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Affect and Job Satisfaction: A Study of their Relationship at Work and at Home

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Abstract

The present study used an experience sampling methodology (ESM) to investigate across- and within-individual relationships between mood and job satisfaction. Momentary measures of mood and job satisfaction were collected from a sample of 74 individuals; significant other measures of trait affectivity were obtained from 55 of these individuals. Multilevel results revealed that job satisfaction affected positive affect after work and that the spillover of job satisfaction onto positive and negative affect was stronger for employees high in trait positive affectivity and negative affectivity, respectively. Results also revealed that the effect of mood at work on job satisfaction declined over time. Finally, mood at work affected mood at home such that positive affect experienced at work positively affected positive affect experienced later at home, and negative affect at work contributed to negative affect experienced later at home.

Affect and Job Satisfaction: A Study of their Relationship at Work and at Home

Kuhn (1970) argued that scientific progress is not the result of a steady accumulation of knowledge. Rather, scientific revolutions take place in which one paradigm is replaced by another. Although it might be hyperbole to argue that a revolution is underway in job attitudes research, it can be argued that a paradigm shift is afoot. Researchers have long accepted Locke's (1969) classic definition of job satisfaction, which incorporates both cognitive ("an appraisal of one's job" [p. 317]) and affective ("emotional state" [p. 317]) elements. From the perspective of basic attitude research, this acceptance is well founded given the classic separation of attitudes into cognitive, affective, and behavioral dimensions (Eagley & Chaiken, 1993).

A great deal of work on the antecedents of job satisfaction has focused on relatively cognitive models. Locke's (1969) value-percept model, for example, involves a rational appraisal of the degree to which the job supplies outcomes that satisfy an individual's values. The Cornell model involves a comparison of job outcomes to job inputs, conditioned by an individual's frame of reference (Hulin, 1991). Similarly, a considerable amount of research has linked job satisfaction to various behaviors (Spector, 1997), and numerous meta-analyses summarizing results of studies linking job satisfaction to outcomes such as job performance, absenteeism, turnover, and citizenship behaviors have been published. Thus, the cognitive and behavioral aspects of job satisfaction are relatively better developed than affect in past research.

Given the relative underemphasis on affect, then, the source and nature of the paradigm shift, or "fresh approach" (Brief, 1998, p. 85), is on the affective side. The researchers who can be most directly credited with fomenting this re-alignment are H. Weiss and A. Brief. Weiss (2002), after reviewing current thinking in the attitudes literature, argues that affect and cognition are distinct influences on (rather than dimensions of) job satisfaction, and further

contends that affective influences have been neglected. Spector (1997) appears to agree with Weiss, commenting, "Today most researchers tend to focus attention on cognitive processes" (p. 2). Brief (1998) also argues that the cognitive perspective has dominated job satisfaction research, and focuses in particular on measurement approaches. In appraising current measures of job satisfaction, Brief concludes, "Organizational scientists often have been tapping the cognitive dimension while slighting or even excluding the affective one" (p. 87).

The importance of this shift in focus is twofold. First, although cognitive models of job satisfaction, such as Locke's (1969) value-percept theory, have a certain level of validity, they do not explain a majority of the variance in job satisfaction. Similarly, the dispositional sources of job satisfaction, while important, likewise do not fully explain individual differences in job satisfaction (Ilies & Judge, 2002) and do little to "enlighten the underlying process" (Weiss & Cropanzano, 1996, p. 9). Second, because much of the temporal variation in job satisfaction may therefore be due to variation in mood/affect (Fisher, 2001), studying the affective foundations of job satisfaction may allow us to better predict and understand job satisfaction as it is experienced by individuals. Thus, in addition to explaining variation in job satisfaction across individuals, the study of affect in job satisfaction research holds the promise of explaining within-individual variation in job satisfaction that would otherwise be missed. Brief and Weiss (2002) noted, "Whereas it is clear that temperaments can influence job satisfaction, the processes by which this happens are not yet well understood" (p. 286). These authors note that considering dynamic affective states in job satisfaction research holds the promise of elucidating both within- and across-individual variations in job satisfaction.

Due to the newness of the perspective, the re-alignment that these authors project has not yet been realized. However, there have been several studies published that provide support for

the importance of affect in job satisfaction. The vast majority of this affect-oriented research has

concerned the link between trait affectivity and job satisfaction (e.g., Watson & Slack, 1993).

Meta-analytic evidence indicates that both trait positive affectivity and trait negative affectivity

are related to job satisfaction, with trait positive affectivity somewhat more strongly so

(Connolly & Viswesvaran, 2000). As opposed to trait affect, two recent studies have investigated

the effect of state affect or mood on job satisfaction using dynamic designs. Weiss, Nicholas, and

Daus (1999) used experience-sampling methodology, wherein managers' moods levels were

sampled four times a day, to investigate the relationship of affective experiences to job

satisfaction. Weiss et al. (1999) found that both affect at work and job cognitions contributed to

job satisfaction. Ilies and Judge (2002), in the first study that measured job satisfaction with a

state approach (multiple time-sampled momentary measurements), found that mood and job

satisfaction were related both within and across individuals, and further found that within-

individual variance comprised 36% of the total variance in job satisfaction. This is variance that

would be missed with the typical between-subjects design.

Mindful of the contributions of these studies, much remains to be done. Specifically, with

few exceptions (Fisher, 2001; Ilies & Judge, 2002; Weiss et al., 1999), there is a dearth of

published job attitudes research that has used a dynamic design. Typically, most research uses a

cross-sectional design where a "single-shot" measure of affect is related to a similar measure of

job satisfaction. Though there is nothing inherently wrong with such designs, they do assume

that both mood and job satisfaction are stable constructs and therefore any temporal variation is

consigned to measurement error. Yet we know that both mood and job satisfaction are constructs

that exhibit substantial short-term variation (Ilies & Judge, 2002; Weiss et al., 1999). Thus, if we

are to better understand the affective nature of job satisfaction, we must use a dynamic design

that allows us to capture and explain the temporal variation in both constructs.

Another important issue is whether individuals who experience the most or the least

positive affective states at work also experience similar levels of affect off work, relative to

others. George (1989), in her study on mood and absence, suggests that "not only should we

consider how workers feel at work, but also how they feel off the job" (p. 321). Moreover, the

potential spillover effects (Lambert, 1990) from work to home, or home to work, should not be

confined to mood. Specifically, because job satisfaction can be viewed as both affective in nature

and with affective influences (Brief & Weiss, 2002), it is relevant to investigate the degree to

which mood states away from work generalize to job satisfaction at work. By the same token, it

is relevant to inquire whether job satisfaction affects mood away from work. Edwards and

Rothbard (2000, p. 180) note that one of the primary ways in which work and family spillover

effects occur is in terms of affect or mood. They note, "Mood spillover occurs when mood in one

domain affects mood in the other domain" (Edwards & Rothbard, 2000, p. 185).

However, as Edwards and Rothbard (2000) note, little empirical research has addressed

the nature of these spillover effects, despite the potential implications for well-being and

performance in work and family roles. Indeed, although potential spillover effects have been

investigated in both the job-life satisfaction literature (Wright, Bennett, & Dun, 1999) and the

work-family literature (Sumer & Knight, 2001), we are not aware of any studies that have

investigated these types of spillover effects with respect to mood and job satisfaction at work and

at home. In general, the work-family literature is dominated by an assumption that work and

family roles conflict, when possible spillover effects have been systematically investigated

(Parasuraman & Greenhaus, 2002). It seems likely that one mechanism that contributes to work-

family spillover is the emotional states experienced in both domains (Rothbard, 2001). Thus, one way to enhance understanding of the permeabilities of work and family domains is to study the emotional experiences in both domains. If mood at work and at home are related, it would provide new evidence regarding the spillover effects in the two roles.

