the attribution condition became aware that the music was irrelevant to their judgment of the CD players, they simply paid less attention to it. Overall, and most importantly, all the analyses indicate no evidence that affective cues reduced subjects' capacity to process information pertaining to the product attributes.

Finally, relating to the question of whether participants understood the information they were provided about sound quality, the majority identified bass enhancement, frequency range, and laser type as features related to sound quality ( $95\%$ ,  $88\%$ , and  $77\%$  correct), and also identified that the CD players were the same on these attributes ( $97\%$ ,  $95\%$ , and  $97\%$  correct). This showed that subjects generally understood there were no differences in the features related to sound quality. Furthermore, including the explicit rating of sound quality in the information table did not affect participants' responses to the question asking them to rate their

own perceptions of sound quality, and there were no sound quality differences across CD players ( $F_s < 1$ ). These findings imply that, irrespective of whether they were given any explicit rating of sound quality or not, participants generally understood that the information implied the two CD players were identical in terms of sound quality.

### Choice Data

The primary dependent measure was subjects' choice of CD player. The results are shown in Figure 5. A log-linear analysis showed that the simplest model providing a good fit to the choice data included only the condition as a predictor ( $\chi^2(6) = .63, p > .99$ , for lack of fit). The sound quality manipulation appeared to have no effect, which is consistent with the findings reported above, which suggest participants knew there was no difference in sound quality regardless of whether an explicit rating was provided. Additional analyses showed that, as before, significantly more subjects chose the affectively superior option in the affect-and-information condition than in the information-only condition ( $\chi^2(1) = 14.46, p < .01, \phi_c = .39$ ). Importantly, in the attribution condition, a significantly lower proportion of participants chose the affectively superior option compared to that in the affect-and-information condition ( $\chi^2(1) = 5.03, p < .05, \phi_c = .22$ ). This finding suggests that attribution caused a significant proportion of subjects to correct their choices for the irrelevant affective cue provided by the music. Finally, there was still a significant difference between the information-only condition and the attribution condition ( $\chi^2(1) = 4.75, p < .05, \phi_c = .22$ ), suggesting that subjects did not completely correct for the effect of the affective cue. Overall, the results of our previous studies were replicated, showing that the presence of the affective cue led to more affective choices compared to when only product information was provided. Furthermore, as predicted, the attribution manipulation reduced the proportion of subjects who chose the affectively superior option, suggesting that the effect of the affective cue occurred primarily when the presence of this cue was outside the awareness of the subjects.

### Valenced Thoughts

An ANOVA showed that only the CONDITION manipulation influenced the valence of informational thoughts ( $F(1,140) = 3.75, p < .05, \omega^2 = .04$ ). Consistent with the choice data, follow up analyses showed that thoughts about the product features in the information-only condition ( $M = -.90$ ) were significantly more favorable than either the affect-and-information condition ( $M = -.49$ ), or the attribution condition ( $M = -.40$ ). Remember that negative scores indicate more thoughts in favour of the informational option. The ANOVA for valenced experiential thoughts showed no significant effects ( $F_s < 1$ ). These findings suggest that the CONDITION factor impacts valenced informational thoughts in a manner consistent with the effects observed on choice.

### Path Analyses

As before, the mechanism underlying the influence of the affective cue on choice was further examined by computing a path analysis (see Figure 6). The most direct test was provided by coding the information-only condition as 0 and coding the affect-and-information condition as 1. This path analysis again revealed a significant heuristic path (COND—CHOICE,  $\beta = .35, p < .05$ ), as well as systematic processing in the form of a significant relationship between informational thoughts and choice (INFO THOUGHTS—CHOICE was significant,  $\beta = .19, p < .05$ ). These paths are consistent with the parallel heuristic/systematic effects observed for the affective cue in the high elaboration condition of Study 1. In addition, the current analysis showed evidence of biased systematic processing (COND—INFO THOUGHTS and INFO THOUGHTS—CHOICE paths were significant,  $\beta_s = .24$  and  $.19, p_s < .05$ ).<sup>5</sup> Thus, both parallel heuristic/systematic processing, as well as heuristically biased systematic processing seemed to play a role in the influence that affect cues had on choice.

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<sup>5</sup> Path analyses were also conducted for information only vs. attribution effects on choice, as well as attribution vs. experience-and-information effects on choice. Each analysis showed only heuristic processing.

The above analyses suggest that the affective cue influenced choice partly through a heuristic process, as evidenced by a significant COND—CHOICE path in figure 6. However, it was also possible to further examine the role of affect as a heuristic cue using the subjects' ratings of how the music made them feel. These feelings significantly predicted choice in the affect-and-information condition ( $\beta = .29, p < .05$ ), which provides the most direct evidence that the feelings produced by the music acted as the heuristic cue.

### Summary

The findings here generally replicated those of our previous studies, and provided further evidence for the heuristic impact of affective cues on choice under high elaboration. In particular, the attribution manipulation showed that subjects who were made aware of their feelings at the time they listened to the music reduced the extent to which they used the affective cue as the basis of choice. This is consistent with past findings concerning the how-do-I-feel-about-it heuristic, and suggests that a similar mechanism was operating here. The attribution findings are also consistent with the dual process view that feelings should only be used in judgment to the degree they are perceived as relevant or valid (Chen and Chaiken 1999, Petty et al. 1991). In addition, process analyses showed that affect served as a heuristic cue to influence choice, both by acting in parallel with systematic processing, and also by biasing systematic processing to some extent. Moreover, direct measures of subjects' affective reactions to the music were shown to predict choice. Overall, this study provided a number of sources of evidence that were consistent with the prediction that affective cues would act as a heuristic to influence choice under high elaboration.

There were also a number of sources of evidence to suggest that subjects generally understood the product information implied there should have been no differences in sound quality between the two CD players. Furthermore, the affective cue manipulation did not seem to have any significant effects on either direct ratings of sound quality, or on the experiential thoughts (which largely concerned statements about sound quality). Therefore, it does not

seem possible to account for the influence that affective cues had on choice in terms of differences in sound quality.

### **Study 3: Product Category and the Relevance of Affective Cues to Satisfaction**

The studies described so far have demonstrated that affective cues can influence choice under both high and low elaboration. In order to show this, we took advantage of the fact that affective judgment occurs relatively automatically, which means that consumers are often unaware of the factors that influence their affective experiences. This allowed us to essentially “trick” consumers into thinking the CD player with positive music was actually better. Under these circumstances, affective cues were shown to bias choice by causing a significant proportion of consumers to pick a CD player that was less optimal in terms of the objective product features provided. Therefore, the findings presented so far are largely consistent with previous suggestions that affectively based decisions are poor decisions (Meloy 2000; Shiv and Fedorikhin 1999). The last two studies further examined the question of why consumers might be willing to make even relatively important decisions on the basis of affective cues.

While affect certainly does bias judgment at times, it seems unlikely that this is the only role it plays in consumer choice. Affectively based choices in everyday life often seem to provide consumers with important rewards that go beyond the tangible benefits provided by the product. As a result, affectively based decisions might be considered good decisions, in the sense that they satisfy important hedonic goals. This idea is central to the notion of experiential consumption (e.g., Holbrook and Hirschman 1982; Richins 1994). It is also central to dual process theories which either implicitly or explicitly assume that consumers base their judgments on feelings because this allows them to make decisions that are more satisfying (e.g., Chaiken et al. 1996, Clore and Parrott 1991, Schwarz 1990; Petty and Wegener 1999; Pham 1998).

