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The Impact of Positive and Negative Affect and Issue Framing on Issue Interpretation and Risk Taking

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Two studies examined the influence of transient affective states and issue framing on *issue interpretation* and *risk taking* within the context of strategic decision making. In Study 1, participants in whom transient positive or negative affective states were induced by reading a short story showed systematic differences in issue interpretation and risk taking in a strategic decision making context. Compared to negative mood participants, those in a positive mood were more likely to interpret the strategic issue as an opportunity and displayed lower levels of risk taking. Study 2 replicated and extended these results by crossing affective states with threat and opportunity frames. Results showed that framing an issue (as a threat or an opportunity) had a stronger impact on issue interpretation among negative affect participants than among positive affect participants. Affective states also moderated the impact of issue framing on risk taking: the effect of framing on risk-taking was stronger under negative rather than positive affect. These results are interpreted via information-processing and motivational effects of affect on a decision maker. © 1998 Academic Press

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INTRODUCTION

Consider the following scenario:

> A manager has just returned from lunch and is now working on the strategic plan for a key market. She has to decide whether the market represents a threat or an opportunity and how much money should be committed to the advertising campaign. During lunch, the manager glanced at the newspaper and read a short story about a student at the local university. Will reading the story impact the strategic decision she is about to make? If yes, what is the nature of the impact? Will the impact be different if it were a happy or a sad story?

We have presented this scenario to many managers. Most are adamant that reading a small story is not likely to impact the outcome of the decision. The few who accept the possibility of an impact are unable to specify its precise nature. In this paper we start with the premise that small events induce a *transient affective state* among decision makers and investigate how these affective states influence decision making. Transient affective states exclude strong emotional states such as distress which have a strong arousal component (Mano, 1994), or affective personality traits (Staw & Barsade, 1993), or task-related affect (Dunegan, Duchon, & Barton 1992). Further, we focus on *strategic decision-making* (SDM) due to its importance to organizational behavior (Eisenhardt & Zbaracki, 1992). The popular business press attests that managers are continuously experiencing a variety of transient affective states arising out of events such as jet lag, death of a colleague, fatigue, and so forth (cf., Kaplan, 1985; Moreau, 1986; Streufert, 1984; O'Reilly 1991). These states have been hypothesized to impact SDM (Isen & Baron, 1991). Yet, their impact on SDM has received very little empirical attention. Therefore, in this paper we examine the influence of transient affective states on two elements of a strategic decision. The first is *issue interpretation* (cf., Thomas & McDaniel, 1990), or assessments about the degree to which an issue represents a threat or an opportunity. The second is *risk taking* (Sitkin & Pablo, 1992), or the degree to which managers are willing to spend resources to obtain an outcome with a given expected value.

Our investigation contributes to the literature on affect and decision making in three specific ways. First we simultaneously examine the role of positive and negative affect on risk taking. This extends past work that has manipulated positive (Isen & Geva, 1987; Isen, Nygren, & Ashby, 1988; Isen, Means, Patrick, & Nowicki, 1982; Isen & Patrick, 1983) or negative (Mano, 1992, 1994) affective states and compared them to a neutral state. One exception is the work of Mano (1992, 1994), who took measures of positive and negative valence underlying subjects' emotional state. By *manipulating* positive and negative affective states and comparing them to each other, we extend findings from these earlier studies. Second, we also examine how framing an issue as a threat or an opportunity (Dutton & Jackson, 1987; Highhouse, Paese, & Leatherberry, 1996) interacts with affect in influencing the two dependent variables. This enables us to investigate how the (in)congruence between the issue under consideration and the decision maker's affective state influence issue interpretation and risk taking. Finally, this work extends the generalizability of past

work on affect and decision making to the context of organizational behavior. With the exception of few studies (e.g., Dunegan *et al.*, 1992), past work (e.g., Isen and her colleagues and Mano) on affect and decision making (specifically risk taking) has been conducted in the context of personal, small scale decisions such as lotteries and wagering chips. Thus, similar to the work of Dunegan *et al.* (1992), this research provides a nexus for blending the two research streams.

The paper is organized as follows. We start with an overview of the emerging literature on affect and decision making and draw hypotheses. Next, we present two studies that investigate these hypotheses. Study 1 examines how positive and negative affective states *directly* influence issue interpretation and risk-taking. Based on the results of Study 1, we draw additional hypotheses, which are investigated in Study 2. In Study 2 we replicate and extend the findings of Study 1 by examining how affective states *moderate the impact of issue framing* (cf., Jackson & Dutton, 1988) on issue interpretation and risk taking. We conclude with a discussion and then list implications for future research.

STRATEGIC DECISION MAKING

Strategic decision making typically refers to decisions about *issues* that are strategic in nature (e.g., Hickson, Butler, Cray, Mallory, & Wilson, 1986). Issues are deemed strategic when they have the potential to affect an organization's performance and position because of the significance of actions taken, levels of resources committed, or precedents set (Ginsberg & Venkatraman, 1992; Hickson *et al.*, 1986; Thomas *et al.*, 1993). Thus, for a medium-size beverage company, decisions involving resource commitment to a new advertising campaign, new market entry, or new product launch would be considered strategic relative to the decision to purchase a new telephone or furniture for the lobby. Several elements of the task related to making decisions about strategic issues (or SDM) have been identified (Daft & Weick, 1984). Of these, two elements—issue interpretation and risk taking—are considered vital for strategic decision making because they are related to organizational performance (Ginsberg & Venkatraman, 1992; Thomas *et al.*, 1993). For our purpose, these two elements are important because they have also been investigated in the literature on affect and decision making. The notion of evaluative judgments (cf., Forgas, 1991) is similar to the idea of issue interpretation used in SDM. Similarly, many have examined the role of affect on risk taking (Arkes, Herren, & Isen, 1988; Isen *et al.*, 1982).

This investigation enables an integration of basic research on affect and decision making with research in strategic decision making. We believe that from a purely theory-building perspective, there is nothing special about strategic decision making compared to individual decision making. However, the context of strategic decision making affords some systematic differences—high stakes decisions, the largeness and potential impact of strategic issues, involvement of other organizational members, and decisions that impact self or the organization differently. The systematic nature of these differences necessitates that findings from individual decision making research be empirically verified

and applied with caution to strategic decision making. Doing so can reveal important differences and similarities between individual and strategic decision making and illuminate both research streams. We view our research as a step in that direction.

THE ROLE OF AFFECT IN STRATEGIC DECISION MAKING: HYPOTHESES

In this section, we draw hypotheses about the influence of affect on two key elements of a strategic decision: issue interpretation and risk taking.

Issue Interpretation

Issue interpretation is a key element of SDM (Eisenhardt & Zbaracki, 1992). The notion of issue interpretation is similar to the idea of rendering judgments about an issue. In many instances issues present themselves to managers as ambiguous data upon which managers impose their interpretation via cognitive processes such as categorization (Jackson & Dutton, 1988). For instance, characterizing an issue as a "threat" (versus an "opportunity") may direct managerial attention toward the potential losses embedded in the issue, or other such negative aspects of the issue. Conversely, if the same issue is labeled as an opportunity, managers may selectively attend to positive aspects of the issue and interpret the ambiguous ones more positively. Interpretations are a potent antecedent of managerial actions (e.g., Dutton & Jackson, 1987; Thomas & McDaniel, 1990), and, as such, an understanding of factors that can systematically influence issue interpretation is of vital importance to improving our understanding of SDM. Empirical research has demonstrated that interpretations are labile and influenced by a wide variety of contextual factors (e.g., Thomas & McDaniel, 1990). Affective states, we contend, are one such factor.