Accordingly, the purpose of the present study is to investigate the relationship between affect and job satisfaction at work and at home. Specifically, we investigate the influence of mood dimensions on job satisfaction, and we explore the interrelationship between mood and job satisfaction, both at work and at home. In the next section of the paper, we link dimensions of affect to job satisfaction, both across individuals and dynamically, and consider mood both at work and at home.

<div align="center">Hypotheses</div>

A great deal of research has related measures of trait affectivity to job satisfaction. Brief and Weiss (2002) comment, "Detected relationships between negative and/or positive affectivity and job satisfaction now are commonplace in the literature" (p. 284). However, the processes by which trait affectivity results in job satisfaction are still not entirely clear (Brief, 1998; Brief & Weiss, 2002). Brief's (1998) model in general, and Brief and Weiss's (2002) comments in particular, suggest that mood at work explains, in part, the relationship between trait affectivity and job satisfaction. As Brief and Weiss (2002) note, "Temperaments influence job satisfaction through both mood at work and interpretations of job circumstances" (p. 285). Indeed, Weiss (2002) presents evidence that mood mediates more of the effect of affective temperament on job satisfaction than cognitive beliefs. Although Fisher (2001) did not test this mediated relationship, her results support it in that state affect was more strongly correlated with job satisfaction than was trait affect. Given the logical nature of the relationship, and some supporting evidence, it is

surprising that direct tests of this mediated relationship have been lacking in the literature. As Fox and Spector (2002) note, although personality research has shown that there is validity to personality, "it is not clear to what extent findings are mediated by the actual experience of emotions" (p. 168).

        H-1:   Across individuals, positive and negative affect at work will mediate the effect of trait positive and negative affectivity on job satisfaction.

Although the few dynamic studies that have been published suggest that mood is related to job satisfaction (Fisher, 2000; Ilies & Judge, 2002; Weiss et al., 1999), these studies have not been able to investigate whether validities generalize over time or across contexts. Although there is no research directly on point here, research from related areas suggests that the effect of mood at work on job satisfaction will be strongest when job satisfaction is assessed at the same time as mood, and weaker when measurement of these concepts is separated. First, research suggests that predictive validities decline as the predictor and criterion become more temporally remote (Hulin, Henry, & Noon, 1990). Second, Staw and Ross's (1985) results suggest that the dispositional source of job satisfaction may weaken over time. Finally, the mood congruency hypothesis (Rusting & DeHart, 2000), while supporting a link between affective experiences in different domains, also would suggest that these linkages would weaken over time. Memories decay, some rather quickly (Altmann & Gray, 2002), and as memories decay, the moods carried with them should fade as well. Collectively, these arguments support the expectation that the effect of mood at work on job satisfaction will decline over time. To investigate this possibility, we study how state affect (mood) influences state job satisfaction within-individuals. First, in an attempt to replicate the only study investigating the relationship between concurrent mood and job satisfaction measures (Ilies & Judge, 2002), we propose:

H-2:   Within individuals, momentary mood will predict concurrent job satisfaction such

that (a) positive affect will have a positive effect on job satisfaction, and (b)

negative affect will have a negative effect on job satisfaction

Second, we propose that the effect of state mood on state job satisfaction measured at

work is ephemeral:

H-3:   The within-individual effect of mood at work on job satisfaction will decline over

time, such that the effect of mood at work on job satisfaction will grow weaker as

the time interval increases.

Though most researchers in organizational psychology are more likely to view mood as

an independent variable, this certainly need not be the case. Furthermore, the influences on

positive and negative affect are generally quite different. Watson (2000) discusses that negative

events, such as stress, are more likely to influence negative affect whereas positive events, such

as social interaction, are more likely to impact positive affect. He notes, "Negative mood

increases in response to various types of unpleasant events and aversive stimuli,

whereas…positive mood states are much more responsive to pleasant events" (Watson, 2000, p.

63). For most, work is both a source of identity and a source of purpose in life (Hulin, 2002).

Furthermore, as Hulin (2002) notes, the distinction between work and nonwork is increasingly

fuzzy. As a result of the increasing permeability of work and nonwork boundaries, one would

expect feelings about one's job to spill over onto one's mood away from work. Because job

satisfaction is a positive psychological state (Locke, 1976), we expect job satisfaction to spill

over onto positive mood more so than onto negative mood.

Rothbard's (2001) engagement hypothesis suggests that positive emotions experienced at

work will spill over unto the emotions experienced at home. One aspect of this engagement

hypothesis is that engagement at work (work attention and absorption) is positively associated with positive affect at home. As noted by Rothbard, supporting this expectation is the argument that individuals who have high levels of job satisfaction do not bring their troubles home with them, and therefore come home in a more positive frame of mind and are more receptive to their family. Although Rothbard's results did not support this aspect of the engagement hypothesis, her measure of work engagement focused more on cognitive processes (i.e., time spent thinking about work, concentration applied to work, absorption in work) than emotional reactions to work. Thus, it is reasonable to hypothesize greater spillover from work role affect (job satisfaction) to positive mood at home, than would be the case with work engagement.

   H-4: Within individuals, job satisfaction at work will have (a) a positive effect on

       positive affect after work and (b) a negative effect on negative affect after work.

   An accumulating body of research suggests that individuals' personalities influence their susceptibility to positive and negative stimuli such that extraverted individuals are more affected by rewards and positive events and neurotic individuals are more affected by punishments and negative events (see Stewart, 1996). Indeed, theory and empirical evidence suggest that when in a positive mood, positively disposed individuals (extraverts) have more positive memories (than less positive individuals) and, when in a negative mood, negatively disposed individuals (relatively neurotic people) have more negative memories (than less negative individuals) (Rusting & Larsen, 1999). Thus, how individuals regulate their moods is based, in part, on their dispositional orientations, with extraverts having their positive moods more easily affected by positive events and relatively neurotic individuals having their negative moods more easily affected by negative events. For example, in Larsen and Ketelaar (1989), pleasant and unpleasant moods were induced using false performance feedback (success and failure respectively). PA

and NA were assessed both before and after the mood induction. Extraversion predicted significant increases in PA to the success feedback, and Neuroticism predicted significant increases in NA to the failure feedback. Such individual differences in receptivity to stimuli or moods is consistent with Gray's (1990) Reinforcement Sensitivity Theory (RST), which argues that extraverts are mainly motivated by pleasure or reward, and so have a strong tendency to approach whereas neurotics are mainly motivated to avoid punishment and so have a strong tendency to inhibit their behavior.

In testing RST with respect to mood, one can use trait positive and negative affectivity to assess the sensitivity to positive and negative stimuli in that researchers tend to equate trait positive affectivity with extraversion and trait negative affectivity with neuroticism (Brief, 1998; Watson, 2000). Indeed, Watson, Wiese, Vaidya, and Tellegen (1999) viewed trait positive and negative affectivity as indicators of the responsiveness to positive and negative stimuli, respectively. If job satisfaction can be seen as an "arousal mechanism" (Matthews & Gilliland, 1999) that stimulates positive emotional reactions, one would then expect those high on trait positive affectivity to be more affected by job satisfaction and those high on trait negative affectivity to be more affected by job dissatisfaction.

H-5:   The within-individual effect of job satisfaction on positive affect after work will be moderated by trait positive affectivity (H-5a) and the effect of job satisfaction on negative affect after work will be moderated by trait negative affectivity (H-5b) such that the relationships are stronger for those with high trait PA and trait NA, respectively.