It is noteworthy that the idea that experiential qualities of the product may also contribute to purchase satisfaction provides the basis for a more functional explanation as to why

consumers might be willing to base even important decisions on affective cues (Katz 1960). Simply stated, we suggest that consumers often make affectively based choices because they believe such decisions will lead to greater purchase satisfaction. We tested this hypothesis in the remaining studies by investigating affective choice for a broader set of product decisions. Moreover, these studies did not include any experimentally engineered attempts to bias choice, but rather observed the extent to which affective experiences that were naturally associated with the purchase context related to choice and purchase satisfaction.

Study 3 provided an initial test of the functional hypothesis by examining whether consumers would adjust their use of affective cues when this seemed likely to increase purchase satisfaction. Participants in this study were asked to consider a number of different product categories and provide two judgments: The extent to which their purchase satisfaction would depend on their affective experiences or the features of the product and the extent to which they would base their choice on affective cues or product features for each product. By comparing the choice and satisfaction ratings for each type of product, it was possible to determine whether subjects adjusted their choices to match the basis of satisfaction in the same product category. Based on the functional hypothesis, we predicted that consumers should use affective cues in judgment to the degree that they were perceived as relevant to satisfaction. We also examined whether this would vary depending on the overall importance of the product category.

#### Method

Fifty-one introductory marketing students participated in this study in groups of 4 or 5. All participants completed two questionnaires in counterbalanced order. One of the questionnaires was called the Choice Survey. In this case, subjects were told that we were interested in knowing the extent to which they thought they would base their product choices on their general feelings about the product, the specific features of the product, or both. Subjects then rated the extent to which they would base their choices on their feelings (0 = not at all to 5

= very much) and the features (0 = not at all to 5 = very much) for 51 different products (see Table 2). We included a broad range of products with which subjects were likely to have some past experience or knowledge. The other questionnaire that participants completed was called the Satisfaction Survey. The experimenter explained that in this case we were interested in knowing about the extent to which subjects were usually satisfied with products because of the general feelings they had when using the product, and/or the specific features of the product. Subjects then rated the same products in terms of whether feelings and features were important in determining satisfaction (using the same scales described above). The experimenter ensured that subjects understood the differences between the surveys, and confirmed this in the post experimental interview. To make it unlikely for subjects to remember their responses to the first questionnaire, two steps were taken. First, subjects were not informed about the second questionnaire before they completed the first one. Second, subjects completed a 20-minute filler task between the two questionnaires.

A separate group of fifty-nine subjects rated the extent to which they perceived each of the products to be important (rated from 0 to 5). These data were used to categorize products into high and low importance groups on the basis of a median split ( $Md = 3.41$ ).

Because we were concerned that subjects might be somewhat unclear as to what we meant by feelings and features, participants were told that feelings referred to whether they felt good when they looked at the product or when they used it. Subjects were also given an example of the way they might feel when they test-drive or just sit in a car. For the ratings of features, participants were told we meant whether they based their choice (or that their satisfaction depended on) whether the product had the best overall features or characteristics, and examples were the number of car doors, or its gas mileage. Participants indicated that it was easy to understand the distinction between feelings and features.

## Results and Discussion

### Preliminary Analyses

To establish that the products we had subjects rate, varied widely in terms of the affective and informational bases of choice and satisfaction, we compared the mean ratings for each product in terms of affect and feature ratings, across product categories. The means for the affect and feature ratings, for each product, are shown in Table 2. There were significant differences across product category, for each rating ( $F_s(50, 1500) = 12.18$  to  $46.73$ ,  $p_s < .001$ ,  $\omega^2 = .18$  to  $.47$ ). The minimum significant difference between means ( $p < .001$ ) is shown for each measure in the last row of Table 2.

It was also possible to examine whether the basis of choice depended on the importance of the product category. To examine this, we computed an ANOVA with product importance (high, low) specified as a between-subject factor and the mean affect and feature ratings for each product from the choice survey specified as a repeated measure. Note that product category served as the level of analysis here rather than individuals. The results showed the main effect for ratings and the interaction effect were not significant ( $F_s(1, 49) = 1.81$  and  $1.65$ ,  $p_s > .19$ ,  $\omega^2 = .02$  and  $.01$ ), suggesting that product importance did not influence whether the basis of choice was affective or informational. Also, there was a significant main effect for product importance ( $F(1, 49) = 14.39$ ,  $p < .001$ ,  $\omega^2 = .21$ ), which showed that both affect and information became more important in making choices as the overall importance of the product category increased ( $M_s = 3.26$  and  $3.92$ ). Most importantly, these findings conceptually replicate the results of study 1, which found the type of choice consumers made (affective vs informational) did not depend on the level of elaboration.

### Main Analyses

The main question was whether consumers would base choices on affective cues to the degree that affect was an important basis of satisfaction for the product category. We also examined whether the same was true for feature-based choices and feature-based satisfaction.

In order to examine these questions, we calculated the correlations between the choice survey measures of affective and feature based choices and the satisfaction survey measures of affect and features as bases of satisfaction, for each of the 51 product categories. The mean correlations were then calculated by averaging across the individual products (shown in Table 3). Consistent with the functional predictions, the means show that the correlations were generally higher when the basis of choice was the same as the basis of satisfaction. That is, consumers considered it more important to base choice on affective cues when affective cues served as an important source of satisfaction for a product ( $M = .59$ ). Subjects also indicated it was more important to base choice on features to the degree that features were important in determining satisfaction ( $M = .56$ ). In contrast, the average correlations were lower when the basis of choice and satisfaction were different ( $M_s = .17$  and  $.20$ ). Overall, these findings show that subjects tended to base their product choices on the factors (feelings or features) that were seen as most relevant to satisfaction in the product category.

It was possible to test this interpretation by computing a 2 (importance: high, low) x 2 (survey: choice, satisfaction) x 2 (rating: affect, features) ANOVA using the correlations for the individual product categories as the data, where importance was a between product category factor, and the survey and rating factors were both within product category. This revealed a significant survey x rating interaction ( $F(1, 49) = 90.31, p < .001, \omega^2 = .53$ ). Moreover, the importance factor did not interact with the other factors ( $F_s < 1$ ), suggesting that the observed correlations between choice and satisfaction did not vary by product importance.

### Summary

In general, the findings provided support for the prediction that consumers base their choices on their feelings to the degree that such feelings seem relevant to satisfaction. This provides initial evidence that consumers use their feelings as the basis of choice in a reasonable and relatively functional manner, i.e., when such feelings are an important source of satisfaction (Katz 1960). Furthermore, this finding was true for both high and low importance

products. Overall, these conclusions are consistent with the dual process idea that consumers are concerned with multiple goals when making decisions, and show that affective cues can serve as a basis for judgment under both high and low elaboration conditions, so long as such cues are perceived as relevant to the goals of the consumer.

#### **Study 4: Affective Choices and Long-Term Purchase Satisfaction**

Study 4 examined consumer decisions in a naturalistic setting in order to investigate the extent to which affective choices would actually lead to greater satisfaction. This study examined the influence of affective experience on satisfaction immediately following the purchase, as well as some time afterwards. The longitudinal design allowed us to distinguish between the view that affective purchases are impulsive purchases that might be immediately satisfying but would lead to regret later on (Shiv and Fedorikhin 1999; Rook 1987), versus the more functional role of affective experience as leading to longer lasting purchase satisfaction (Richins 1994). We were particularly interested in knowing whether initial affective experiences would be associated with greater satisfaction for important purchases, as this would provide the most direct evidence to support the functional explanation as to why even highly motivated consumers are willing to base their decisions on affective cues.