The theoretical basis for this contention comes from the notion that people's judgments about ambiguous stimuli are systematically influenced by their affective states. Specifically, people selectively attend to and elaborate more on information bits with valences consistent with that of their affective state (Blaney, 1986; Forgas, 1995). This occurs because the affective state is presumed to activate categories (Isen & Daubman, 1984) or associative networks (Bower, 1991) with valences consistent with their affective state. When confronted with an ambiguous issue (issue that has opportunity and threat consistent attributes, Jackson & Dutton, 1988), decision makers are likely to attend to and elaborate on data with valences consistent with those of the activated categories or network. The valences of activated categories, in turn, are likely to be consistent with those of the affective states (Isen & Daubman, 1984). Moreover, decision makers may categorize information in affect consistent categories and use data from memory whose valences are consistent with the valence of the affective state to interpret neutral bits of information embedded in the issue (cf., Isen, Shalker, Clark, & Karp, 1978). For instance, those in a positive affect state would not only attend to and elaborate more on positively

valenced (i.e., opportunity consistent) data in the issue, but also interpret neutral bits of data more positively. Consequently, decision makers are likely to interpret an ambiguous issue in a manner consistent with their affective state. Thus:

H1: Affective states will have an influence on issue interpretation such that decision makers in a positive affective state will view an ambiguous issue as more of an opportunity than decision makers in a negative affective state.

Risk Taking

Risk taking behavior among decision makers is an important element of SDM because it is directly related to a firm's strategy and success (e.g., Bowman, 1982). Most studies have found that managers tend to take more risk under negatively framed situations than under positively framed situations (e.g., Bowman, 1982; Sitkin & Weingart, 1995). Further, studies have shown that outcome history influences risk taking such that a history of successes leads to higher risk taking than a history of failures (Sitkin & Weingart, 1995; Thaler & Johnson, 1990).

Only recently has research examining the effect of affective states on risk taking behavior emerged. Early work in this area was done by Isen and her colleagues and later extended by Mano. Their work has yielded two key findings. First, compared to people in a neutral mood, those in a positive mood tend to become risk averse. However, the extent of risk aversion is moderated by decision framing: when the decision is framed as a potential gain (e.g., buying into a lottery) people in a positive mood are relatively more risk averse than when the decision is framed as a loss (e.g., buying insurance against potential losses). Similarly, as the situation becomes more self-relevant those in a positive mood tend to become more risk averse (Arkes *et al.*, 1988; Isen & Patrick, 1983; Isen & Geva, 1987). Studies have also shown that people under positive affect display risk aversion or cautiousness in a high-risk situation but risk seeking in a low-risk situation (Isen & Patrick, 1988). Further, under positive affect (compared to neutral), losses are seen as having greater disutility, although potential gains are not seen as having higher utility (Isen *et al.*, 1988). In another study, Dunegan, Duchon, and Barton (1992) found that task-related affect (i.e., managers' feeling about the accounts under consideration) and the criticality of the decision influenced risk taking. Compared to positive affect, managers took more risk under negative affect if the decision was perceived as more critical, but less risk if the decision was less critical.

A motivational explanation of this finding is provided in the *mood-maintenance hypothesis* (Isen & Patrick, 1983). This hypothesis states that people under positive affect are motivated to maintain their positive state. Under positive affect, therefore, they do not take big risks because that increases the potential for large personal losses that might disrupt the positive affective state. Similarly, it can also be argued that under negative affect people will be willing to take higher risks to obtain higher potential gains in the hope of "repairing" their negative affective state. Thus, the influence of affect on risk

taking is explained via a desire to maintain a positive affective state or mitigate a negative affective state, rather than merely an information-processing bias.

Mano (1992, 1994), on the other hand, found that affect influences risk-taking such that those in a *negative* affective state are likely to take more risks than those in a neutral state. However, his work also demonstrates that the increased risk taking under negative affect is largely due to the arousal associated with the affective state and that the valence component (positive or negative factor) does not explain significant variation in risk taking. Presumably, the heightened arousal level associated with negative affect leads to "restricted attentional capacity," which in turn induces greater risk taking behavior (Mano, 1992, p. 239). This explanation is based on the information-processing bias introduced by heightened arousal, rather than a motivation to preserve positive affective states or mitigate negative affective states.

However, these studies did not have an organizational orientation, and the risk taking task was related to a lottery or insurance which had *personal consequences* for the participant. Could it be that when the task does not directly impact the individual, these effects would not accrue? For instance, it is not clear whether the logic of the mood-maintenance hypothesis would generalize to a strategic decision making context. On the one hand, it could be argued that, during strategic decisions, respondents act as *agents* on behalf of an organization; potential losses for the organization may not influence them personally, and therefore the motivation to maintain a positive affective state may simply not exist. On the other hand, it can also be argued that strategic decisions by their very nature engender a high level of criticality and involvement (cf., Dunegan *et al.*, 1992; Hickson *et al.*, 1986) and therefore the consequences should be influential for managers. This may happen because, in many instances, managers are judged based on the outcome of the decisions they make, and therefore such decisions can be personally consequential for a decision maker. In fact, studies show that strategic decisions, even if they do not impact the managers personally, do engender high levels of involvement (e.g., Staw, 1981). Therefore, we argue that even in a strategic decision scenario, decision makers will be motivated to maintain their positive affective state and regulate their risk taking accordingly. Thus:

H2: Affective states will influence risk taking such that decision makers in a negative affect state will take higher risks than those in a positive affect state.

STUDY 1

The purpose of this study was to test the impact of positive or negative affective state on issue interpretation (H1) and risk taking (H2). The affective state of participants was experimentally manipulated and its effect on interpretation and risk taking was observed.

Subjects and Procedure

Participants were 63 advanced undergraduate and MBA students enrolled in a strategic marketing course at a large eastern university. They participated

in the study for partial credit toward their grade. They were told that they were participating in two studies. The first was to understand their reaction to newspaper feature stories, and the second was to understand decision making. Participants then read a story designed to manipulate the valence of their affective state, following which they performed the decision task.

In the first part of the experiment, respondents were asked to read a short (about half a page) story designed to induce a positive or negative affective state. Then we administered manipulation checks to ascertain if the stories were successful in inducing affect. The second part, which immediately followed the first, simulated a business situation. Participants acted as vice presidents of a company and were asked to evaluate a scenario about a beverage company's marketing strategy. The strategic scenario was adapted from Jackson and Dutton (1988) and Thomas and McDaniel (1990). The scenario was purposely worded to be ambiguous so that participants could impose their subjective interpretation on the issue (see Appendix). After reading the scenario, participants answered questions designed to measure interpretation and risk taking. At the end of the task, respondents were debriefed about the study.

Design

Half the participants saw the positive story, and the other half saw the negative story. Thus, for affect, the design was a simple one-factor, two-level, between-subjects design.

Variables

Affective state. Affective state was manipulated by having participants read a positively or negatively valenced story adapted from Johnson and Tversky (1983). These stories have been shown to effectively induce positive or negative affect. The positive story described a student who gets accepted into medical school with a scholarship, while the negative story described a student's struggle with leukemia. This method of inducing affect closely resembles a situation that managers would encounter in a real business setting (as opposed to hypnotic induction, free bags of candy, or watching movies). In today's business environment, managers are expected to keep up with business news. It is highly likely that a manager might read a story in a newspaper or brochure that would induce transient positive or negative affect. Both stories are included in the Appendix.

Issue interpretation. Issue interpretation was measured via a five-item scale based on items used in past studies (cf., Ginsberg & Venkatraman, 1992; Thomas *et al.*, 1993). Each of the following items was rated on a 7-point scale with "strongly disagree = 7" and "strongly agree = 1" as anchors: (1) these trends represent a plus, (2) these new developments are a threat (reverse scored), (3) the future will be better because of these new developments, (4) these developments represent a potential loss (reverse scored), and (5) these developments present opportunities. Consistent with past research these items

were combined to form an additive scale. The scale is constructed such that high scores on the scale represent a positive interpretation and low scores represent negative issue interpretation. The scale had a Cronbach's alpha of .56, which is lower than the .70 alpha suggested by Nunnally (1978) for exploratory research. However, for this study the low alpha indicates the scale's reduced potential to detect effects (Nunnally, 1978) and therefore provides a very conservative test of our hypotheses. Further, in Study 2 we refined this scale and replicated the results of this study. As seen later, those results were similar to those found here and provide confidence in using this scale as a dependent measure.