One issue for which research is conspicuously absent is the relationship between mood at work and away from work. George (1989) suggested that researchers should consider both mood

at work and mood off the job. Although Rothbard (2001) did not examine the dynamic

relationship between mood at work and at home (hers was a between-subjects, cross-sectional

design), several arguments she used to support the engagement hypothesis also support the

relationship between positive affect at work and at home. Specifically, because positive affect is

related to prosocial actions toward others (Isen & Baron, 1991) and helping others enhances our

own mood (Williamson & Clark, 1989), individuals who are in a good mood at work should

engage in both thoughts and actions that make it more likely (compared to individuals in a less

positive mood) to carry this positive affect home with them.

We further expect that positive affect at home will be more affected by positive affect at

work than by negative affect at work, with the reverse also holding true with respect to negative

affect at work and at home. One of the more enduring findings in the mood literature is a

correlational hierarchy of affects such that discrete positive emotions correlate highly with one

another, discrete negative emotions correlate highly with one another, but positive and negative

emotions are either uncorrelated or somewhat weakly correlated with each other (Watson,

2000). Thus, positive (negative) emotions correlate more highly with other positive (negative)

emotions than they do with each other. The relationship between state and trait mood appears to

follow this same, positive-to-positive and negative-to-negative, pattern. For example, in Fisher

(2001), trait positive mood was significantly correlated with state positive mood ($r=.60$, $p < .01$)

but uncorrelated with state negative mood ($r=.00$, *ns*), whereas trait negative mood was more

strongly correlated with state negative mood ($r=.34$, $p < .05$) than state positive mood ($r=-.14$,

ns).

The positive-to-positive and negative-to-negative correlational pattern is consistent with

the mood congruency hypothesis in personality psychology. The mood congruency hypothesis

argues that positive moods elicit positive interpretations of events and pleasant thoughts and

feelings whereas negative moods bring about the opposite reactions (Rusting & DeHart, 2000).

Because the mood congruency is based on associative models of memory, whereby earlier

moods lead to congruent later moods through mood-based memories (Bower, 1981), positive

affect at work should set in motion a self-fulfilling prophecy whereby individuals process

subsequent information in such a way as to reinforce their original positive mood. The same

should be true of negative moods at work. Thus, although the relationship between affect at work

and affect at home has not been investigated, both the correlational hierarchy and the mood

congruency hypothesis suggests particular links between positive moods at work and home and

negative moods at work and home.

H-6:   Within individuals, positive affect at work will have a positive effect on positive

affect at home (H-6a) and negative affect at work will be have a positive effect on

negative affect at home (H-6b).

Method

Participants

Participants were 74 university employees from a southeastern state. These individuals

were selected through an e-mail letter soliciting participation that was sent to a random sample of

the employees listed in the university e-mail directory. The sample included personnel with

typical administrative positions such as secretary or office manager. Participation in the study

was completely voluntary; the employees who completed the study received a small honorarium

for their participation.

Procedure

We collected three types of data: reports of mood and job satisfaction at work, reports of

mood away from work, and measures of trait affectivity. To obtain mood and job satisfaction

reports, we used experience-sampling methodology (ESM; Wheeler & Reiss, 1991). To measure

trait affectivity, we used ratings provided by significant others (e.g., spouse, family member,

close friend). We obtained trait affectivity ratings for 55 participants.

To measure mood and job satisfaction at work, we used interval-contingent ESM asking

employees to report their momentary mood and job satisfaction three times a day, for two weeks.

These data were collected through an Internet interface. Subjects logged on to a Web page and

were first presented with a job satisfaction survey. Upon completion of the job satisfaction

survey, participants completed an adjective-based mood survey. The order in which the mood

adjectives appeared in the survey was randomized across occasions. Participants were asked to

complete on-line surveys at 9 AM, 12 PM, and 3 PM on each working day of the study, and the

electronic interface was programmed to accept the data for each designated time only once

within a two-hour window and to record the exact time of data submission (e.g., the 9 AM

survey was accepted between 8 AM and 10 AM).

On each working day of the study, participants also were required to complete a survey

that included mood measures from an off-work location (e.g., home), in the evening. Participants

were instructed to complete the off-work surveys at 7 PM. On non-working days (e.g., weekend

days), two off-work surveys were required, one at 11 AM and one at 7 PM. Participants had two

options for completing the off-work surveys: they could use an Internet survey similar to the one

used to collect the work data, or they could complete the same questionnaire on paper surveys

that were mailed to those who indicated they prefer this option before the study started.

For the participants for whom we have complete data sets (55 individuals), we computed the response rates for experience-sampling ratings as follows. These respondents provided 1,204 experience-sampling ratings from work, which is equivalent to an overall response rate of 81% (the maximum number of ratings was 9 [days] x 3 [surveys per day] x 55 [participants] = 1,485; the response rate was computed by comparing the number of ratings that we received [1,204] to the maximum number of possible ratings [1,485]). Participants provided 715 off-work ratings, of which 395 were submitted electronically, and 320 were entered on paper surveys. The overall response rate for off-work surveys was 68% (as with the work ratings, the response rate was based on the maximum number of ratings for the 55 participants).

Measures

Mood. Mood was assessed with an adjective-based survey. We used the Positive and Negative Affect Schedule (Watson, Clark, Tellegen, 1988) to measure the broad factors of positive and negative affect (both positive and negative affect were measured with 10 adjectives). Instructions asked respondents to enter a number from 0=*not at all* to 6=*extremely much* in the fields adjacent to each adjective to estimate the extent to which the adjective described their momentary mood. The same survey was used to measure both work and off-work mood. For the work data, the internal consistencies of the positive and negative affect scales, computed on individuals' mean ratings, were .97 and .94, respectively. The internal consistency of the off-work scores was .97 positive affect and .95 for negative affect.

Job satisfaction. Job satisfaction was measured with a five-item version of the Brayfield and Rothe (1951) measure. The scale was administered with momentary time instructions (e.g., "Right now, each minute of work seems like it will never end," "At this very moment I am fairly satisfied with my job," and "Right now, I find real enjoyment in my work"), and ratings were

obtained on a five-point scale ranging from 1=*strongly disagree* to 5=*strongly agree*. The internal consistency of the scores, computed on mean item ratings, was .95.

Trait positive and negative affectivity. We used the Positive and Negative Affect Schedule (Watson, Clark, & Tellegen, 1988), with general instructions, to measure trait positive and negative affectivity (like with the momentary affect scales, each affectivity scale was measured with 10 items). As noted, we received significant other ratings of these personality factors for 55 participants. Internal consistency was .91 for trait positive affectivity and .88 for trait negative affectivity.

Analyses

We used two types of analyses: To test the hypothesis on the role of state affect in mediating the effect of individual differences in trait affectivity on job satisfaction (H-1), we used ordinary least squares (OLS) regression analysis. For testing within-individual (H2, H-3, H-4 and H-6) and cross-level hypotheses (H-5), we used hierarchical linear modeling (HLM). For the OLS regression analyses, we used the average (across all occasions) responses of all 55 participants with complete significant other ratings. For multi-level analyses we used the data provided by 74 individuals for momentary within-individual analyses, and used the data sets of individuals for whom we also had significant other personality ratings (55 respondents) to investigate cross-level effects.[1]

To test the hypotheses concerning dynamic relationship with multi-level analyses, we used either *momentary* experience-sampling ratings (for H-2 and H-3) or averaged experience-sampling responses for each participant and each day (*daily* ratings; for H-4, H-5 and H-6).[2] For both momentary and daily analyses, we used HLM (Byrk & Raudenbush, 1992). HLM uses a two-stage iterative approach to estimate the relationships among variables at two levels of

analysis. To estimate the effect of job satisfaction on off-work mood, for example, at the first

level of analysis (level 1), off-work mood is regressed on job satisfaction for each individual in

the study. If no predictors are included at level 2, then individuals' level 1 intercepts and slopes

are regressed onto a unit vector, which actually estimates the pooled effect of job satisfaction on

off-work mood. If the level 1 intercepts and slopes are regressed on between-subjects variables

(trait affectivity), the level 2 results test the moderator effect of trait affectivity on the job

satisfaction-home mood relationship. We used HLM 5 (Byrk, Raudenbush, & Congdon, 2000),

to test the hierarchical models.

