The Effects of Mood on Task Performance and Task Satisfaction

This study investigated the influence that mood states have on task performance and task satisfaction. Forty-four undergraduate students underwent either a positive or negative mood induction procedure and then worked on an anagram task. Mood, task satisfaction, and task performance were assessed. Results showed that mood influenced participants’ satisfaction with the task: participants in the positive mood condition reported more satisfaction with the task than participants in the negative mood condition. Mood did not influence performance on the anagram task. The results are discussed in relation to implications for the understanding of job satisfaction and for the measurement of job satisfaction in organizations.

Recent, there has been a rise in research on the effects of mood on job satisfaction. For example, George (1992) examined the role of trait affectivity in work-related satisfaction reactions and concluded that trait positive and negative affect may form the basis for job satisfaction. Although George focused on how trait affect (i.e., personality) influences affective states (i.e., moods), she stressed that transitory mood is the construct of concern to understanding behavior. Weiss and Cropanzano (1996) provide a useful framework for examining the impact of transitory mood and emotion on job satisfaction. This approach, which they call affective events theory, proposes that although job satisfaction is partly the result of cognitive evaluations about workplace characteristics, it is also partly the result of affective experience. Figure 1 shows the relationship between the major variables in affective events theory.

Affective reactions lie at the center of affective events theory. The two main influences on affective reactions are dispositions and work events. First, it is generally agreed that affect levels fluctuate over time in cyclical patterns. Larsen and Kasimatis (1990) describe strong weekly mood cycles in college students. It seems clear that people are predisposed to regular patterns of mood. The second influence on affective reactions is events. Various theories of emotion recognize the role of events in the experience of emo-
Certain aspects of the work environment increase the likelihood of certain events occurring. For example, the presence of close supervision may result in the administration of punishers and reinforcers. These events can serve as shocks to already extant affective patterns, such as mood cycles. The reactions engendered by these events may in turn be tempered by the effect that individual difference variables have on the interpretation of the event or the quality of the affective reaction.

The consequences of affective experience are both attitudinal and behavioral. Affective experiences have a direct influence on overall job attitudes. Features of the work environment have both direct and indirect influences on overall satisfaction. Features directly influence satisfaction through evaluative or cognitive processes and indirectly influence satisfaction through their influence on the likelihood of certain events occurring. The behaviors that may derive from affective experience can be grouped into two categories: affect-driven and judgment-driven behaviors. Affect-driven behaviors follow directly from affective experiences and are not mediated by overall attitudes. They may be influenced by coping strategies and mood management effects. Judgment-driven behaviors are mediated by satisfaction; they are the consequence of decision processes in which evaluation of the job is part of the equation.

Recent research testing the propositions of affective events theory has been supportive. For example, Weiss, Nicholas, and Daus (1993) demonstrated that average daily mood accounted for a significant proportion of variance in job satisfaction above and beyond that which was accounted for by the traditional cognitive model. These results suggest positive mood will raise satisfaction with a task and negative mood will tend to lower satisfaction with a task. Nicholas (1994) replicated the results of Weiss et al. (1993) in the laboratory, showing that mood has a causal effect on task satisfaction.

Other research suggests that mood can have a significant effect on a number of human behaviors and cognitive processes. For example, Isen, Means, Patrick, and Nowicki (1982) found that participants in a positive mood tended to invest less cognitive energy in problem-solving tasks. They suggest positive affect itself requires processing capacity, leading people in a positive mood to skimp elsewhere. Sinclair (1988) also found evidence of limited cognitive investment on the part of happy participants when he observed they were more likely to show a halo bias when making judgments about another person’s performance. Isen and Means (1983) found participants in a positive mood tended to use less information when making decisions, with those in a negative mood persisting, on average, 50% longer at information gathering and deliberations before arriving at a deci-
sion. Isen and Daubman (1984) demonstrated that participants in a positive mood tended to be less discriminating in a categorization task. However, positive mood has been found to facilitate creative problem solving (Isen, Daubman, & Nowicki, 1987). People in a negative mood tend to gather more information for the purposes of making a decision (Hildebrand-Saints & Weary, 1989), are less easily persuaded by weak arguments (Bless, Bohner, Schwarz, & Strack, 1990), and use more complex strategies for problem solving. In addition, affect has been shown to play a role in helpfulness and generosity (Isen, 1970), and in memory (Blaney, 1986).