Risk taking. This was measured as the amount of money each manager was willing to pay for nine action plans designed to respond to the strategic issue. This measure is identical to the one used in past research (e.g., Arkes *et al.*, 1988; Mano, 1992, 1994). We deliberately kept this measure consistent with that of past research to facilitate comparison of results. The nine plans were created such that for each plan there was a given level of profit and a probability of attaining that profit. Thus, each plan represents a prospect of the type ($, *p*). Three levels of profit—$100k, $1000k, and $3000k—were used along with three probability levels of achieving the profit: .10, .50, and .90. For each subject, amount and probability of profit were fully crossed to produce nine action plans. An example follows:

Plan 1
This plan has a 90% chance of producing a $3,000,000 profit if the issue is resolved.
What is the most you are willing to pay for this plan? $ _____

Each respondent provided a monetary figure for nine such plans produced by crossing the two within-subjects variables: amount and probability of profit. The amount of money a respondent is willing to spend on each plan served as a measure of risk taking such that *higher willingness to spend represents a higher level of risk taking* and vice versa. There was no upper limit on how much a respondent could spend on each plan. However, for a prospect of type ($, *p*), the expected value of the prospect ($ $\times$ *p*) provides the normative upper bound on how much should be spent on each plan. For the plan shown, the expected value (.9 $\times$ 3 million = 2.7 million) is the normative maximum that should be paid for the plan.

Analysis Plan

We tested H1 by comparing differences in issue interpretation across the two affective states. Thus, the analysis is a simple one-way ANOVA for the two-level factor. For risk taking (H2), however, the analysis plan is more complex due to the way risk is measured. Here, the analysis calls for a 2 (affect, between subjects) $\times$ 3 (probability of profit, within subjects) $\times$ 3 (amount of profit, within subjects) design. Results based on this analysis plan are described next.

Results

Manipulation checks. After reading the story, respondents rated how the story made them feel on a 9-point scale anchored as "negative/depressed" or "positive/uplifted" where positive ratings were coded as being higher. This rating served as the manipulation check for the affect induction. A *t* test showed that the stories were indeed successful in inducing the desired affective state; the mean for the negative affect was significantly lower than that for positive affect (2.48 versus 6.51; $p < .0001$).

H1: Issue interpretation. H1 states that issues will be interpreted as more of an opportunity for the positive affect condition than the negative affect condition. Also, recall that higher scores represent positive interpretation (opportunity) and lower scores represent negative interpretation. Results of a one-way ANOVA support the hypothesis. There is a significant main effect of affect on issue interpretation ($F_{1,62} = 5.84$, $p < .02$), and those in a positive affect condition have significantly higher scores on issue interpretation than those in a negative affect condition (21.44 versus 18.97). Thus, not only does affect influence interpretation of the strategic issue, but the influence is in the predicted direction. H1 is supported, even with the attenuated scale used in this experiment. In light of the low reliability of the dependent measure, we also did a follow-up analysis. We created two separate scales—one with the three positive items, and the other with the two negative items—and conducted separate ANOVA's for each. Results for these scales were virtually identical to the results based on the composite scales. For each scale, interpretation was more positive for positive mood compared to negative mood (both *p*'s $<.05$). These results show that a respondent's affective state systematically impacts his or her interpretation of a strategic issue.

H2: Risk taking. H2 states that risk taking will be higher under the negative affect condition than the positive affect condition. Further, recall that each respondent evaluated nine plans (three levels of amount crossed with three levels of probability) and told us how much he or she was willing to spend on each plan. Higher willingness to pay indicates higher risk taking. For the sake of analysis, then, affect is a between-subjects factor, and amount and probability are within-subjects factors. Results show that affect has a significant main effect ($F_{1,60} = 7.82$, $p < .007$) on risk taking. More importantly, H2 is supported; those in a negative affective state (mean = \$3240.47) are willing to spend a higher amount of money than those in a positive affective state (mean = \$2123.06). This pattern is evident in Table 1 where the average spending for each cell is shown. *Risk seeking behavior is higher under negative rather than positive affect.*

Amount and probability of profit and risk taking. As expected, amount of profit ($F_{2,120} = 156.75$, $p < .0001$) and probability of profit ($F_{2,120} = 84.96$, $p < .0001$) have a significant main effect on willingness to spend. As the amount of profit for a plan increased, respondents were willing to spend more money on the plan. Similarly, as the probability of achieving a certain level of profit

TABLE 1

Cell Means for Amount Spent in '000 (Study 1)

Probability, amount	Negative affect	Positive affect
.10, 100	39.12	5.06
.10, 1000	76.29	52.80
.10, 3000	178.00	152.25
.50, 100	29.22	20.87
.50, 1000	224.52	133.65
.50, 3000	697.58	523.06
.90, 100	98.65	48.48
.90, 1000	430.97	294.13
.90, 3000	1466.13	892.77

rose for a plan, respondents were willing to pay more for the plan. The statistically significant interaction between probability and amount of profit ($F_{4,240} = 61.52$, $p < .0001$) points to a similar conclusion. Thus, willingness to spend is directly related to the amount and probability of attaining a given profit level.

Affect and amount/probability of profit. Interestingly, there is a significant two-way interaction between amount of profit and affect ($F_{2,120} = 5.51$, $p < .02$) and probability of profit and affect ($F_{2,120} = 5.51$, $p < .01$). These interactions are shown in the two panels of Fig. 1. As the probability of profit goes up, the amount that respondents are willing to spend increases. However, the willingness to spend increases much faster for those in the negative affect condition than those in the positive affect condition. Thus, not only do people in a negative affect condition exhibit higher risk taking, but risk taking also increases faster when the probability of profit increases.

Similar results are found for the interaction between affect and amount of profit. At all levels of profit, those in a negative affect condition are willing to spend more money. However, at increasing levels of profit the willingness to spend increases much faster for those in a negative, rather than a positive, affect condition. One explanation for these results is that at higher probability or amounts, decision criticality (Dunegan *et al.*, 1992) increases, leading to higher risk taking among negative affect participants than among positive affect participants who are relatively more risk averse in order to "maintain the positive mood." These results suggest that affect may actually influence the risk *preference* (Sitkin & Pablo, 1992) of decision makers; however, more empirical research is needed to verify this suggestion.

Discussion: Study 1

These results offer evidence that transient affective states influence interpretation and risk taking within a SDM context. Although the magnitude of the effect on issue interpretation is small, it is nevertheless surprising that such a weak manipulation (i.e., reading a small story) has a systematic effect on