<div align="center">Results</div>

Means, and intercorrelations (computed across subjects) are presented in Table 1. The

table also presents standard deviations computed between individuals, within individuals based

on momentary scores, and within individuals based on daily average scores (where appropriate).

Between-Individual Analyses

Hypothesis 1 posited that, across individuals, positive and negative affect at work would

mediate the effect of trait positive and negative affectivity on job satisfaction. To test this

hypothesis, we performed several hierarchical regressions. In the first block, we entered trait

positive affectivity and trait negative affectivity. As shown in Table 2, trait positive affectivity

significantly predicted job satisfaction but trait negative affectivity did not. In the second block,

average state measures of positive and negative affect were entered into the regression predicting

job satisfaction. As the table shows, both state affects—positive and negative—significantly

predicted job satisfaction. Interestingly, though, trait positive affectivity remained a significant

predictor of job satisfaction controlling for the state affects. Thus, H-1 was supported, but only

partially. Though state affect did explain part of the effect of trait positive affectivity on job

satisfaction, it did so only in part. These results should be interpreted with caution because of the relatively low power given the small sample size.

Momentary Within-Individual Analyses

The second hypothesis (H-2) predicted that within individuals and across time, mood at work would have an effect on concurrent job satisfaction. To test this hypothesis we estimated a model (Model 1) that, at level 1, regressed momentary job satisfaction on positive and negative affect (the affect scores were centered at the individuals' means to eliminate between-individual variances in these scores), and it estimated the pooled value of the within individual predictors at level 2 (i.e., no level 2 predictors were included in this model).[3] The equations for this model are shown in the Appendix; Table 3 presents the results. As these results show, the hypothesis receive strong support in that both positive affect (standardized β=.45, $p < .01$) and negative affect (standardized β=-.40, $p < .01$) were strong predictors of concurrent job satisfaction.[4]

Hypothesis 3 predicted that the effect of mood at work on job satisfaction would decline over time. To test this hypothesis, we compared the effects of momentary mood on concurrent momentary job satisfaction (*time t*; this model is identical with Model 1 described above) with the effects of momentary mood on momentary job satisfaction assessed after one time period (*time t+1*), two time periods (*time t+2*), or in the morning of the *next day*. The results in Table 4 reveal that, when both mood and job satisfaction were assessed concurrently at work, both positive and negative affect significantly predicted job satisfaction. At time t+1, only negative affect remained a significant predictor of job satisfaction, and at time t+2, the effect of affect on job satisfaction virtually disappeared. (The Model 1 equations are shown in the appendix; the equations for the models predicting job satisfaction at time t+1 and t+2, or next day are similar to those for Model 1). This pattern of results suggests support for H-3.

Daily Within-Individual Analyses

Hypothesis 4 predicted that job satisfaction at work would affect positive affect after work. To test the first part of this hypothesis (H-4a), we specified an HLM model where, at level 1, positive affect after work was regressed on job satisfaction at work (Model 2). Job satisfaction scores were centered relative to individuals' means, thus all the between-individual variance in job satisfaction was removed when estimating the pooled within-individual parameters. In another model (Model 3), we regressed negative affect after work on job satisfaction to test H-4b. The equations for both models are shown in the Appendix; the results of these analyses are summarized in Table 5. These results reveal that, as hypothesized in H-4a, job satisfaction at work significantly predicted positive affect after work. Job satisfaction did predict negative affect after work negatively, but the results did not reach significance.

Hypothesis 5 predicted that the within-individual effect of job satisfaction on positive affect would be stronger for those high on trait positive affectivity and the effect of job satisfaction on negative affect would be stronger for those high on trait negative affectivity. To test this hypothesis, in Model 4 and Model 5, we regressed individuals' slopes for predicting positive and negative affect with job satisfaction on their scores on trait affectivity (at level 2 in the HLM analyses; see Appendix for model equations). As Table 5 shows, both of these hypotheses were supported. Trait affectivity does appear to affect individuals' sensitivity of their mood to job satisfaction. The significant moderating effects of trait affectivity are graphically illustrated in Figures 1 and 2. Figure 1 shows that the effect of job satisfaction on positive affect at home is stronger for those high on trait PA than those low on trait PA. Figure 2 shows that the effect of job dissatisfaction (low job satisfaction) on negative affect at home is stronger for those high on trait NA than those low on trait NA.

Hypothesis 6 predicted that affect at work would predict affect at home, with positive (negative) affect at work predicting positive (negative) affect at home. Results of these analyses are provided in Table 6 (we do not present the equations for these models; they are very similar to those for Model 2 and Model 3). As the table shows, the results supported H-6 in that positive affect at work predicted positive affect at home (assessed later that same day) and negative affect at work predicted negative affect at home (again, assessed later that day). Again, it is important to understand that these pooled within-individual estimates do not contain any effects due to differences between individuals. Because the estimates cannot include any between-individual effects, any concern that the relationships between mood across the work and home spheres may be due to individual differences in general mood can be safely eliminated.

<center>Discussion</center>

Fox and Spector (2002) noted that in psychology in general, and in job satisfaction research in particular, cognition has been emphasized more than emotions, and when emotions have been considered, the focus generally has been on emotional traits rather than emotional states or moods. Although a fresh focus on affect in job satisfaction research is underway, this research still is in its infancy (Brief & Weiss, 2002). There is an extensive literature linking trait affectivity to job satisfaction (see Connolly & Viswesvaran, 2000, for a review). However, little research has linked transient measures of mood at work to job satisfaction with a dynamic design that is capably of fully capturing these relationships.

Weiss et al. (1999) supported the importance of studying dynamic mood states rather than aggregated reports of mood. Ilies and Judge (2002) found that traditional between-subjects designs miss more than one-third of the variance in job satisfaction. Fisher (2001) found that both positive and negative affect, measured dynamically, contribute to job satisfaction. The

present study sought to extend further this line of research. Furthermore, we followed George's (1989) advice and considered employees' mood both at work and off work in investigating the dynamic relationship between mood and job satisfaction.

We believe this study contributes to the mood and job satisfaction literature in general, and to the emergent literature on the dynamic interrelationships between personality, mood, and job satisfaction in particular, in four main areas. These areas are: (a) mood as a mediator of the trait affectivity-job satisfaction relationship, (b) mutual influences of mood and job satisfaction on each other including the stability of these effects, (c) spillover effects of work mood and job satisfaction to mood in off-work settings, and (d) the moderating role of personality. Below we discuss these areas of contribution.

Mood as a Mediator of the Trait Affectivity-Job Satisfaction Relationship

Following Brief (1998) and Weiss (2002), we investigated whether mood mediates the trait affectivity-job satisfaction relationship. The results suggest that the experience of affect at work is one mechanism that explains why people's affective traits are associated with their reports of job satisfaction. But the mediation effect was only partial, which suggests that other mechanisms may also mediate the trait affectivity-job satisfaction relationship. It may be the case that affective traits also influence cognitive interpretations of work stimuli. That is, affective traits may influence people's cognitive assessments of their job situations (perhaps both directly and indirectly through mood). Because trait PA was more strongly related to job satisfaction than was trait NA—both before and after controlling for state PA at work—trait PA may play a stronger cognitive role in evaluations of job satisfaction than trait NA. Such an interpretation is consistent with theories and findings in basic attitude research.