It should be mentioned that existing studies have examined the relation between affect and satisfaction for past purchases, and these show that affect is a significant predictor of purchase satisfaction (Mano and Oliver 1993; Oliver 1993). While promising, the fact that these studies used only concurrent measures of affect and satisfaction means that it is difficult to interpret the direction of causality for the observed associations. In addition, measuring both affect and satisfaction in the same experimental session may introduce experimental demand. The longitudinal design used here helped to better address these issues.

## Method

### Subjects and Procedure

Eighty-five students from an introductory marketing class participated in the study for course credit. Each participant was provided with a sealed envelope that contained the initial questionnaire (see measures below), and an instruction sheet taped to the front of the envelope. Subjects were asked to take this envelope with them the next time they thought they might purchase an item that fit the description given on the instruction sheet. Those in the high importance condition were given the instruction that they should complete the questionnaire after buying a product they considered to be important to them, while those in the low importance condition were told to complete the questionnaire after buying something that they did not consider to be important. Subjects were assigned to these groups by random assignment. Both groups were told that the product used to complete the questionnaire should be something they bought for themselves, and that they should still have it in a month's time. The instruction sheet further indicated that the product should not be a grocery item. It was emphasized that subjects should not open the envelope until immediately after making their purchase. Approximately one month later, the experimenter returned to the class, and had subjects complete a follow-up measure of the satisfaction ratings. Participants were reminded of the name of the product they had rated on the initial survey.

### Dependent Measures

Affective Ratings. Subjects rated their feelings according to a standardized battery of items (Crites, Fabrigar, and Petty 1994). Specifically, they indicated the extent to which each of the following words described their feelings about the product they bought: love, hateful, excited, bored, delighted, sad, acceptance, disgusted, happy, annoyed, relaxed, angry, calm, joy, tense, and sorrow. Each item was rated from 0 (does not describe/does not apply) to 3 (definitely describes). Negative items were reverse scored, and then all items were averaged to form an overall index ( $\alpha = .75$ ).

Utilitarian Ratings. Subjects also rated a standardized set of items concerning their beliefs about the utilitarian value associated with the product they purchased. These items were taken from the same source as the affective ratings (Crites et al. 1994). In this case, subjects indicated the extent to which each of the following words described the thoughts they had about the product they bought: useful, valuable, useless, worthless, wise, perfect, foolish, imperfect, safe, wholesome, unsafe, unhealthy, beneficial, and harmful. Each item was rated from 0 (does not describe/does not apply) to 3 (definitely describes). Negative items were reverse scored, and then all items were averaged to form an index ( $\alpha = .79$ ).

Satisfaction Ratings. The satisfaction ratings were adapted from Mano and Oliver (1993). Specifically, subjects rated their level of agreement with each of the following statements: a) I am satisfied with this product, b) If I had it to do all over again, I would feel differently about buying this product, c) My choice to get this product was a wise one, d) I feel bad about my decision to buy this product, e) I think that I did the right thing when I decided to get this product, f) I am not happy that I bought this product, g) In most ways this product is close to ideal, h) This product is excellent, i) I got the important things I wanted from this product, j) I would change nothing about this product, k) I am dissatisfied with this product. Each item was rated on a seven-point scale ranging from -3 (Disagree) to +3 (Agree). Negative items were reverse scored, and then all scores were averaged to create an index ( $\alpha$ 's = .83 and .93, for time 1 and 2).

Decision Measures. We also included measures examining the extent to which affective or informational cues were used as the basis of purchase, in order to examine whether this would depend on the importance of the product. Subjects were first given the same explanation and examples of what we meant by feelings and features provided in the previous study, and were then asked to indicate the extent to which their purchase decision was based on their feelings, as well as the extent to which their decision was based on the features of the product. Specifically subjects indicated: a) how heavily they weighed their feelings (features) in their

choice, b) how important their feelings (the features) were to their choice, c) the extent to which choice depended on their feelings (the features), and d) how focused they were on their feelings (the features) when making their choice. These items were rated from 0 (not at all) to 6 (very much so), and were averaged to form an affective choice index ( $\alpha = .91$ ) and a feature choice index ( $\alpha = .93$ ).

Manipulation Checks. A number of questions were included to examine the effectiveness of the importance manipulation. This included a question asking subjects to indicate the price of the item they had purchased. In addition, participants completed the Personal Involvement Inventory (Zaichkowsky 1994), which includes both an affective subscale (boring/interesting, fascinating/mundane, involving/uninvolving, exciting/unexciting, appealing/unappealing) and a cognitive subscale (important/unimportant, relevant/irrelevant, not-needed/needed, worthless/valuable, mean-nothing/mean-a-lot-to-me). Subjects were asked to rate the product category in which they made their purchase according to each of the above word pairs by checking a seven-point scale. These were scored from  $-3$  to  $+3$  so that higher numbers indicated greater involvement, and were then averaged to form cognitive and affective involvement scores. Finally, subjects were asked to indicate both the name of the product they bought and the date they completed the survey.

## Results and Discussion

### Preliminary Analyses

Seventy-three of the original eighty-five subjects (86%) completed both the initial and final questionnaires. Only the data of those who had completed both questionnaires were included in the analyses. The second questionnaire, containing the final satisfaction measures, was completed an average of 23 days after the initial questionnaire (range = 10 days to 35 days). This time period did not differ across levels of importance ( $t < 1$ ).

Examples of the types of products that were bought in the high importance condition were: camcorder, cell phone, golf club, snowboard, computer, and computer peripherals.

Examples of low importance products were: paper, stapler, skin lotion, shampoo, gloves, magazines, pens, tennis balls, and a hockey stick. Items purchased in the high (vs. low) importance condition generally cost more ( $M_d = \$72.50$  vs.  $\$21.99$ , Mann-Whitney  $U = 370.50$ ,  $p < .001$ ). Also, scores on the cognitive involvement index were higher in the important versus the unimportant condition ( $M_s = 1.68$  vs.  $1.28$ ,  $t(71) = 2.03$ ,  $p = .05$ ,  $\omega^2 = .04$ ). However, the importance manipulation did not have a significant effect on the level of affective involvement ( $t < 1$ ). Together, the manipulation checks suggest that subjects largely interpreted the importance instructions in utilitarian terms (i.e., according to the price and the cognitive involvement subscale) rather than in affective terms (affective involvement subscale).

It was also possible to examine the decision measure in order to determine whether the basis of product choice depended on the level of importance attached to the item. Overall, both feelings ( $M = 3.90$ ) and features ( $M_s = 4.14$ ) were rated as an important basis of choice ( $t_s(72) = 5.42$  and  $7.17$ ,  $p_s < .001$ , compared to the scale midpoint). Furthermore, a 2 (Importance: High, Low) x 2 (Decision-Basis: Feelings, Features) repeated measure ANOVA showed that the weight given to feelings versus features did not differ significantly ( $F(1, 71) = 1.09$ ,  $p > .30$  for Decision-Basis main effect), and these weights did not depend on the level of importance attached to the purchase ( $F < 1$  for the interaction). Overall, both feelings and features seemed to be equally important in determining purchase decisions, regardless of the importance of the purchase. These analyses conceptually replicate the findings for the choice data in Studies 1 and 3, which showed in particular that affective and informational cues had similar effects on choice under both high and low elaboration conditions.