The current study sought to combine the propositions of affective events theory and the results of research on the effects of mood to investigate the effects of mood state on both satisfaction and performance in a laboratory task. Positive or negative mood was induced in participants who then worked on an anagram task. Point values were assigned to the letters in the anagrams, and, as in the board game Scrabble, a variety of words earning varying point totals could be made from each anagram. Two hypotheses were tested. First, it was predicted that participants in a positive mood would report more satisfaction with the anagram task than would participants in a negative mood. This hypothesis tests a basic assumption of affective events theory: mood influences satisfaction. Second, it was predicted that people in a negative mood would perform better on the anagram task than would people in a positive mood. This hypothesis is derived from the research on the effects of mood on behavior and cognitions. Performance on the anagram task was expected to be a function of effort investment on the part of participants. Based on the previous research, it was expected that participants in a positive mood would be less likely to invest the cognitive energy necessary to solve the anagrams in a way that would yield high scores. Participants in a negative mood were expected to persevere at the puzzles, thereby achieving higher scores.

**Method**

**Participants**

Forty-four college students, 16 men and 28 women, participated in the study in return for course credit. Twenty-one of these students were randomly assigned to the positive mood condition, and 23 were assigned to the negative mood condition.

**Mood Induction**

Mood was induced using a variation of the procedure described by Velten (1968). The Velten mood induction procedure is a reliable method of inducing mild positive or negative mood in a laboratory setting (Clark, 1983). This technique utilizes 60 self-referent mood statements printed on cards. The relevant set of mood statements (positive or negative mood) is read silently and reflected upon by participants. Each statement is viewed by the participant for 20 s. At the end of each 20-s interval, the participant is prompted to move on to the next card. Examples of statements read in the positive mood condition include “This is great—I really do feel good. I’m elated about things” and “Life is so much fun; it seems to offer so many sources of fulfillment.” Negative mood statements include “I feel a little low today” and “I’m discouraged and unhappy about myself.” The entire mood induction procedure takes 20 min.

**Experimental Task**

The anagram task consisted of four Scrabble-type word puzzles. Each puzzle consisted of seven letters. A point value was associated with each letter. For example, the letter a was associated with a point score of 1, whereas the letter p received a point score of 3. Participants were instructed to rearrange each row of letters to form a two- to seven-letter word in order to achieve as high a score as possible. For example, the letters I N E I P C L could be rearranged to form the words pin, pine, or pencil. Although it was not always possible to use all seven letters to solve the anagram, any word in which all seven letters were used received a 50-point bonus. Neither proper nouns nor foreign, slang, or hyphenated words were allowed.

**Audiotape**

An audiotape of mood induction and anagram task instructions was made prior to the experiment. The audiotape began with the instructions for the mood induction and then paced the students through the 60 mood statement cards. Participants were given 20 s to view each card. At the end of each 20-s interval, a tone sounded on the tape prompting the student to move to the next card. After the last card had been viewed, the tape instructed the participants to put the mood statement cards aside and to begin work on the anagram task. Instructions were given for the anagram task via the tape, and then participants were allowed 10 min to work on the task. At the end of the 10-min interval, participants were instructed to stop working on the task.