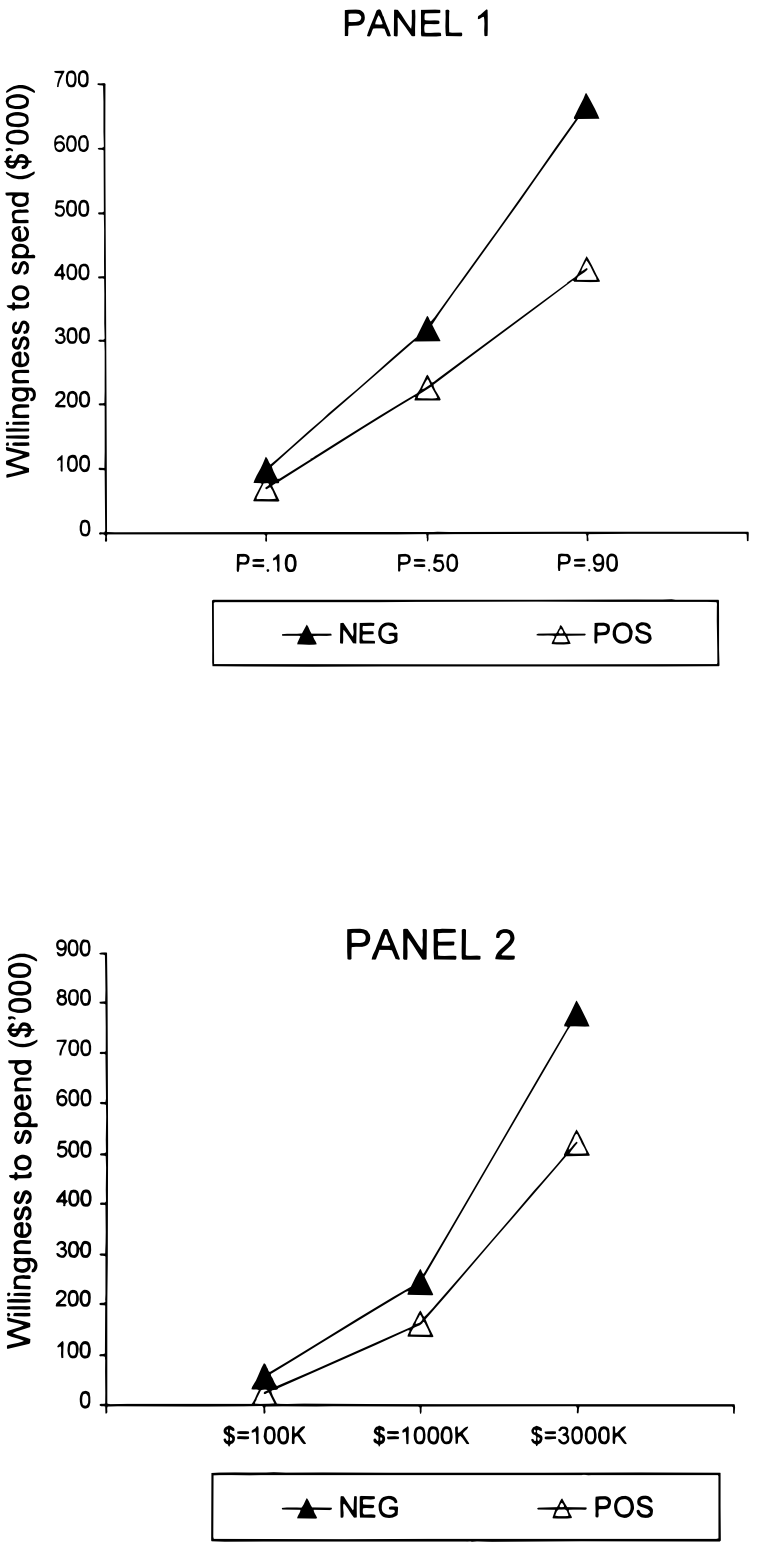

FIG. 1. Study 1, mean willingness to spend at various levels of probability (Panel 1) and amount of profit (Panel 2) for positive and negative affect.

interpretation of a strategic issue. Consistent with past research, Study 1 also found that affect has a systematic influence on risk taking behavior, albeit in a SDM context. These results also show that as the stakes involved in the strategic decision increase (i.e., at higher probability and amount of profit), risk taking increases significantly faster for negative, rather than positive, affect decision makers. Possible explanations and research extensions of this result are discussed later.

AFFECT AND ISSUE FRAMING: HYPOTHESES

Thus far, it was assumed that the strategic issue confronting a manager is ambiguous—that is, it does not clearly connote a threat or opportunity. However, many times strategic issues confronting decision makers may come in prepackaged form. For any number of reasons the issue may already have been framed for managers, or it may possess features that conclusively indicate a "threat" or "opportunity" (Ginsberg & Venkatraman, 1992; Highhouse, Paese, & Leatherberry, 1996; Jackson & Dutton, 1988). In this case, the issue framing may influence elements of SDM. We are interested in examining how affective states and issue framing *jointly* impact issue interpretation and risk taking.

Issue Interpretation

In Study 1, we found that ambiguous issues are interpreted in an affect consistent manner. However, what about issues that are clearly framed as a threat or an opportunity? Does the decision maker's affective state play any role in the interpretation of valenced issues? That is, does the decision maker's affective state moderate the impact of issue framing on issue interpretation?

Past research suggests that *the degree of incongruity between the valence of a person's affective state and stimuli systematically affects information processing* such that a high level of congruence may facilitate information processing, while a high level of incongruity may impede it (Mackie *et al.*, 1989; Forgas, 1995). In such a case, one would predict that when the valence of the issue framing and affective state is congruent (e.g., opportunity and positive affect) they may reinforce each other, but when the affective state and issue frame are incongruent, the affective state is likely to attenuate the impact of issue framing on issue interpretation. Studies have shown that when the valence of the stimulus under consideration is incongruent with the valence of the induced affective state there is an increase in the difficulty of information processing, leading to outcomes such as higher illusory correlations or overestimation of stereotypic information (Mackie *et al.*, 1989). Furthermore, an intriguing finding in the literature has been the asymmetric effect of positive and negative affect on decisions such that those in negative affect engage in more systematic processing than those in positive affect (cf., Forgas, 1995, for a review). Therefore, we would expect that issue framing would have a larger impact on those in a negative affective state. That is, when an issue is clearly identified as a threat or an opportunity, those in negative affect will recognize it as such,

while those in a positive affect would not differentiate between threat and opportunity. Thus, we expect the valence of the decision maker's affective state to moderate issue framing such that for the negative affect condition, issue framing will have a stronger influence on issue interpretation than for the positive affect condition. This expected interaction is the focus of Study 2 and can be formally stated as follows:

H3: Compared to decision makers in a positive affect state, issue framing will have a stronger impact on issue interpretation among decision makers in a negative affect state.

Risk Taking

As with issue interpretation, it is plausible that issue framing and affective states of the decision maker may jointly influence risk taking. Research shows that (e.g., Isen & Patrick, 1983; Dunegan *et al.*, 1992) when the situation is noncritical, people in positive affect tend to become risk seeking in the domain of gain (i.e., buying a lottery), but risk averse when the situation is framed as a loss (i.e., buying insurance). That is, for "high stakes" decisions, respondents may become motivated to maintain their positive affective state and display risk averse behavior, even in the face of a threat. Given the nature of strategic decisions (i.e., high criticality or stakes), we expect that during a positive affective state, decision makers will be motivated to maintain their positive state and become risk averse even when the situation is framed as a threat. However, during a negative affect state, such a motivation (to maintain positive mood) is absent, and therefore respondents will display risk seeking for threat frame and risk aversion for opportunity frame. These hypotheses can be summarized as follows:

H4A: Decision makers in a negative affect state will take higher risk when the issue is framed as a threat than when it is framed as an opportunity.
H4B: Decision makers in a positive affect state will take low risk irrespective of whether the issue is framed as a threat or an opportunity.

Note that these hypotheses assume that a strategic decision is perceived as being critical and its outcome influences the decision maker's affective state. While consistent with prior literature (Ginsberg & Venkatraman, 1992; Staw, 1981) the veracity of this assumption ultimately needs empirical testing, especially since it is likely to vary from issue to issue. Yet, it provides a starting point for investigating the moderating role of affect in issue framing and risk taking.

STUDY 2

The purpose of this study was to replicate and extend the findings of the first study by introducing a new factor: issue framing. This enables us to test H3 and H4 and ascertain how affect moderates the influence of issue framing on issue interpretation and risk taking. Recall that, in the first study, the issue description was ambiguous (i.e., features associated with both a threat and opportunity were present in the issue). In this study the issue was worded to

be either a threat or an opportunity, which enabled us to observe the effect of framing *and* affect. Additionally, we use a different manipulation to induce affective states among participants. This enables us to extend the generalizability of our findings, because the second mode of affect induction—feedback about their performance—is something that decision makers are highly likely to encounter in organizations.

Subject and Procedure

Eighty undergraduate seniors and MBA students enrolled in the capstone marketing strategy course at a university on the East Coast participated in the study in exchange for partial credit. Similar to Study 1, we first manipulated their affective state and then asked them to perform the strategic decision making task. The experiment was run in two parts.