### Main Analyses

Regression Analyses. The questions addressed in these analyses were whether affective experiences and utilitarian beliefs would predict both initial and long-term satisfaction, and whether this would depend on the importance of the product. We computed a set of regression analyses for initial and final satisfaction measures that included condition, affect,

utilitarian beliefs, condition x affect, and condition x belief as predictor variables. Continuous measures were centered, and the condition variable was coded 0 for low importance and 1 for high importance (Aiken and West 1991). The results of these regressions showed that both utilitarian ratings ( $\beta = .29, p < .05$ ) and the condition x affect interaction ( $\beta = .44, p < .01$ ) predicted initial satisfaction, whereas only the condition x affect interaction was a significant predictor of long-term satisfaction ( $\beta = .62, p < .001$ ). These analyses therefore suggested that consumers were initially more satisfied to the extent they believed the product they bought had utilitarian benefits, but utilitarian beliefs were not significantly related to long-term satisfaction. In contrast, the feelings consumers had when making their purchase were related to both initial and long-term satisfaction, but both of these relationships depended on the importance of the purchase.

Additional analyses were undertaken to investigate the interactions observed between affective ratings and the experimental condition. Specifically, we regressed the satisfaction measures on affect and utilitarian ratings within each level of importance. The standardized regression weights for these analyses are shown in Table 4, along with the first order correlations for each of the predictor variables. For important purchases, these analyses revealed that affective ratings predicted both initial satisfaction ( $\beta = .57, p < .001$ ) and long-term satisfaction ( $\beta = .65, p < .001$ ), whereas affect was not a significant predictor of satisfaction for less important purchases.

### Summary

For important purchases, positive feelings about the products were not only associated with immediate purchase satisfaction, but they were also highly predictive of greater long-term satisfaction as well. This conclusion is quite different from the standard view that affect tends to have a disruptive influence on the consumer's ability to make good decisions, where affectively based choices are viewed as necessarily impulsive, and where any satisfaction derived from an affective purchase is likely to be short-lived. Rather, we found that it was the satisfaction

derived from utilitarian benefits that was short-lived. Overall, these results provided support for the idea that the use of affective experiences in making important decisions can have functional benefits in terms of the consumer's personal sense of satisfaction in the long-run. In addition, the extent to which purchase decisions were based on feelings versus features did not vary on the basis of the importance of the purchase. This result conceptually replicated the finding that both affect and information were important determinants of choice under high elaboration conditions.

### General Discussion

Overall, these studies provide evidence that affect plays a rather important role in consumer choice. In fact, affective cues were shown to influence numerous aspects of the decision making process—namely evaluation, choice, and satisfaction. Moreover, these effects were demonstrated in controlled laboratory studies as well as for real purchases. The evidence provided here builds on previous findings in a number of respects. For instance, it shows that affect can influence judgment under high elaboration conditions, rather than being limited to low elaboration conditions. In our initial experiments, many consumers chose the affective alternative despite clear information suggesting that the forgone alternative was better, and even when these decisions were important to consumers. In addition, the choice measures in studies 3 and 4 showed that affective cues determined decisions for a broad range of important and unimportant consumer products. Process measures included in studies 1 and 2 indicated that feelings served as a heuristic cue that influenced product choice in combination with systematic processing under high elaboration conditions. Finally, studies 3 and 4 provided a functional explanation as to why consumers might be willing to base even important decisions on affective cues by showing that affective choices could lead to purchase satisfaction in the long-term.

The initial experiments were designed to provide a fairly challenging test of affect's influence on choice. This was done by directly pitting the valence of affective cues in opposition

to clear information that the alternative product was better, meaning that affective preferences had to be strong enough to overcome the implications of the product information. Furthermore, the features that varied between products were chosen because pretest data suggested they were important, and 100% of the subjects chose the informationally superior option when given only the information about product features. In comparison, studies that have examined other heuristics under high elaboration have demonstrated such effects only in the absence of clear product information. For instance, Chaiken and Maheswaran (1994) found that the heuristic effects of source credibility occurred under high elaboration only when information regarding product benefits was ambiguous. Darke et al. (1998) showed that a consensus heuristic influenced judgment under high elaboration only when no other information was available. The fact that the present studies demonstrated affective cues could influence choice despite clear information to the contrary suggests that such cues are capable of providing a relatively strong heuristic for choice.

The initial experiments also examined the mechanism by which affective cues influenced choice under high elaboration. Path analyses showed these effects occurred through both parallel heuristic/systematic processing and heuristically biased systematic processing. However, there was no evidence that consumers directly elaborated on any feelings they had about the products per se (AFFECT—EXPERIENTIAL THOUGHTS—CHOICE path was nonsignificant). In fact, subjects indicated very few conscious feelings about the products in the thought listings (only 3% of the experiential thoughts listed in studies 1 and 2). The heuristic influence of affective cues observed in our studies is largely consistent with the how-do-I-feel-about-it heuristic (Schwarz and Clore 1983), which suggests consumers are often unaware of the influence that affective experiences have on their judgments, and this can make the heuristic vulnerable to the influence of irrelevant sources of affect. Study 2 provided further evidence for this mechanism by showing that consumers corrected their judgment for the influence of the (irrelevant) affective cue once they became aware that the music was the true

source of their feelings. Overall, these findings suggest that relatively little conscious thought about the affective cues was required to influence choice under both high and low elaboration conditions (Zajonc 1980).

While affective cues required little conscious elaboration in our lab experiments, it is still possible that conscious processing of affective cues could occur under different circumstances (Giner-Sorolla 1999). In particular, this may be more likely when some amount of elaboration is actually needed to appreciate the affective qualities of a product, for instance when trying to imagine where it would be more fun to go on vacation, or when trying to appreciate a romantic novel. In fact, the affective choice ratings included in studies 3 and 4 were likely to involve at least some conscious processing of affective cues, since these measures directly required subjects to rate the feelings that were inherently associated with a number of products. It might be useful to further examine conscious and unconscious aspects of affective processing in future studies, especially in a context where more elaborate information processing is required to appreciate the qualities of the affective cues.

The findings reported here also have important implications for the question of whether affective cues are primarily a source of error in product choices, or whether they can play more of a functional role in such choices. On the face of it, the fact that many consumers picked the affective alternative (pilot study, studies 1 and 2), despite recognizing that it had inferior features, provides reasonably clear evidence in favor of the bias view. However, the experimental procedures used in these studies were really much better suited for identifying bias (as is the case in much of the past research), rather than identifying more functional aspects of affective judgment. This is because the affective cues were artificially paired with the CD players, and were therefore irrelevant to judgments concerning the desirability of the CD players themselves (objectively speaking). Manipulating affective cues in this way, rather than examining more natural affective reactions inherently related to the product, has the advantage of providing greater experimental control. However, it also means that virtually any use of

affective cues would necessarily lead to bias. In this situation, the only way for consumers to make functional judgments is to avoid the use of affective cues. In fact, subjects did just that when they were given the relatively subtle suggestion that their feelings might be related to the music they heard (i.e., in the attribution condition of study 2). This correction effect therefore provides at least some evidence that consumers used affective cues in a functional manner (see also Pham 1988). Overall, our initial experiments suggest that irrelevant affective cues can bias judgment, but there was also some evidence that the use of affective cues was functional, in the sense that consumers attempted to correct for this bias when they became aware of its presence.