**Measures**

**Mood.** The effectiveness of the mood manipulation was assessed using the pleasantness and arousal scales of the Current Mood Report (CMR; Ketelaar, 1989). The CMR is a 24-item mood adjective rating...
scale designed to measure mood along four dimensions: positive affect, negative affect, pleasantness, and arousal. Participants are asked to indicate the extent to which they are feeling each adjective at the time the report is completed using a 5-point scale, with 1 indicating not at all, 3 indicating a moderate amount, and 5 indicating very much of the feeling described by the adjective. Self-descriptions of mood can be described in terms of two dimensions (Russell, 1980). Some researchers have used positive and negative affect as the underlying dimensions (Watson & Tellegen, 1985), whereas others have used pleasantness and activation (Larsen & Diener, 1987). In this study, we focused on the pleasantness and activation dimensions of mood because these dimensions best reflect the expected mood produced by the Velten procedure. The CMR has been found to show internal consistency reliability and construct validity (Ketelaar, 1989; Larsen & Kasimatis, 1990).

**Task satisfaction.** Task satisfaction was measured using a faces scale (Kunin, 1955). The faces scale presents participant with seven human faces reflecting various levels of smiling or frowning. The respondent is asked to choose the face that best represents how he or she feels about the task. The face exhibiting the deepest frown is scored as 1; the biggest smile is scored as 7. Brief and Roberson (1989) commented favorably on the construct validity of the faces scale, calling it the instrument of choice if job satisfaction is construed as an affective reaction.

**Task performance.** Task performance was measured by scoring the anagram task. Each letter was associated with a point score. For example, the letter a was associated with a point score of 1, whereas the letter p received a point score of 5. Only letters used by the participant contributed to the score. Any time all seven letters were used to form a word, a bonus of 50 points was granted. It was possible to use all seven letters in only two of the four anagram puzzles; the remaining two anagram puzzles had unusable letters. The highest score possible was 148 points. Neither proper nouns nor foreign, slang, or hyphenated words were counted.

**Procedure.** Participants were seated in separate cubicles. Prior to the experiment, a sealed envelope containing mood induction cards and a sealed envelope containing the anagram task were placed in each cubicle. The valence of the mood induction—positive or negative—for any individual participant was determined randomly. During any experimental session there was a random mix of participants undergoing either the positive or negative mood induction. This feature of the procedure is important, since it preserves the assumption of independence of treatments and avoids the problem of treatment being correlated with session-specific effects. This assumption is violated when participants are assigned to experimental conditions in groups, but data are analyzed at the individual level. A prerecorded audiotape was then used to provide participants with the mood induction instructions and to pace them through the mood induction procedure one card at a time. This feature of the procedure allowed the experimenter to remain blind to the condition of any individual participant until the end of the experiment, thereby eliminating experimenter effects and serving to standardize the procedure for all participants. Once the participants had completed the mood induction, they were instructed via the audiotape to put the mood statement cards aside and to begin the anagram task. Upon completion of the anagram task, respondents completed an experimental questionnaire which was provided by the experimenter and which contained the manipulation check and dependent measures.

**Results.**

Means, standard deviations, and intercorrelations between all variables are shown in Table 1. Results are considered on a variable-by-variable basis.

**Manipulation Check.** Cronbach’s alpha internal consistency estimates of .77 and .65 were computed for the pleasantness and arousal scales of the CMR respectively. A t test was computed to determine if the mood induction procedure was successful in inducing mild positive or negative mood in participants. Responses to the CMR indicated that participants who underwent the positive mood induction (M = 15.43, SD = 3.45) reported more pleasant affect than those in the negative mood condition (M = 12.08, SD = 3.21), t(42) = 3.32, p < .001, suggesting the mood manipulation had its intended effect on participant mood. As expected, no significant difference between conditions was found on the activation dimension of the CMR, t(42) = 1.15, ns. This pattern of results is consistent with expectations for the Velten procedure, which is designed to induce positive or negative mood of mild intensity in participants.

**Task Satisfaction.** Results of a t test indicated that participants in the positive mood condition (M = 5.33, SD = .91) found the anagram task to be more satisfying than those in the negative mood condition (M = 3.91, SD = 1.65), t(42) = 3.49, p < .001. This result shows that...
positive mood influenced task satisfaction and supports the first hypothesis of this study.