In the first part, students took a "General Business Skills Test." They were told that the test was part of a program to develop a standardized survey to grade business students in the future and that their scores would be used to develop norms for the standardized test. The exam had questions related to grammar, algebra, economics, and current events. Participants had up to 10 minutes to complete the exam, though none took more than 5 or 6 min.

The second part of the experiment had three steps and took place in the next class session. Respondents were told that they would get their scores back and also participate in two other studies designed to test scales and business decision-making scenarios. They were told that the testing was unrelated to the emotion inventory or to the decision making task. First, respondents were given positive or negative feedback about their performance. Each respondent was randomly assigned to the positive or negative feedback condition irrespective of his or her actual performance. After reading the feedback, they completed an "Emotion Measurement Scale." This scale, adapted from Mano (1992) had items that served as manipulation checks to ascertain whether the feedback had induced the desired affective state. Last, they completed the actual decision making task labeled as the "Strategic Decision Making Study." The scenario used for the decision task is included in the Appendix and describes a beverage company facing a strategic issue. Respondents took about 30 min to complete the second phase. Upon completion of the second phase, respondents were fully debriefed about the false feedback and the intent of the experiment. They were generally responsive and did not appear to feel negatively about the manipulation. They were also given their actual exams back so they could judge their true performance.

Design

We used a 2×2 factorial design with affect (positive and negative) and issue frame (threat and opportunity) as factors.

Variables

All independent variables were the same as in the previous study with the addition of issue framing and the differential manipulation of affect.

Affective state. Affect was manipulated by providing positive or negative feedback to respondents. Those in positive affect were told that their performance was in the highest category with their score in the 90th percentile or above. Those in the negative affect state were told that their performance was in the lowest category with their score in the 30th percentile or below.

Issue framing. Issue framing was manipulated by altering the features of the scenario presented to the respondents. These alterations were based on issue features that have been empirically identified as being descriptive of threats and opportunities (Jackson & Dutton, 1988). Those in the threat frame received a scenario with threat consistent features, and those in the gain frame received a scenario with opportunity consistent features. The scenarios are included in the Appendix.

Issue interpretation. Issue interpretation was measured via a three-item semantic-differential scale, where each item was scored on a 9-point scale. The three items tap into a decision maker's interpretation of an issue as being positively or negatively valenced (Jackson & Dutton, 1988). Using these items, respondents indicated their interpretation of the strategic issue in question (see Appendix for a description of the issue). The three items used are shown below:

A threat for the company—An opportunity for the company

A potential for making money—A potential for losing money

A positive situation—A negative situation.

Note that these items represent a modification of the five-item scale used in Study 1. This modification was made in light of the low reliability for the issue interpretation scale used in Study 1. By pretesting the scale, we were able to reduce it to three items which were also reliable measures of the construct. The Cronbach's alpha for this scale was .94, a marked improvement over the scale used in Study 1 (Cronbach's alpha = .56). Note that in constructing the composite scale, the last two items were reverse scored, and an averaged scale was constructed based on the three items. As before, higher scores on the scale indicate more positive interpretations.

Risk taking. This variable was operationalized in the same manner as in the previous study. The amount that a respondent was willing to spend on each of the nine plans created by crossing the three levels of the two within-subjects factors (amount and probability of profit) was used to measure risk taking. Recall that higher willingness to spend indicates higher risk taking. Further, the expected value of each plan is the maximum amount that is normatively expected to be spent on each plan.

Analysis Plan

For issue interpretation, the data were analyzed via a 2×2 between-subjects analysis of variance. The analysis for risk taking is more complex due to the within-subjects variables needed to measure risk taking. The analysis for risk taking calls for a 2 (affect, between subjects) $\times$ 2 (issue framing, between subjects) $\times$ 3 (amount of profit, within subjects) $\times$ 3 (probability of profit, within subjects) design. Thus, the design is identical to that of Study 1 except for the addition of issue framing, a between-subjects factor.

Manipulation Checks

Affect. After receiving feedback on the exam, respondents completed an Emotion Measurement Scale, where they reported the degree to which they were presently experiencing various feelings. The response was collected on a 9-point scale anchored with "a great deal" and "not at all." Three items were used as manipulation checks for the affect induction. *T* tests on each item showed that the manipulation was successful. Those in the higher-feedback (i.e., positive affect) condition were significantly more "happy" (5.95 versus 2.90, $p < .0001$) and "pleased" (5.87 versus 2.52, $p < .0001$) than those in the lower-feedback condition. Further, those in the low-feedback (i.e., negative affect) condition were significantly more "unhappy" (4.47 versus 2.25, $p < .0001$) than those in the high feedback condition.

Issue framing. The issue interpretation scale described earlier also served as a manipulation check for issue framing. A *t* test showed that issue valence was significantly more positive for the group receiving the opportunity frame than the group receiving the threat frame (7.18 versus 4.11; $p < .0001$). Thus, the issue framing manipulation was successful.

Results

Results for issue interpretation and risk taking are described next.

Issue interpretation. Issue interpretation was measured with a three-item scale such that a higher score represents positive interpretation, and a lower score indicates negative interpretation. Using this scale as the dependent variable, we are interested in examining (1) whether or not the valence of affective states of the respondents has an influence on issue interpretation and (2) whether or not affect moderates the influence of issue framing on issue interpretation. An analysis of variance with affect and issue framing as factors was conducted. Results for the analysis show that the overall model is highly significant ($F_{3,76} = 36.42$, $p < .0001$).

H1. This hypothesis envisions a significant main effect of affect on issue interpretation. There is a statistically significant main effect of affect ($F_{1,76} = 16.91$, $p < .0001$) and issue framing ($F_{1,76} = 91.02$, $p < .0001$) which is qualified by a significant interaction ($F_{1,76} = 6.09$, $p < .02$). Those in the positive affect

condition attach more positive valence (mean = 6.30) to the issue than those in the negative affect condition (mean = 4.94).

This replicates the finding from Study 1 and shows that affective states have a systematic impact on the respondent's interpretation of a strategic issue even when the procedure used to induce the affective state is personally relevant and strong. That issue framing is significant is hardly surprising and merely shows the success of the framing manipulation.

H3: The moderating effect of affect on issue framing in determining issue interpretation: The statistically significant ($F_{1,76} = 6.09$, $p < .02$) interaction between affect and issue framing supports H3 and is shown in Fig. 2. Under a positively valenced affective state, issue framing has a much smaller effect on issue interpretation, but under negative affect, issue framing has a stronger effect on issue interpretation. These results suggest two explanations.

First, they support the notion that people in a negative-affect condition process information less effectively such that they are more susceptible to framing effects. Those in the positive affect condition, however, are less susceptible to framing effects due to more effective processing of the stimulus presented. However, a second explanation is that those under a positive affect