However, correction effects can only provide limited evidence for the functional view of affective judgment. Such effects might be better described as showing it is functional to avoid affective cues, rather than demonstrating the functional benefits of actually using affective cues in judgment. The underlying assumption of the correction effect is still that affective judgment is bad, and therefore to be avoided. It seems important to further consider the question of whether affective judgment is functional by examining the ultimate outcome of affective choice in a context where it might actually make sense for consumers to use their feelings. Studies 3 and 4 did this by examining the extent to which affective choice might lead to greater satisfaction for a broad range of products, and by measuring affective cues inherently related to the product. Specifically, study 3 showed that consumers were more likely to make affective choices when affective experience was an important source of satisfaction in the product category. In addition, study 4 showed that the affective cues associated with consumer choices in everyday settings led to greater satisfaction, not only immediately following purchase, but also sometime later. That is, this study showed there were real, long-term benefits for consumers who made affective choices, in terms of purchase satisfaction. These findings are consistent with the most central characteristic of functional judgment (Katz 1960), namely that judgment is functional to

the degree that it satisfies the actual goals of the consumer. In general, these studies provide more direct evidence that actual use of affective cues in choice can be functional.

The current findings were also consistent with the most recent suggestions of dual process theories. For instance, this framework now includes the possibility that heuristic processing can occur under both high and low elaboration conditions (Chen and Chaiken 1999; Petty and Wegner 1999). In either case, the main requirement is that the heuristic cue should be perceived as a reliable and valid basis of judgment. In addition, these models have also started to recognize that individuals may have other important processing goals besides accuracy, including affective or hedonic goals (Wegner et al. 1995). Finally, while the original dual process models were focused primarily on attitude judgment (Petty et al. 1983; Ratneshwar and Chaiken 1991), recent formulations have used more general terminology that is more easily extended to understanding judgment in other contexts (e.g. Chen and Chaiken 1999). Overall, the dual process framework was useful in understanding the range of influences that affective cues had on consumer judgment, as well as the psychological processes that underlie such effects. Furthermore, the current studies provide an important extension of such models to the context of product choice and judgments of purchase satisfaction. In general, the dual process perspective provided a broad framework for understanding the influence of affect on a number of different types of judgment.

While consistent with the more recent predictions of dual process theories, our finding that affective cues can influence decisions under high elaboration is quite different from the majority of past empirical research which shows affect primarily influences judgment under low elaboration. Why the difference? There are a number of possible explanations. One simple explanation is that many of the past studies examine affective judgment under low involvement conditions, and for relatively unimportant purchases, and therefore these studies do not directly test the question of whether affective judgment might also occur under high elaboration. In addition, some of the past studies use products where affective experience seems largely

irrelevant to satisfaction and choice (e.g., inexpensive ballpoint pens). However, our results show that affective cues are more likely to influence judgment when they are perceived as relevant to the satisfaction derived from consuming the product. In contrast, the CD player used in many of our studies was relatively high in terms of both the importance of affective experience (e.g., compared to camera film or garbage bags) and the importance of features in determining satisfaction (see Table 2). Finally, the vast majority of past research has associated feelings with products by using mood state manipulations, where subjects are induced into a positive or negative mood before examining a single product. Positive mood states tend to lower the level of information processing, as well as producing mood congruent effects on judgment (e.g., Batra and Stayman 1990; Bless et al. 1990). For this reason, it would be difficult to find valenced mood effects under high elaboration when mood state manipulations are used. In contrast, our studies manipulated affective cues in a way that should not have influenced subjects' overall mood (i.e., pairing positive music with one option and negative music with the other), and importantly our manipulations did not lower processing capacity (see below for further discussion). It seems that disentangling the processing and valence effects may have been at least part of the reason we were able to show that affect does in fact influence judgment under high elaboration conditions.

The suggestion that affective choice can be considered functional or beneficial for consumers has a number of interesting implications. For instance, marketers who use affectively based messages or sales tactics are often accused of engaging in unscrupulous attempts to undermine more legitimate forms of consumer choice based on an objective analysis of the product features. However, the current finding that affective choice often leads to greater long-term purchase satisfaction lends greater credibility to the use of affective marketing appeals, in the sense that such appeals may actually help consumers make choices that are better suited to their personal goals. However, this certainly does not mean that just any affective appeal should be considered legitimate. The current studies also show it is

possible for marketers to bias consumer decisions using affective cues that are irrelevant to the judgment task. In this respect, affectively based marketing strategies seem more legitimate in cases where affective experience provides long-term benefits for consumers in terms of purchase satisfaction.

Conversely, we would also suggest there are cases in which it is questionable for marketers to encourage consumers to engage in a more objective analysis of the product features when making decisions, since this strategy does not necessarily lead to the greatest level of purchase satisfaction. This idea is implied by the fact that utilitarian benefits often provide consumers with only limited purchase satisfaction (Study 4). Furthermore, studies by Wilson et al. (1993) suggest that encouraging consumers to think more carefully about their decisions can actually lead them to make less satisfying choices, than had consumers simply based their judgments on relatively automatic, aesthetic preferences. In general, consumers seem most likely to make good decisions when they are provided with both relevant information and relevant affective experiences concerning their alternatives, since the current evidence suggests consumers naturally use affective cues in a way that is likely to lead to greater long-term satisfaction.

### Limitations

One potential issue in the current studies was whether the high elaboration condition used in our initial experiments (i.e., winning the chosen CD player) was actually high in an absolute sense. It should be mentioned that this applies not only to our studies, but also to previous experiments which suggest affect does not have a significant effect under “high” elaboration. Questions regarding the absolute level of elaboration are difficult to answer, since experiments are only designed to examine relative effects of the independent variables. However, there was a good deal of evidence to suggest the level of elaboration in our initial experiments was high in at least the relative sense. This included elevated levels of attention, memory, and the number of total thoughts listed in high elaboration conditions. In addition,

systematic information processing was also observed in high elaboration conditions (INFO THOUGHTS—CHOICE path was significant). These findings suggest that the elaboration conditions in our initial studies were at least high enough to induce systematic processing of the product features. In addition, studies 3 and 4 examined a broader range of products and also showed that affective cues were important in determining judgment for both important and unimportant purchases. In this case, the purchases may even be considered important in an absolute sense. However, it still may be of interest to investigate the use of affective cues for extremely important purchases, such as buying a house, or an automobile. We suspect that affect will continue to be an important basis of choice and satisfaction in many such cases.

A related question was whether the manipulation of the affective cues used in our initial experiments could have lowered subjects' capacity or motivation to engage in elaboration (Bless et al. 1990; Mackie and Worth 1989). There was reasonably clear evidence arguing against this possibility. For instance, standard elaboration measures included in Studies 1 and 2 showed that affective cues generally did not lower attention, memory, or total thoughts. In addition, the effects of the attribution manipulation in study 2 cannot be easily explained by capacity. Subjects in the attribution condition received affective cues, yet made more informational choices than subjects who received the same affective cues but no attribution manipulation. In contrast, capacity effects should have led to the same proportion of affective choices in both of cases. Overall, the affective cues that were paired with the product alternatives in our studies did not seem to lower elaboration in the same way that more global mood state manipulations can lower elaboration.