Specifically, attitude research suggests that individuals in whom positive mood has been induced engage in different cognitive processes than those in whom no such mood has been induced. Positive mood appears to reduce systematic processing of information, such that positive individuals are more susceptible to heuristic cues (Worth & Mackie, 1987). Reliance on these heuristic cues may be a means of maintaining positive moods; to invest effort in obtaining and processing detailed information (as opposed to relying on heuristics) might lead to the dissipation of the positive mood (one might learn something that would run counter to the mood) (Eagley & Chaiken, 1993). Moreover, a positive mood might optimistically bias the processing of information (Shaller & Cialdini, 1990), which would also reinforce maintenance of a positive mood. Interestingly, the link between negative affect and cognitive processes is less studied and the results are more equivocal (Eagley & Chaiken, 1993). This converges with the results of our study in that trait NA was less related to job satisfaction, and negative affect at work, while related to job satisfaction, was less strongly related than was positive affect at work.

What we are arguing is that if positive affectivity (trait PA) leads to positive mood and if positive mood leads to differential processing of job information, then these cognitive processes may explain further the effect of trait PA on job satisfaction. Given our findings and our interpretation of their possible meaning, the effects of affective traits on job cognitions should be investigated in future research. Thus, showing that dynamic mood mediates some but not all of the effect of trait affectivity on job satisfaction respond to calls to better understand the processes by which affective traits influence job satisfaction (Brief, 1998; Brief & Weiss, 2002) while also suggesting future research that would include cognitive processes.

Mutual Influences Between Mood and Job Satisfaction

Previous research has assumed that the relationship between state affect and job satisfaction represents the effect of affect on job satisfaction. Indeed, the results in Table 3 reveal that both positive affect and negative affect have significant concurrent effects on job satisfaction (these effects are short-lived, as we found no evidence of an effect of current mood on the next day's job satisfaction—see Table 4). However, the results in Table 5 show that job satisfaction assessed at work, in turn, has significant effects on positive (but not negative) affect after work. Thus, a significant contribution of this study is to show that affect and job satisfaction appear to have mutual effects on one another—especially in the case of positive affect. Thus, not only can affect be considered as a distinct influence on or as a part of job satisfaction (Brief & Weiss, 2002), but it can also be viewed as a *consequence* of job satisfaction. By investigating whether job satisfaction influences employees' mood measured later in the day, we examined whether affect can also be viewed as a reaction or response to job satisfaction. The results suggest that such view is appropriate.

We should note that the dynamic nature of our data allowed us to investigate these two distinct causal links: from mood to job satisfaction, and from job satisfaction to mood, in a multi-level modeling framework. These analyses are appropriate because (a) the temporal ordering of the variables was correct, and (b) we conducted regressions strictly within individuals (by eliminating the between-individual variance in the predictor scores). In contrast, cross-sectional analyses, even when they include a longitudinal component, cannot separate within- and between-individual effects, thus making the interpretation of such results more problematic.

Spillover Effects

Although the work-family literature has made substantial progress in the decade since Zedeck's (1992) appraisal of the literature, "linking mechanisms" that explain the relationship between work and family roles are sorely lacking in the literature (Edwards & Rothbard, 2000; Zedeck, 1992). Whereas depletion is a dominant theme in the work-family literature, where it is assumed that work and family roles detract from one another (Rothbard, 2001), the results presented here suggest that affective spillover occurs between the domains. Specifically, the results showed that how employees feel about their job at work influences the affect they experience at home. In addition, the results indicated that mood at work also spills over outside the work area, in that it influenced mood at home. The within-individual nature of the analyses gives these results a precise interpretation. That is, the influence of job satisfaction on mood at home within individuals, for example, means that the affective states experienced by employees at home vary from day to day in synchrony with the feelings of satisfaction that they experienced at work earlier in the day. Because all the possible effects of differences across individuals were controlled in the analyses of the time-sampled data, the explanation that individual differences are responsible for the observed pattern of relationships between mood and job satisfaction across time was eliminated.

The findings contribute to the work-family literature by clarifying spillover processes (Lambert, 1990) or linking mechanisms (Edwards & Rothbard, 2000) that explain ways in which the work and family boundaries are permeable. Lambert (1990) notes that spillover effects can be positive or negative. In the area of affect and job satisfaction, it appears that the positive spillover effects are more important. For the relationship of mood to job satisfaction, it appears the spillover effects are ephemeral—only negative affect had more than a concurrent effect on

job satisfaction (see Table 4). Furthermore, job satisfaction did impact positive mood at home (see Table 5). Finally, there were moderately strong spillover effects from mood at work to mood at home in that positive affect and negative affect at work impact positive affect and negative affect at home, respectively (see Table 6). Although the spillover model has garnered considerable support in the literature (Lambert, 1990), our results suggest a new avenue of support for the model, in terms of affective processes.

Moderating Role of Personality

An important area of research in the past decade has been the investigation of trait congruency effects whereby extraverted or high PA individuals are more responsive to positive stimuli and neurotic or high NA individuals are more responsive to negative stimuli (Rusting & Larsen, 1999). Past research has investigated these effects in terms of sensitivity to mood induction (Rusting & Larsen, 1999), cognitive processing of information (Rusting & DeHart, 2000), and sensitivity to rewards or punishments (Stewart, 1996). The cross-level moderator analyses presented here (see Table 5) suggest a new way of investigating the trait congruency connection between personal characteristics and sensitivity to rewards and punishments— examining the impact of trait PA and NA on the effect of job satisfaction at work on positive and negative mood after work. These results are important because they show that dispositions not only have direct effects on mood and job satisfaction but they also influence how mood and job satisfaction are interrelated across time. Specifically, employees' standing on measures of affective traits impacted the extent to which their job satisfaction influenced their mood after work. In this way, the results provide further support for trait congruency effects. Positive affectivity (trait PA) amplifies the effect of individual's job satisfaction on their positive mood

after work, whereas negative affectivity (trait NA) dampens or suppresses the effect of satisfaction on negative mood.

Limitations and Strengths

One limitation of this study is sample size. Although the sample size was 74, it was reduced to 52-55 when the between subjects and within subjects data were combined and missing data were taken into account. However, in the other two studies on the topic, the sample sizes were approximately half this size (N=27 in Ilies & Judge, 2002; N=24 in Weiss et al., 1999). Given the intensity of the data collection efforts, with multiple observations per participant being required daily over the period of two weeks, it is difficult to collect such data with large numbers of participants. Furthermore, because HLM affords more power than traditional between-subjects techniques, the moderate sample sizes used in the analysis are less of a concern. With respect to our test of the mediation hypothesis (H-1), because this test was based exclusively on between-individual variance, the low power associated with the small sample size means that further replication is needed before drawing firm conclusions on the mediating role of state affect on the trait affectivity-job satisfaction relationship.

The design of this study also has strengths. One such strength is that data were collected at two different levels (dispositional and experience-sampled data), from two sources (self and significant other), and in two contexts (at work and at home). In addition, the use of composites formed by multiple time-sampled reports of mood and job satisfaction in cross sectional analyses controlled for the effect of transient errors on the reported scores (i.e., for cross-sectional analyses temporal variations are treated as transient errors), which minimized the effects of measurement error on the cross-sectional estimates presented here.