**Task Performance**

Results of a t test showed no significant difference between mood conditions in performance on the anagram task \( t(42) = .32, ns \). This result suggests that mood had no effect on participants’ performance on the anagram task and fails to support the second hypotheses of this study.

**Discussion**

The main focus of this study was to test propositions of affective events theory. The theory proposes that mood is one influence on job and task satisfaction. Affective events theory also proposes that mood will influence certain behaviors. One class of these behaviors may be performance related. A considerable body of literature in social psychology suggests that mood can have a significant influence on human behavior. Combining the findings of that body of literature with the proposals of affective events theory generates some interesting hypotheses regarding performance. However, it is important to recognize that performance on a task is not the result of behavior alone. Rather, performance on a task is the result of a fit between the behavior and task demands. Performance will be facilitated when behavior fits the demands of the task and will be hindered when it does not.

The current study found clear support for the first hypothesis. Participants in a positive mood reported more satisfaction with the task than those in a negative mood. These results are a replication of the previous research by Weiss et al. (1993) who found mood levels accounted for variance in job satisfaction. The study by Weiss et al. was, however, correlational in nature. The current research provides a controlled experimental test of that hypothesis focusing on task satisfaction, which is one component of overall satisfaction. This study also attempted to extend the investigation of affective events theory by examining the influence of mood on the affect-driven behaviors proposed in the theory. Significant group differences in task performance were not observed. One possible reason for this failure to find an effect of mood on task performance may lie in the fact that variability in performance within each group was quite large. This within-groups variance overwhelmed any differences between the groups. On the one hand, this failure may signal the theory is wrong, i.e., affect does not have any effect on performance. On the other hand, these results might be an artifact of the nature of the chosen task. Using a task on which performance within groups would vary less may result in a different outcome. Given the copious literature in social psychology that supports the impact of mood on human behavior, the latter conclusion is probably the most accurate.

The main impact of this study is the support shown for the central tenet of affective events theory and the contribution it makes to our understanding of job satisfaction in general. Job satisfaction has been defined traditionally as “the pleasurable emotional state resulting from the appraisal of one’s job as achieving or facilitating the achievement of one’s job values” (Locke, 1969, p. 316). Affective events theory, supported by the results of this study, suggests job satisfaction itself should not be conceptualized as affect and is not an emotional reaction to a job; rather, affect seems to be one contributing factor in the development of job attitudes (Weiss & Cropanzano, 1996).

This study was designed primarily to test propositions of affective events theory in a laboratory, but there are some implications of this study that extend beyond that setting. For example, many organizations use attitude surveys to assess the thoughts and feelings of employees. Sometimes, decisions for organizational change result from these surveys. The results

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**TABLE I**

*Means, Standard Deviations, and Intercorrelations of Study Variables*

<table>
<thead>
<tr>
<th>Variable</th>
<th>M</th>
<th>SD</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Activation</td>
<td>13.14</td>
<td>2.66</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Pleasantness of mood</td>
<td>13.68</td>
<td>3.70</td>
<td>.06</td>
<td>1.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Task performance</td>
<td>44.45</td>
<td>35.20</td>
<td>.008</td>
<td>.38*</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>4. Task satisfaction</td>
<td>4.59</td>
<td>1.51</td>
<td>-.05</td>
<td>.62**</td>
<td>.51**</td>
<td>1.00</td>
</tr>
</tbody>
</table>

*p < .05, **p < .01
of this study suggest that mood can have an impact on job satisfaction. Because moods fluctuate over time, it might be beneficial to consider how timing might affect the outcome of any attitude survey. A single questionnaire administration is not sufficient for obtaining an overall estimate of job satisfaction. Perhaps a better approach would be to use multiple measures of job satisfaction spread out across time to obtain a more dynamic portrait. Of course, as the name of the theory implies, casting an eye toward the impact of events might also be wise.

References