It is conceivable that the ordering of the music and product information could moderate the extent to which consumers base their decisions on affective cues. In our initial studies, subjects always listened to the music in each of the CD players first, and then read information about the features afterwards. Edwards (1990) has shown that subjects are most likely to base evaluations on affective cues when this ordering is used, whereas evaluations are likely to be

based on informational cues when the order is reversed. This was in fact the reason we chose the music-before-information ordering. While this ordering might have made it somewhat more likely that affect would influence decisions, there were a number of other factors that actually made it more likely subjects would base their decisions on the available product features. For instance, while affective cues and product features were both relevant to the choice of a CD player (see Table 2), the product features were seen as the more relevant (4.67 vs. 3.16) of the two factors for this product category. In addition, the information about the product was clear and easy for subjects to understand. For these reasons, we suggest that the current studies provide at least a reasonable test of the influence that affective cues can have on consumer choice. Nonetheless, it is important to recognize that the extent to which decisions are based on affective cues may vary according to a number of different factors, including: the order of encountering these cues, the apparent relevance of affective cues and features to the decision, and the relative strength of affective cues versus features.

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Figure 1: Percentage Who Chose the Informational and Affective Alternatives in Pilot Study

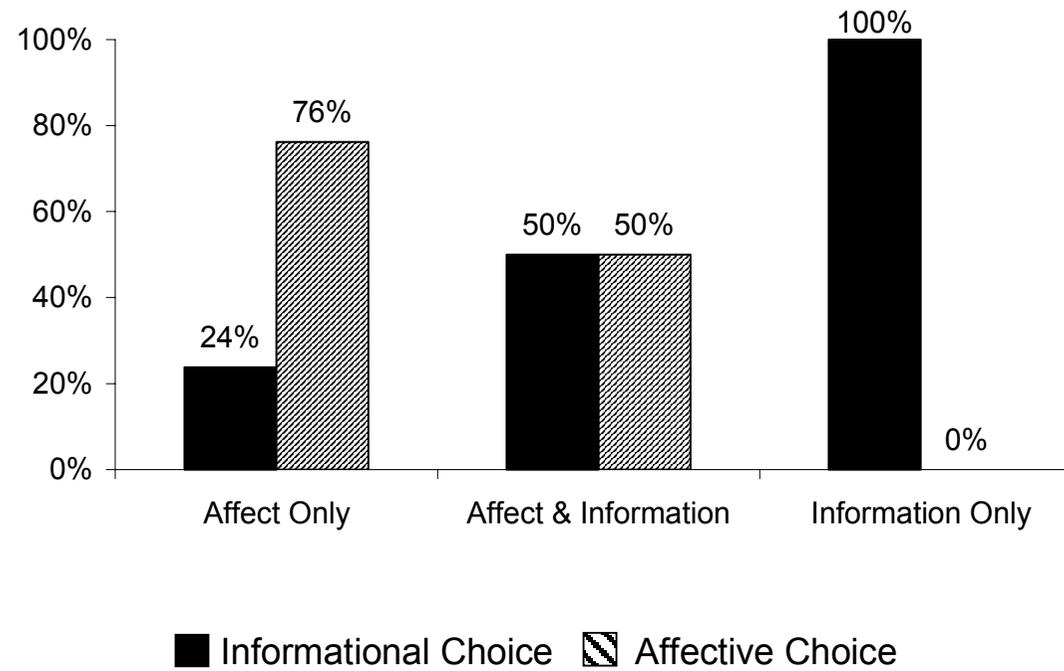


Figure 2: Percentage Who Chose the Informational and Affective Alternatives in Study 1