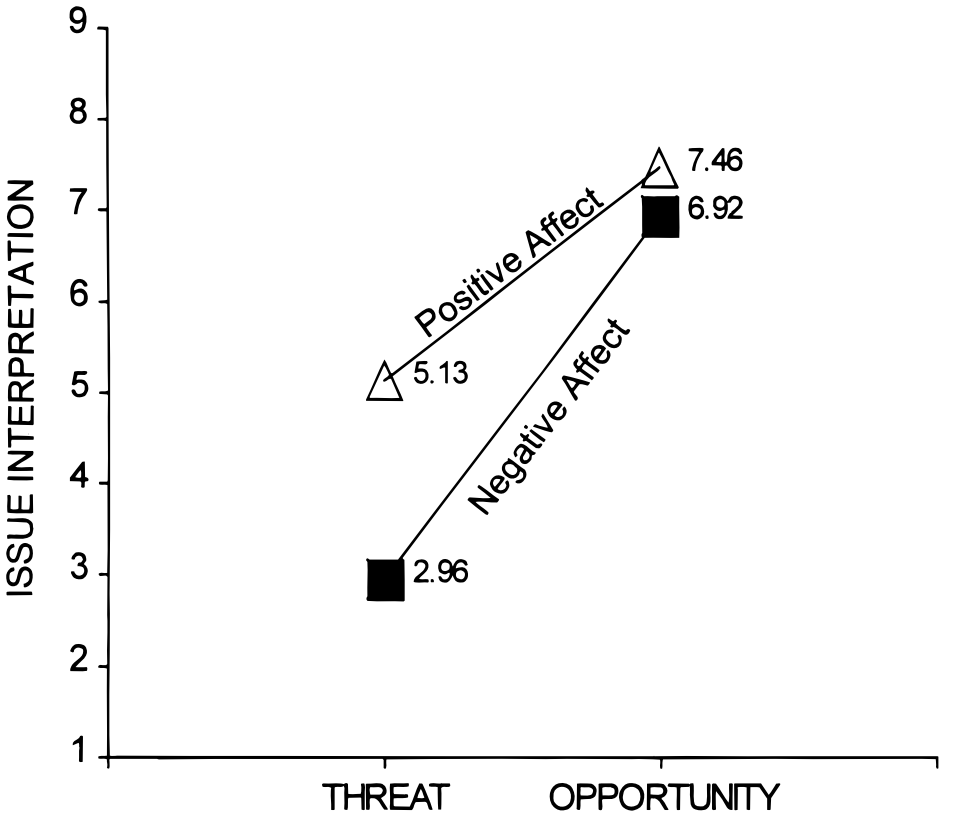

FIG. 2. Study 2, average scores on issue interpretation for threat/opportunity framing and positive/negative affect induction. Higher scores represent more positive (opportunity) interpretation, while lower scores represent more negative (threat) interpretation.

condition recognize the threat frame, but in order to maintain a positive affect state, interpret it as an opportunity. This explanation is consistent with the mood maintenance hypothesis and relies on the respondent's motivation to maintain a positive affect state.

Risk taking. Recall that higher willingness to pay for a given action plan indicates higher risk taking. In this analysis, affect and issue framing are between-subjects factors, and amount and probability (three levels each) are within-subjects factors such that each respondent provided nine evaluations. The results of the analysis are discussed below.

H2: H2 states that, affect influences risk taking such that risk taking will be higher under negative than positive affect. Affect has a significant main effect ($F_{1,76} = 5.21$, $p < .03$) such that people in a negative affect state show a higher willingness to spend (mean = \$3887.11) than those in a state of positive affect (mean = \$2523.60). These results support H2 and corroborate the findings of Study 1. Using a different manipulation for inducing affect than we did in Study 1, we find that, once again, risk behavior is higher under *negative rather than positive affect*.

Impact of issue framing on risk taking. There is also a significant main effect of issue framing on risk taking ($F_{1,76} = 5.24$, $p < .03$). Willingness to spend is higher when the issue is framed as a threat (mean = \$3929.84) rather than as an opportunity (mean = \$2549.87). These results are parallel to those obtained by Mano (1994) and by Sitkin and Weingart (1995). Both found that negative frame (loss or threat) induced higher risk taking than a positive frame (gain or opportunity).

Impact of amount and probability of profit on risk taking. We also find a significant main effect of amount of profit ($F_{2,152} = 76.09$, $p < .0001$) and probability of obtaining that profit ($F_{2,152} = 147.07$, $p < .0001$) on willingness to spend. As the amount or probability of profit increases, respondents are willing to spend more money. The statistically significant interaction between probability and amount of profit ($F_{4,304} = 34.51$, $p < .0001$) points to a similar conclusion.

H4a and H4b: H4a and H4b postulate that affect will moderate the influence of issue framing on risk taking:issue framing will impact risk taking in the negative, but not positive, affect condition. The interaction between the valence of affective state and issue framing is statistically nonsignificant ($p = .69$), suggesting that the valence associated with affect perhaps does not have such a moderating influence. This is similar to results reported by Mano (1994). He found that framing bets as gains (lottery) or losses (insurance) interacted with the subjects' affective states, though the interaction was largely driven by arousal and not by valence.

However, to examine the results in detail, we also computed simple effects of framing within each level of affect. The cell means on overall willingness to spend are shown in Fig. 3. We find that in the negative affect condition, framing

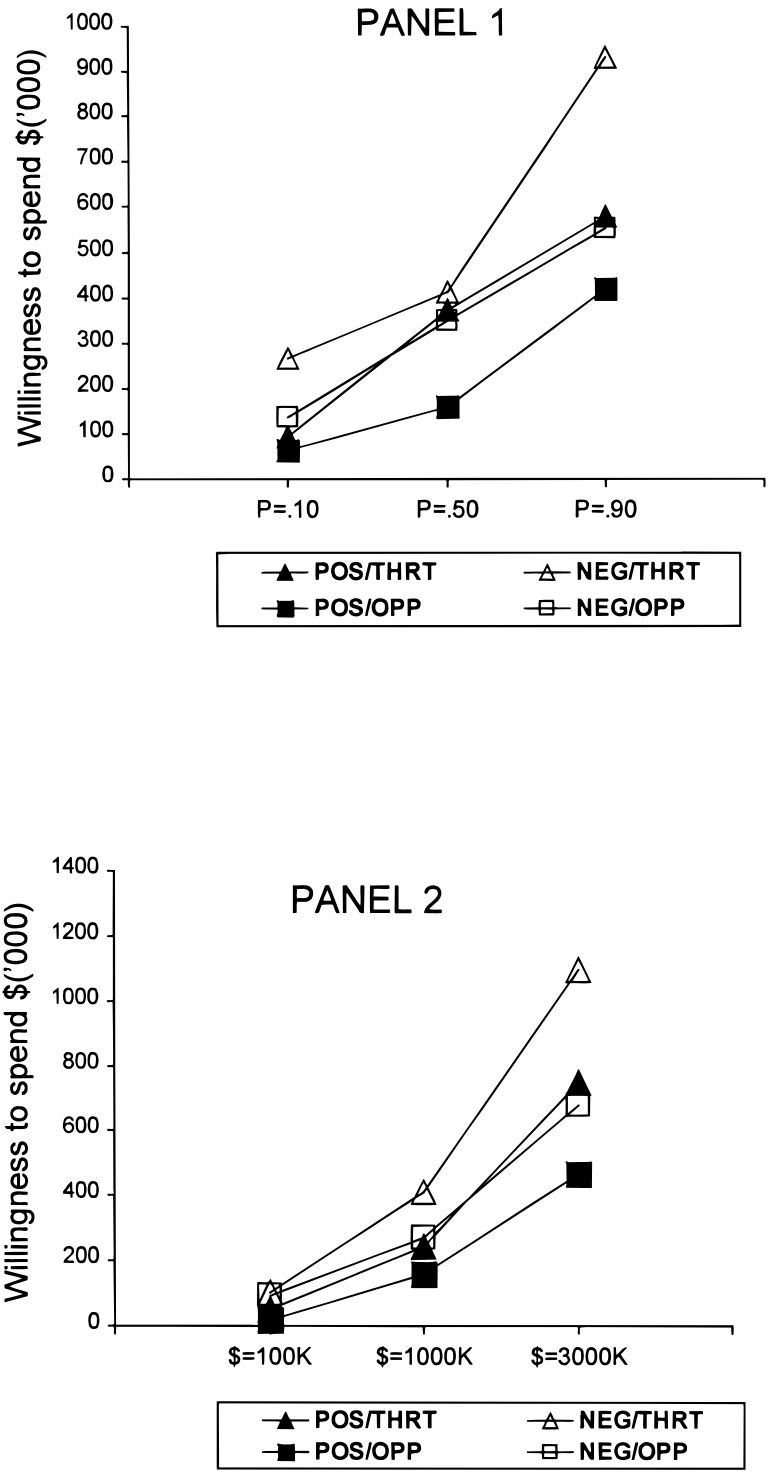

FIG. 3. Study 2, average willingness to spend for threat/opportunity framing and positive/negative affect induction. Higher level of spending indicates higher level of risk taking.

does influence risk taking ($p = .06$), whereas it does not in the positive affect condition ($p = .18$). These results provide some support for the contention that participants in positive affect are motivated by their desire to maintain their positive affective state and less likely to take risk even when the issue is framed as a threat. However, given the nonsignificant interaction, no specific conclusions can be offered based on the simple effects alone.