Implications and Future Research

Our results have both practical implications and implications for researchers interested in studying job attitudes and mood at work and at home. For employees and employers, there is value in understanding that the affective experiences at work can affect both job satisfaction and mood at work, both of which have spillover effects to mood at home. In this way, the results extend Affective Events Theory (Weiss & Cropanzano, 1996), which maintains that "affective experiences at work influence overall judgments about satisfaction with one's job" (Weiss & Cropanzano, 1996, p. 46). Our results suggest that the aftermath of affective events likely reaches to the home life as well. If employers care about the work-family balance achieved by their employees, and there is reason to believe that they should (Milliken, Martins, & Morgan, 1998), then employers can contribute to positive affect in both work and nonwork domains through the way they treat employees. For example, research shows that treating individuals fairly affects discrete emotional reactions (Weiss, Suckow, & Cropanzano, 1999). Putting in place fair processes may not only raise employee satisfaction, it may have residual benefits in terms of affective reactions away from work. For employees, that the consequences of having a satisfying (or dissatisfying) job spill over onto one's mood at home provides further evidence for the importance of being in a satisfying job. When one considers the "contagious" effect of emotions on others (Neumann & Strack, 2000), this spillover effect may be amplified even further at home.

In addition to practical implications, the results suggest several promising avenues for future research. Although Affective Events Theory (Weiss & Cropanzano, 1996) has been cast in terms of work events, and how these events affect work affect and attitudes, the theory certainly could be broadened to include the home domain. In the theory, work events produce affective

reactions which in turn lead to job attitudes. In future research, the theory could be broadened to include events that happen at home, and the relationship of the resulting affective reactions to work affect and job attitudes. Similarly, the theory could broaden the study of work events to analyze the effect of these events (and the affective reactions) to affective processes at home. Stone (1987), for example, analyzed the effect of daily life events on mood and Grandey, Tam, and Brauburger (2002) analyzed the relationship between work affective events and affective reactions. These separate areas of research could be brought together, and expand the scope and implications of Affective Events Theory.

Another area for future research is to test the elements of the models presented by Edwards and Rothbard (2000) on the work-family interface. These authors propose several models which hypothesize the interrelationships among role performance, rewards, and mood in both work and family roles. An important extension of the results presented in this paper would be to replicate the results observed here, but to also consider behavior in work and family roles, as well as the rewards each of these roles provides. Trait congruency effects could be investigated where the effect of work and family rewards on work and family mood, respectively, are moderated by trait PA, in addition to the moderation effects observed here.

Conclusion

We believe this paper contributes to the literature on personality, affect, and job satisfaction, and that our results have important implications for studying work-family conflict through the investigation of job satisfaction and mood spillover effects from work. First, we have shown that state mood influences state job satisfaction, and the effect declines rapidly with the passage of time. Second, we found that employee's satisfaction with their job, measured at work, influences the affective states experienced by employees at home, and the magnitudes of these

influences vary according to employees' trait affectivity. Third, the present results show that mood does spill over outside the work environment in that the affective states experienced at work influenced affect measured later in the day, at home. Jointly, the results presented here enhance our understanding of the psychological mechanisms through which individuals' mood and job satisfaction are interconnected across work and off-work spheres and across time, and of the ways in which stable dispositions influence these mechanisms.

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Appendix

Equations for HLM Models

Model 1

Level 1 (within-individuals; momentary ratings)

Job Satisfaction at Work $_{ij}$ = β_{0j} + β_{1j} (Positive Affect at Work $_{ij}$) + β_{2j} (Negative Affect at Work $_{ij}$) + r_{ij}

Level 2 (between individuals)

$\beta_{0j} = \gamma_{00} + U_{0j}$

$\beta_{1j} = \gamma_{10} + U_{1j}$

$\beta_{2j} = \gamma_{20} + U_{2j}$

Where:

β_{0j}= level 1 intercept

β_{1j}=individuals' slopes for predicting momentary Job Satisfaction at Work with concurrent Positive Affect at Work

β_{2j}=individuals' slopes for predicting momentary Job Satisfaction at Work with concurrent Negative Affect at Work

γ_{00}= grand mean of Job Satisfaction at Work scores, after the within individual effect of concurrent mood was accounted for

γ_{10}= pooled slope for predicting momentary Job Satisfaction at Work with concurrent Positive Affect at Work

γ_{20}= pooled slope for predicting momentary Job Satisfaction at Work with concurrent Negative Affect at Work

Appendix continues

Appendix (continued)

Model 2

Level 1 (within-individuals; daily averages)

Positive Affect at Home $_{ij}$ = β_{0j} + β_{1j} (Job Satisfaction at Work $_{ij}$) + r_{ij}

Level 2 (between individuals)

β_{0j} = γ_{00} + U_{0j}

β_{1j} = γ_{10} + U_{1j}

Where:

β_{1j}=individuals' slopes for predicting Positive Affect at Home with Job Satisfaction at Work

γ_{00}= grand mean of Positive Affect at Home after the effect of Job Satisfaction at Work

within individuals was accounted for

γ_{10}= pooled slope for predicting Positive Affect at Home with Job Satisfaction at Work

Model 3

Level 1 (within-individuals; daily averages)

Negative Affect at Home $_{ij}$ = β_{0j} + β_{1j} (Job Satisfaction at Work $_{ij}$) + r_{ij}

Level 2 (between individuals)

β_{0j} = γ_{00} + U_{0j}

β_{1j} = γ_{10} + U_{1j}

Where:

β_{1j}=individuals' slopes for predicting Negative Affect at Home with Job Satisfaction at Work

γ_{10}= pooled slope for predicting Negative Affect at Home with Job Satisfaction at Work

Appendix continues

Appendix (continued)

Model 4

Level 1 (within-individuals; daily averages):

Positive Affect at Home $_{ij}$ = β_{0j} + β_{1j} (Job Satisfaction at Work $_{ij}$) + r_{ij}

Level 2 (between individuals)

β_{0j} = γ_{00} + γ_{01} (Positive Affectivity) + U_{0j}

β_{1j} = γ_{10} + γ_{02} (Positive Affectivity) U_{1j}

Where:

β_{1j}=individuals' slopes for predicting Positive Affect at Home with Job Satisfaction at

Work

γ_{01}= level 2 slope for predicting β_{0j} with Positive Affectivity

γ_{11}= level 2 slope for predicting the level 1 slope with Positive Affectivity

Model 5

Level 1 (within-individuals; daily averages):

Negative Affect at Home $_{ij}$ = β_{0j} + β_{1j} (Job Satisfaction at Work $_{ij}$) + r_{ij}

Level 2 (between individuals)

β_{0j} = γ_{00} + γ_{01} (Negative Affectivity) + U_{0j}

β_{1j} = γ_{10} + γ_{11} (Negative Affectivity) + U_{1j}

Where:

β_{1j}=individuals' slopes for predicting Negative Affect at Home with Job Satisfaction at Work

γ_{01}= level 2 slope for predicting β_{0j} with Negative Affectivity

γ_{11}= level 2 slope for predicting the level 1 slope with Negative Affectivity

Footnotes

[1] The total number of momentary observations used for within-individual analyses varied according to which variables were included in the specific analyses (due to listwise deletion).

[2] For analyses that predicted job satisfaction based on momentary data, we included a lagged job satisfaction variable to account for serial dependence in job satisfaction ratings (Ilies & Judge, 2002). Including lagged satisfaction in the within-individual models reduced the total number of observations because we did not lag across non-consecutive observations (these were treated as missing data). Because using the daily responses eliminates the problem of autocorrelation, we did not include lagged predictors as control variables in these analyses.

[3] The model included a time index and lagged job satisfaction to control for possible time trends, and for serial dependence in job satisfaction scores.

[4] We standardized these level 1 regression coefficients by multiplying the estimated slope by the within-individual standard deviation of the independent variable divided by the within-individual standard deviation of the dependent variable.