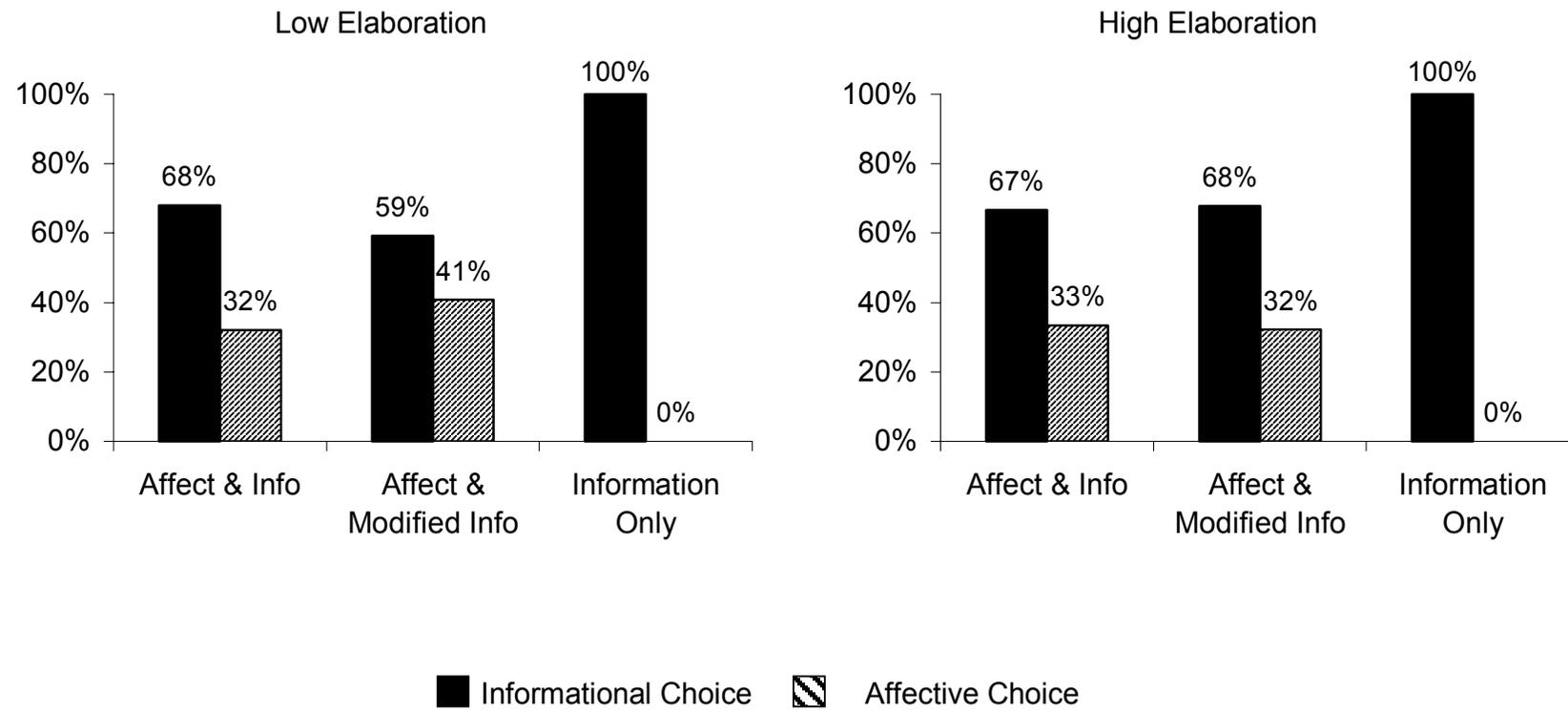


Figure 3: Choices Implied by Attitudes in Study 1

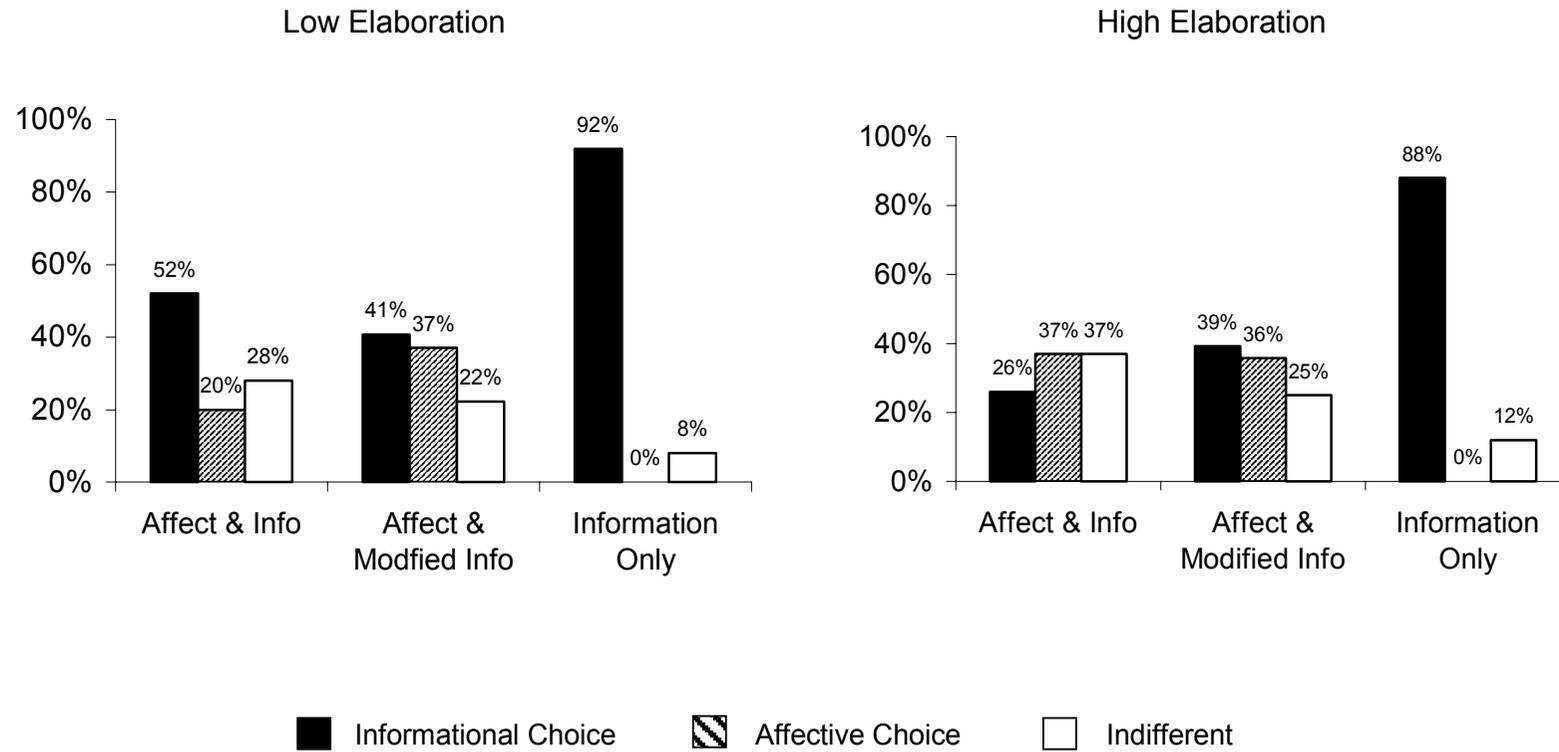
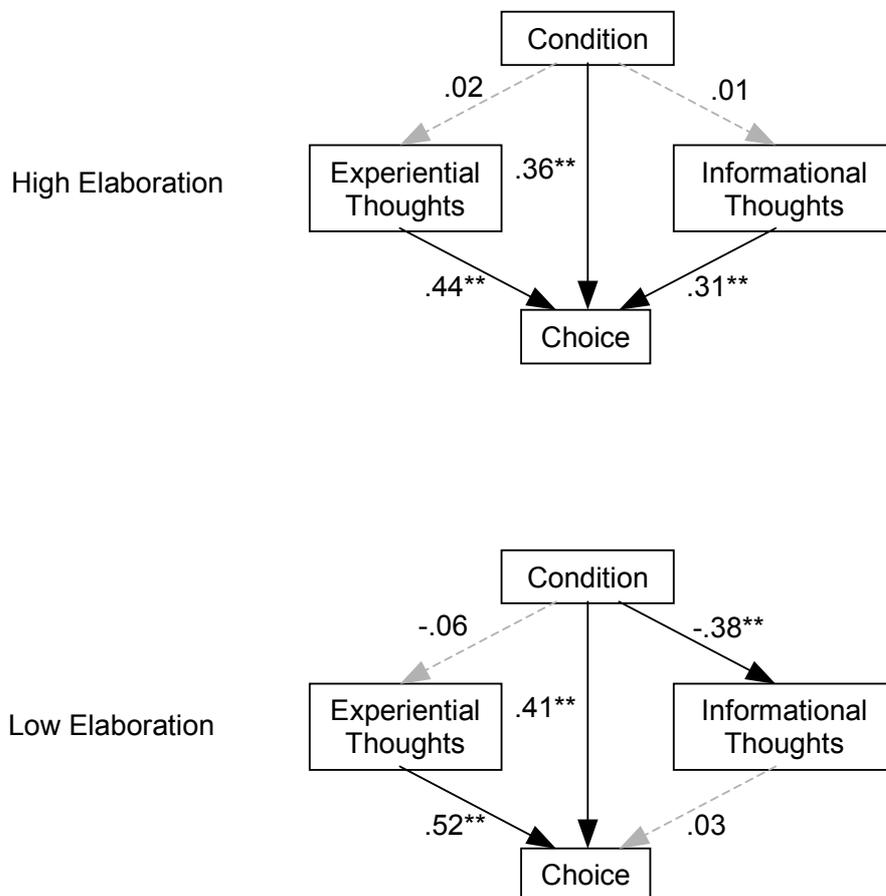


Figure 4: Path Analyses in Study 1



\*  $p < .05$   
\*\*  $p < .01$

Figure 5: Percentage Who Chose the Informational and Affective Alternatives in Study 2