H4: Regarding affect, we find that it has a significant interaction with amount of profit ($F_{2,152} = 3.67$, $p < .05$) but not with probability of profit ($p = .19$). Regarding issue framing, we find that its interaction with probability of profit ($F_{2,152} = 3.07$, $p < .06$) is marginally significant, but its interaction with amount of profit is highly significant ($F_{2,152} = 8.83$, $p < .003$). The pattern of results based on these interactions can be discerned in Panels 1 and 2 of Fig. 4.

The three-way interaction between affect, issue framing, and probability of profit approaches significance ($F_{2,152} = 2.87$, $p < .07$) while the three-way interaction between affect, issue framing, and amount of profit is statistically nonsignificant ($p = .51$). The interaction between probability, amount, and issue framing is also significant ($F_{4,304} = 3.14$, $p < .05$). Finally, the four-way interaction between probability, amount, affect, and issue framing is also significant ($F_{4,304} = 3.32$, $p < .05$).

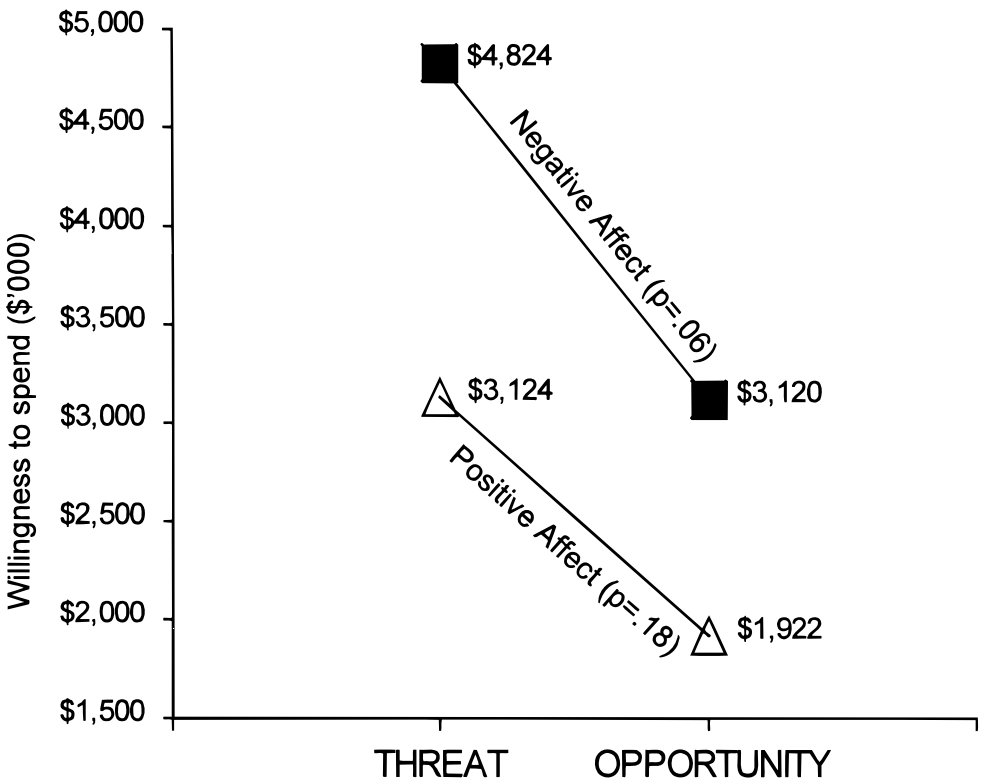

FIG. 4. Study 2, mean willingness to spend at various levels of probability (Panel 1) and amount of profit (Panel 2) for the positive/negative affect and threat/opportunity framing conditions.

This set of results suggests that, in a SDM context, affective states influence risk taking by influencing people's assessments of the amount of money involved, while issue framing influences both the perceptions of amount of money and probability assessments. Thus, to examine the antecedents of risk taking, there is a need to distinguish the effect of affect and issue framing and treat them as two separate and distinct elements of the decision. While framing is part of the decision, affect is part of the context. Both need to be studied and a promising direction for research is to identify contingent variables that determine the relative magnitude of framing versus affect in a decision context.

Discussion and Summary of Results: Study 2

Affect not only has a direct influence on issue interpretation but also moderates the effect of issue framing on issue interpretation. Compared to participants in positive affect, those in negative affect are more likely to incorporate issue framing in their interpretation. Further, affect influences risk taking behavior such that risk taking is higher under negative than positive affect. There is some evidence that affect moderates the effect of issue framing on risk taking. In summary, these results replicate findings from Study 1 and provide new insights regarding how affect moderates the relationship between issue framing and issue interpretation and risk taking within the context of SDM.

In formulating these conclusions, it should be considered whether these results were driven by participants' affective states. It could be that the feedback manipulation changed participants' perception of their own efficacy, and the perceived self-efficacy, in turn, influenced their interpretation of issues. However, self-efficacy does not explain the pattern of results obtained for risk taking. Previous research (Sitkin & Weingart, 1995; Thaler & Johnson, 1990) shows that when perceived self-efficacy is high, people tend to be risk-seeking and not risk averse. However, in Study 2, participants in the positive feedback condition were risk-averse compared to participants in the negative-feedback condition. These results are consistent with those of Study 1 and previous research. Thus, affect, and not perceived self-efficacy, better explains the pattern observed in these data. Nevertheless, future research should consider empirical estimation of the separate and joint effects of affective states and perceived self-efficacy on decision making. This is theoretically interesting because perceived self-efficacy, similar to affect, may influence not only the information-processing activities but also the motivational aspects of decision makers. For instance, though both negative affect and perceived low self-efficacy may motivate decision makers to "repair" their negative state, the repair strategies initiated may be different for affect versus perceived self-efficacy. Further, it could also be that the influence of perceived-self-efficacy on decision making is partially mediated via the affective states of the decision maker.

GENERAL DISCUSSION

Collectively, results from the two studies contribute to the current work on affect and decision making by replicating and extending previous findings on affect and decision making in a SDM setting. Due to their magnitude and scope, strategic decisions appear to be qualitatively different than the types of decisions investigated in the affect and decision making literature; consequently, concerns about the applicability of insights from the latter to the former are frequently raised (e.g., Dunegan *et al.*, 1992) and rightfully so. In the absence of empirical evidence bridging the two streams, such concerns cannot be summarily dismissed. By exploring the role of affect on interpretation and risk taking in a strategic decision making context, this work provides another step toward bridging the gap between these literatures. In addition to the current study, evidence from several other studies (Dunegan *et al.*, 1992; Staw & Barsade, 1993) suggests that managers' affective studies have an important role to play in SDM.

Theoretically, the results of these studies can be viewed from two perspectives. The first is an information processing perspective, and the other is a motivational perspective. The information processing perspective postulates that people in a negative affective state process information more systematically while those in a positive state process information more heuristically (Forgas 1995) or strategically (Isen & Daubman, 1984). That is, those in a positive mood are "smarter" at processing information than those in a negative mood (Staw & Barsade, 1993). Consistent with this positive mood subjects were less susceptible to framing effects than negative mood subjects and were systematically willing to spend far less to obtain the same outcome.