Table 1

Means (M), Standard Deviations (SD), and Intercorrelations Across Individuals for All Study Variables

	M	SD_b	SD_{wm}	SD_{wd}	1	2	3	4	5	6	7
1. Trait positive affectivity	48.80	11.19	---	---	1.00						
2. Trait negative affectivity	23.23	9.97	---	---	-.16	1.00					
3. Ave. state positive affect at work	27.30	12.52	8.14	6.98	.11	-.06	1.00				
4. Ave. state negative affect at work	4.74	6.76	4.52	4.19	-.11	.00	.11	1.00			
5. Ave. state positive affect at home	23.68	13.42	---	8.63	.01	.10	.85**	.18	1.00		
6. Ave. state negative affect at home	4.32	7.12	---	5.09	-.03	-.03	.10	.93**	.13	1.00	
7. Ave. state job satisfaction	17.67	3.73	2.73	2.28	.35**	-.16	.49**	-.46**	.27*	-.40**	1.00

Notes: $N = 55\text{-}74$. Trait Positive and Negative Affectivity were measured with significant other ratings. * $p < .05$ (two-tailed). ** $p < .01$ (two-tailed). SD_b = standard deviation computed between individuals. SD_{wm} = within-individual standard deviation of momentary scores. SD_{wd} = within-individual standard deviation of daily averages.

Table 2

Mediating Effect of Affect at Work on the Trait Affectivity-Job Satisfaction Relationship

	β	R^2
Step 1: Trait Affectivity		
Trait Positive Affectivity	.34**	
Trait Negative Affectivity	-.09	
R^2		.14*
Step 2: Trait Affectivity + Affect at Work		
Trait Positive Affectivity	.25**	
Trait Negative Affectivity	-.07	
Positive Affect at Work	.58**	
Negative Affect at Work	-.31**	
ΔR^2		.45**
R^2		.59**

Notes: N=55. * $p < .05$. ** $p < .01$. Trait Positive and Negative Affectivity were measured with significant other ratings.

Table 3

HLM Estimates of the Effect of Concurrent Mood at Work on Job Satisfaction

	Job Satisfaction	
	β	ΔR^2
Intercept (β_0)	17.90**	
Lagged Job Satisfaction (β_2)		.02
Unstandardized estimate	.12**	
Standardized estimate	.12**	
Momentary Affect at Work		.48
Positive Affect at work (β_3)		
Unstandardized estimate	.15**	
Standardized estimate	.45**	
Negative Affect at work (β_4)		
Unstandardized estimate	-.24**	
Standardized estimate	-.40**	

Notes: The model is based on 74 individuals and 1,055 data points (the number of momentary observations used in the analyses was decreased by the inclusion of lagged satisfaction scores because the scores were not lagged across individuals or across non-consecutive observations and these instances were treated as missing data). ** $p < .01$. To account for eventual time trends in the data, the regressions included a time index as a control variable; the effect of this index on job satisfaction was not significantly different from zero (standardized $\beta=.02$, *ns*). To form the lagged satisfaction variable, the momentary job satisfaction scores were lagged by one period. All predictor scores were centered at the individuals' means to eliminate between-individual variance. β=level 1 regression coefficients (within-individual estimates); the values presented in the table represent estimates for the final regression. ΔR^2=increase in the variance explained by each regression block; all proportions of variance explained were computed as the proportional reduction in the level 1 (within-individual) variance component of job satisfaction scores (see Hofmann, Griffin, & Gavin, 2000).

Table 4

HLM Estimates of the Effect of Mood at Work on Job Satisfaction

	Models Predicting Job Satisfaction			
	At Time t[a]	At Time t+1[b]	At Time t+2[c]	Next Day[d]
Intercept (β_0)	17.75**	17.83**	18.05**	17.96**
Positive Affect at work (β_1)				
Unstandardized estimate	.15**	.00	.01	-.02
Standardized estimate	.45**	.01	.03	-.06
Negative Affect at work (β_2)				
Unstandardized estimate	-.24**	-.09**	.04	.01
Standardized estimate	-.40**	-.15**	.06	.01
ΔR^2	.48	.03	.03	.11

Notes: ** p < .01. To account for autocorrelated residuals and for eventual time trends that may have been present in the data, all models included lagged job satisfaction and a time index as control variables. To form the lagged satisfaction variable, the momentary job satisfaction scores were lagged by one period.

Table 4 continues

Table 4 (Continued)

All predictor scores were centered at the individuals' means to eliminate between-individual variance. β=level 1 regression coefficients (within-individual estimates). ΔR^2= the variance explained by the two affect variables over and above the variance explained by the control variables (the proportions were computed as the proportional reduction in the level 1 variance component of job satisfaction scores; see Hofmann, Griffin, & Gavin, 2000).

[a] Momentary job satisfaction measured *concurrently* with affect. This model is based on 74 individuals and 1,055 data points.
[b] Momentary job satisfaction measured *one time period* after affect. This model is based on 70 individuals and 642 data points.
[c] Momentary job satisfaction measured *two time periods* after affect. This model is based on 63 individuals and 266 data points.
[d] Momentary job satisfaction measured *next day*. This model is based on 67 individuals and 255 data points.

Table 5

HLM Estimates of the Effect of Job Satisfaction on Mood After Work

	Positive Affect After Work	Negative Affect After Work
Intercept (β_0)	22.65**	4.06**
Level 1: Job satisfaction (β_1)		
Unstandardized estimate	.63**	-.24
Standardized estimate	.17**	-.11
ΔR^2	.05	.22
Level 2: Moderating effects (γ_{11})		
Trait negative affectivity		
Unstandardized estimate	---	-.05**
Standardized estimate	---	-.22**
Trait positive affectivity		
Unstandardized estimate	.04**	---
Standardized estimate	.12**	---

Table 5 continues

Table 5 (continued)

Notes: The models were based on 53 individuals and 372 data points (daily averages of work and home ratings). ** p < .01. Both models included a day index to control for possible time trends. The level 1 predictor scores (i.e., state job satisfaction) were centered at the individuals' means to eliminate between-individual variance. β=level 1 regression coefficients (within-individual estimates) for predicting home affect with work job satisfaction. ΔR^2= the variance explained by job satisfaction over and above the variance explained by the control variable (the proportions were computed as the proportional reduction in the level 1 variance component of job satisfaction scores; see Hofmann, Griffin, & Gavin, 2000). The total residual variance did not decrease upon introducing the cross level moderator effect in the mixed model (the within-individual residual variances did decrease but the between-individual variance slightly increased; see Snijders & Bosker, 1999, for a treatment of negative R^2 values in multi-level modeling and alternative formulas). Trait Positive and Negative Affectivity were measured with significant other ratings. The standardized estimates for the moderating effects show the increase in the level 1 regression coefficient for predicting positive/negative affect at home with job satisfaction, in standardized points, that corresponds to one standard deviation increase in the trait positive/negative affectivity scores.