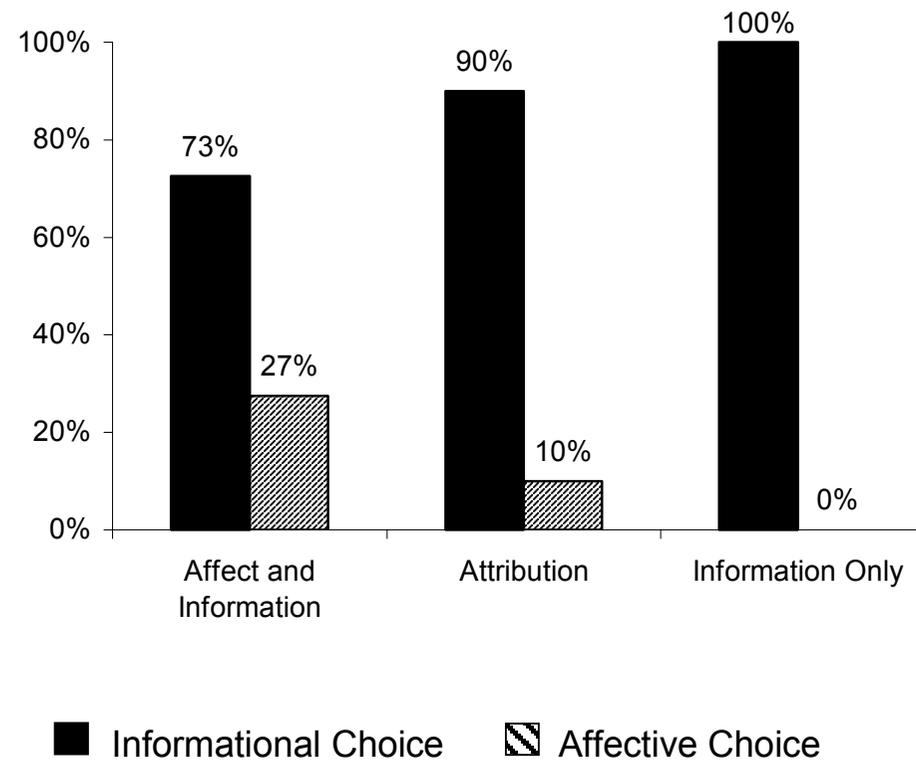
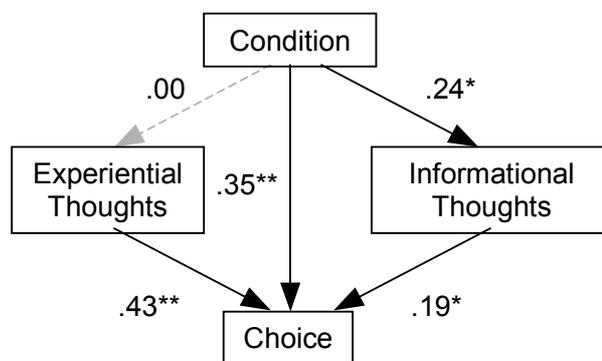


Figure 6: Path Analyses for Information versus Affect Conditions in Study 2



\*  $p < .05$

\*\*  $p < .01$

Table 1: Information Given to Subjects about the Relative Product Features

<u>Features</u>	<i>Model L</i>	<i>Model T</i>
Car adapters included	Yes	Yes
Anti-shock memory	10 secs	10 secs
Enhanced bass response	Yes	Yes
Avg. battery life	20 hrs	15 hrs
Programmable	Yes	Yes
Freq. Response range	20 to 20,000 Hz	20 to 20,000 Hz
Laser type	3 beam, semi-conductor	3 beam, semi-conductor
Weight	220 grams	280 grams
Warranty	1 year	1 year
Retail Price	\$170 to \$190	\$170 to \$190

Table 2: Ratings for Importance of Affect and Features for Satisfaction and Choice in Study 3

<b>Product Type</b>	<b>Choice Features</b>	<b>Choice Affect</b>	<b>Satisfaction Features</b>	<b>Satisfaction Affect</b>
Air Freshener	3.29	2.92	3.24	2.98
Apartment	4.73	4.67	4.53	4.42
Bedroom Furniture	3.90	4.10	4.00	4.06
Beer	2.51	3.06	2.63	3.02
Bike	4.16	3.16	4.35	3.57
Camera	4.59	3.55	4.57	3.65
CD (music)	3.43	4.04	3.51	3.76
CD Player (portable)	4.67	3.16	4.59	3.59
Cereal	2.88	2.35	2.80	2.43
Computer Game	4.14	3.35	4.08	3.43
Coat	4.16	4.24	4.12	4.22
Coffee Maker	3.61	2.14	3.90	2.71
Computer	4.94	2.67	4.88	3.37
Deodorant	3.47	3.10	3.20	3.20
Dessert	3.59	4.29	3.61	4.04
Dinner	3.78	3.84	3.84	4.14
Dress shoes	4.08	4.39	4.08	4.43
Film	3.33	1.90	3.88	2.78
Flowers	3.14	4.16	3.10	4.02
Garbage bags	2.25	0.61	2.43	1.02
Gift card	3.37	4.37	3.41	4.16
Gift	3.84	4.35	3.78	4.22
Hammer	2.80	1.08	2.55	1.41
Headphones	3.82	2.82	3.94	3.37
Hand soap	2.98	2.51	2.84	2.75
Hair style	3.88	4.76	4.02	4.65
Kitchen utensil	3.59	2.47	3.37	2.33
Magazine	3.82	3.51	3.59	3.43
Major in school	4.67	4.45	4.39	4.61
Movie	3.47	3.45	3.16	3.90
Pants	3.65	3.90	3.86	4.12
Perfume/Cologne	3.49	4.25	3.78	4.29
Pet	3.27	4.63	3.29	4.53
Plant	2.59	3.47	2.86	3.59
Poster	3.10	4.22	3.06	4.06
Restaurant	3.86	4.02	4.08	4.40
Ring	3.86	4.45	3.96	4.47
Room paint	3.47	4.27	3.29	4.18
Screws	2.73	0.96	2.69	1.35
Soft drink	2.88	3.33	2.84	3.20
Shirt/Blouse	3.59	4.10	3.75	4.10
Snack	2.78	3.57	3.08	3.33
Sports bag	4.02	3.25	3.90	3.61
Sports shoes	4.45	4.29	4.29	4.27
Stereo	4.71	3.63	4.63	3.92
Sunglasses	3.98	4.22	4.22	4.33
Toothpaste	3.37	2.61	3.33	2.90
Trip	4.53	4.49	4.27	4.59
T-shirt	3.45	3.69	3.37	3.66
University	4.69	4.33	4.49	4.53
Watch	4.25	4.24	4.41	4.08
<b>LSD (.001)</b>	<b>0.71</b>	<b>0.67</b>	<b>0.86</b>	<b>0.66</b>

Table 3: Mean Correlation Between Importance of Affect and Features for Choice and Satisfaction in Study 3

		<u>Importance for Satisfaction</u>	
		Features	Affect
<u>Importance for Choice</u>	Features	.56 <sup>a</sup>	.20 <sup>b</sup>
	Affect	.17 <sup>b</sup>	.59 <sup>a</sup>

<sup>a b</sup> Means differ at  $p < .001$

Table 4: Affect, Utilitarian Beliefs, and Satisfaction as a Function of Importance in Study 4

Predictor Variables		<u>High Importance</u>		<u>Low Importance</u>	
		Satisfaction (Time 1)	Satisfaction (Time 2)	Satisfaction (Time 1)	Satisfaction (Time 2)
Affect Ratings (Time 1)	$\beta$	.57***	.65***	-.01	-.13
	r	.69***	.63***	.16	.00
Utilitarian Ratings (Time 1)	$\beta$	.24	-.04	.37*	.30
	r	.68***	.13	.38*	.25

Note that standardized regression weights refer to analyses that include both predictor variables. The first order correlations are also reported. ( $n = 34-38/\text{cell}$ ).

\*  $p < .05$ , two tailed

\*\*  $p < .01$ , two tailed

\*\*\*  $p < .001$ , two tailed