The motivational perspective postulates that people in positive mood are motivated to maintain their positive mood while those in a negative mood are motivated to repair their negative mood. By this explanation, positive affect respondents would be motivated to interpret issues more positively as a strategy to maintain their positive mood or repair their negative mood. Similarly, the fact that those in a positive mood state consistently take lower risk in the high stakes strategic decision, irrespective of the issue frame, supports the notion that even during strategic decisions respondents may be motivated to maintain positive affect. A potential criticism of this explanation is that participants in these studies were making decisions as agents, on behalf of the organization, such that the outcomes were not personally relevant. Thus, decision outcomes are not likely to be personally relevant, and participants should not engage in mood maintenance. In the absence of clear measures of involvement no definitive statements can be made, though literature in SDM suggests that managers do get highly involved in such decisions (Eisenhardt & Zbaracki, 1992; Hickson *et al.*, 1986; Streufert, 1984). The moderating role of involvement in unpacking the information processing versus motivational explanations for the current results should be examined in future studies. That is, under high involvement conditions, the current results could be meditated

via mood maintenance, but under low involvement the current results may be due to information processing bias.

Mano (1992, 1994) in assessing his results has observed that higher arousal (irrespective of valence) generally led to higher risk seeking. Furthermore, he found that the gain/loss frame influenced risk taking only among low-arousal, but not among high-arousal, participants (Mano, 1994, Fig. 4, p. 51). He suggested two explanations of why higher arousal induced higher risk taking: higher risk attitudes (i.e., inclination to accept higher risks) or induced attentional restriction. Although the current studies did not manipulate or measure arousal, our results can be conceptually interpreted within the framework used by Mano (1992, 1994).

We interpret the results of the current studies and those of the past studies as supporting both the information processing and the motivational explanations. A proper understanding of the impact of affect on decision making, and strategic decision making in particular, could come only from explicitly recognizing the dual mechanism invoked by affective states. Respondents are motivated to maintain their positive affective states or repair their negative affective state. Simultaneously, affective states influence information processing, whether it becomes more analytical or strategic. As both these explanations seem equally plausible, additional research is needed to outline the contextual factors under which one or the other explanation becomes stronger. Involvement, as we suggest, is one such factor that could be investigated in subsequent research. Empirically, a study could be designed in which the degree of outcome relevance to the respondent could be systematically varied (e.g., by varying the degree of profit sharing in the outcome) and the mood preservation or information processing explanations could be teased apart.

IMPLICATIONS FOR UNDERSTANDING STRATEGIC DECISION MAKING

A manager's life in an organization is rife with affective states, and there is no avoiding these affective states. However, do these affective states influence managerial decisions? What is the nature of this influence? When people are asked about the impact of affect on SDM, they generally respond by stating that affective states should be minimized. Given the limitations of this work (experimental task and student subjects) we hesitate to draw strong conclusions for managers. However, the current results suggest that the optimal solution may be *to optimize, and not minimize, affective states*. Having recognized that their affective states can influence their information processing or motivation and consequent decision outcomes, managers can adjust their decision process to make more effective decisions. However, it behooves managers to *be aware* of their affective state and to impose a theoretical and empirical understanding about the role of affect in their decisions. This study goes beyond merely asserting that affect influences SDM, but shows the nature of the effects for two key elements of SDM: interpretation and risk taking.

From a research perspective, this work shows that both "cold," (i.e., information processing biases) and "hot," (i.e., motivational) properties of affective states should be given due importance in understanding their influence on SDM. The motivational aspects of affective states may be particularly salient for strong emotions such as anger or fear and very relevant to examining risk taking (March & Shapira, 1987). Further, it is important to recognize that the applicability of the information or motivational perspective may vary based on the specific SDM element under consideration. Information processing mechanisms are more likely to be influenced by affect when studying processes such as attention and judgments, while motivational aspects of affective states are more likely to be influential when examining actions such as resource allocation or risk behavior.

Last, potential limitations of the work should be borne in mind. The use of students may limit the generalizability of the results. Also, these studies were limited to interpretation and risk taking. Future research should investigate additional elements of SDM (e.g., scanning) in light of affect, using real managers and real settings. Two other directions are important for extending these results. First, a neutral condition could be included to understand whether the effect of affect on decision making is nonmonotonic. Second, in addition to valence, the role of arousal should also be considered when examining decision making. Eventually, a model of SDM should accommodate both valence and arousal associated with affective states. Such a model should also explain the differential role of the information-processing biases versus the motivations that managers bring to the decision. Finally, sources of affect (transient and task related) may be different or similar in many respects. A comparative investigation of such sources of affect is another direction for future research.

APPENDIX

Story used to induce positive affect (Local Student Achieved Lifetime Goal). It was an exceptionally nice day, John Evans thought, as he walked home from the exam. He felt he did very well on the test. Although his applications to medical schools had been sent out months ago, John thought that these grades still might matter. John's thoughts turned to that evening. He was going out to dinner with his girlfriend, at their favorite restaurant. The food there was very good, and he really did enjoy his girlfriend's company. As he turned the corner he noticed the mail had come. He anxiously opened the box and took out the mail. Flipping through the envelopes, he saw an envelope with the return address of his first choice medical school. He was almost afraid to open it, thinking he might already have been rejected. Still it seemed too thick to simply be a rejection. Nervously, he sat down on the steps to open it. As he read down the page, he realized that it was an acceptance! Not only that, but the chances of financial aid seemed to be very good. He sat back in the sunshine and realized that his date tonight would be a real celebration.

Story used to induce negative affect (Local Student Dies of Leukemia). The recent death of John Graham, 20, gives us an insight into the ordeal of a young cancer victim. Graham, a student at the University, had always considered himself healthy. Since his freshman year his only illness has been a headcold. After his exams he noticed he was feeling tired, but attributed it to overwork in preparing for the tests. Sleep did not help his condition, and Graham now felt exhausted after climbing the two flights of stairs to his dorm room. His girlfriend noticed his condition and mentioned that he seemed less active than usual. He assured her it was nothing, but secretly suspected that he had contracted mononucleosis. When he finally went to the Student Health Center, the doctor seemed very concerned. After seeing the results of blood tests, the physician ordered Graham into the hospital "for a few more tests." He never left. The diagnosis was an advanced case of leukemia, a cancer of the blood. Intense radiation therapy was tried. This last-ditch effort caused severe side effects that were extremely painful and caused Graham to lose much of his hair. Despite the treatment, the disease spread. Heavy doses of pain-relieving drugs were tried, but even this did not relieve his agony. He lost weight, but it became too painful to ingest food. His acquaintances found it difficult to recognize their friend who only months ago appeared active and energetic. As the pain become unbearable, he could no longer read or walk through the hospital corridors. All that was left for Graham was intense suffering and, in two months, death.

Strategic scenario used in Study 1. The demographics of our customer-base seems to be changing. For example, a recent study by a consulting firm reveals that 20% of the adult customers do not drink the types of beverages that Sonoma specializes in. However, those who drink Sonoma brand of beverages are extremely loyal to it. Additionally, the trend in the area toward no-caffeine drinks may lead to more and more people switching to alternative beverages. The rumor of a new, supposedly large corporation coming to the territory is also discussed. The mix of products offered by our company has seemed right, but product awareness has continued downward. This has suggested to some that a new advertising campaign is needed to increase awareness and change attitude toward our brand. With the reputation of a premium drink, it is felt that this possible advertising campaign is a viable option and may increase sales. However, there is a general concern that there may be some difficulty in generating awareness and changing attitudes.

Scenario used in Study 2 (threat attributes in parentheses). The demographics of Sonoma's customer base seem to be changing rapidly. A recent study by a consulting firm reveals that 50% of the adult customers (do not) drink the types of beverages that Sonoma specializes in. Furthermore, those who drink Sonoma brand of beverages are extremely (not) loyal to it. Therefore, Sonoma is devising a new marketing campaign targeted toward the "Generation X" segment. This segment has very diverse tastes and requires distribution through new channels such as cafes and coffee houses. Sonoma has (does not have) extensive experience in using these outlets to sell its products. Therefore,

Sonoma will have virtually full (no) control of the distribution system. Additionally, Sonoma has designed a new line of drinks for this segment which was introduced in the market a few weeks ago. The positive (negative) side of this is that product awareness has continued upward (downward). Some people in the company have suggested that a new advertising campaign is needed for boosting the increasing (halting the declining) presence that Sonoma has among the Generation X segment. However, to do this, a new action plan needs to be implemented.

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