Table 6

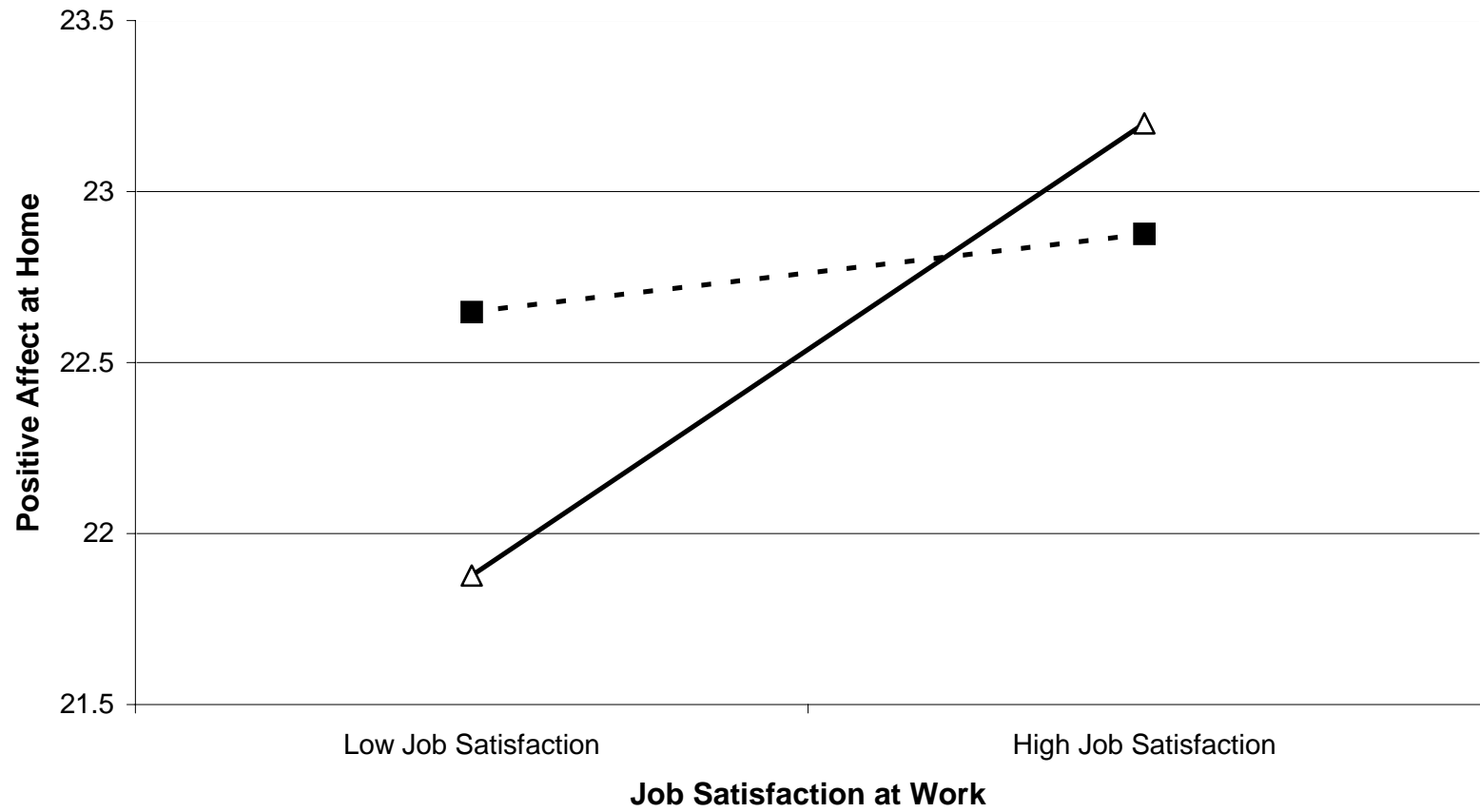*HLM Estimates of the Effect of Mood at Work on Mood at Home*

Affect at work	Affect at home	
	Positive affect at home	Negative affect at home
Intercept (β_0)	22.66**	4.04**
Positive affect at work (β_1)		
Unstandardized estimate	.25**	-.02
Standardized estimate	.20**	-.03
Negative affect at work (β_2)		
Unstandardized estimate	-.19	.41**
Standardized estimate	-.10	.34**
ΔR^2	.11	.45

Notes: The models were based on 67 individuals and 396 data points (daily averages of work and home ratings). ** $p < .01$. The models included a day index to control for possible time trends. The level 1 predictor scores (i.e., state positive and negative affect at work) were centered at the individuals' means to eliminate between-individual variance.
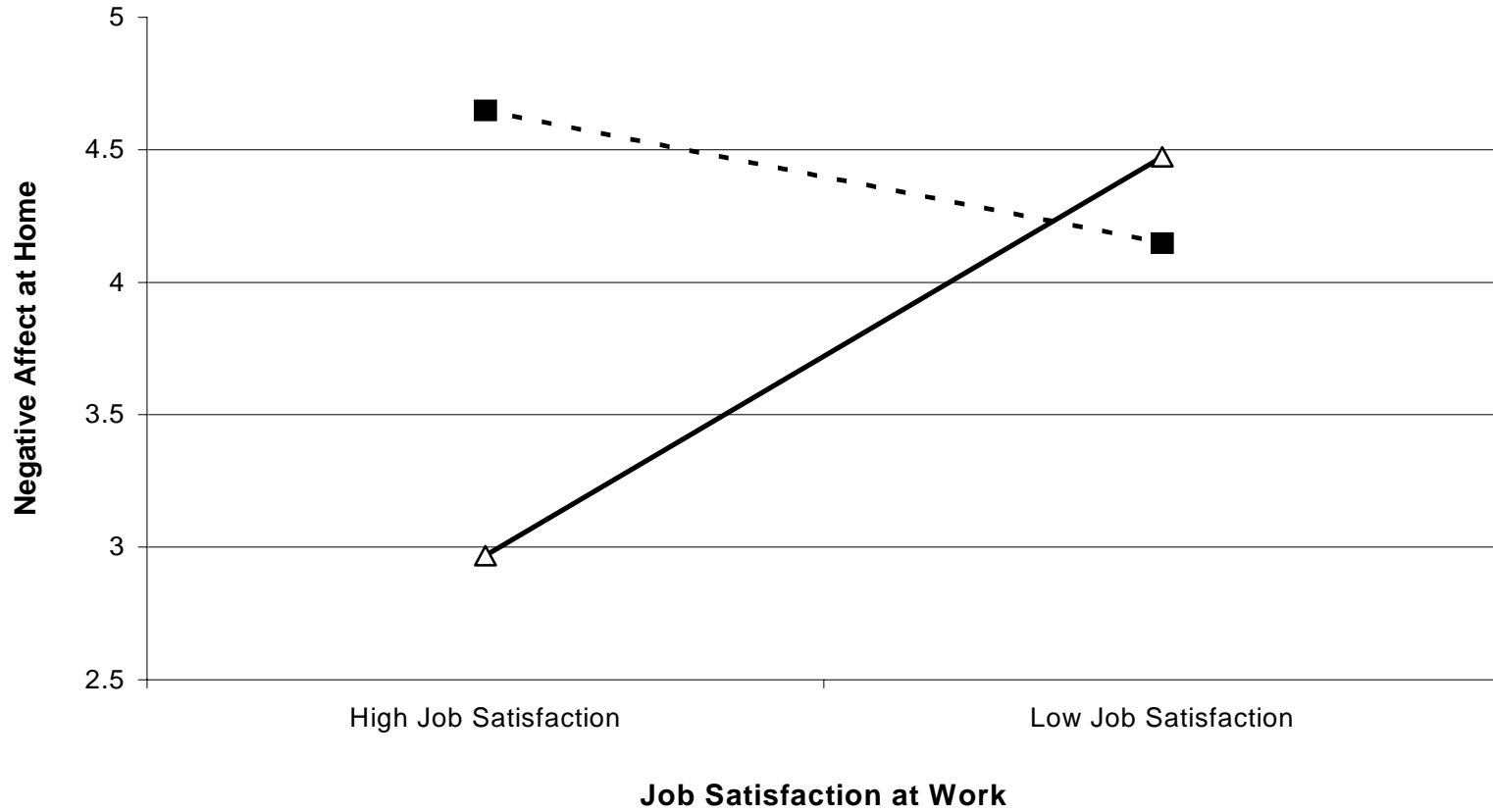
Figure Captions

Figure 1. The moderating effect of Trait Positive Affectivity on the relationship between job satisfaction at work and positive affect at home.

Figure 2. The moderating effect of trait Negative Affectivity on the relationship between job satisfaction at work and negative affect at home.

Negative Affect at Home (y-axis, scale 2.5 to 5)

Job Satisfaction at Work (x-axis: High Job Satisfaction, Low Job Satisfaction)

△——1 SD above the mean on Negative Affectivity   – ■ – 1 SD below the mean on Negative Affectivity