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What is This?
Positive and Negative Affect, Signal Sensitivity, and Pay Satisfaction

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This study examines the relationship of two dispositional factors, positive and negative affect (PA and NA), with multi-dimensional pay satisfaction. Among a sample of 194 full- and part-time employees in two southern states, PA explained significant variance in pay satisfaction after controlling for actual salary levels, overall job satisfaction, and other individual characteristics. More importantly, the data show that PA interacts with actual salary level in explaining certain dimensions of pay satisfaction. By contrast, results confirm the hypothesis that NA is unrelated to pay satisfaction. Implications of these results are discussed and directions for future research identified.

Research on pay satisfaction has spanned decades. It assumes even greater importance with changing work force demographics and increasing scarcity of human resources (Miceli & Lane, 1991). Despite extensive research, few stable predictors of pay satisfaction have been identified, perhaps because pay satisfaction research seldom explores personality or dispositional characteristics as potential antecedents. According to Adler and Weiss (1988), personality research is sometimes held in low regard; this may explain the dearth of personality-related explorations in pay research. More recently, dispositional factors gained credibility and visibility in the organizational literature (e.g., Arvey, Carter, & Buerkley, 1991; George, 1992). Some researchers now argue that dispositional factors may be equally as predictive of outcomes as are situational variables (House, Shane, & Herold, 1996). The time appears ripe for a systematic investigation of the disposi-

G. Douglas Jenkins, Jr. is now deceased.

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tional antecedents of pay satisfaction. We begin this process by focusing specifically on the relationship of positive and negative affect (PA and NA) with pay satisfaction.

We view pay satisfaction as multi-dimensional, and the relationship of PA and NA to each dimension of pay satisfaction is examined separately. A great deal of research has been dedicated to determining the appropriate number of pay satisfaction dimensions. Most of the early work on pay satisfaction included a measure of pay level satisfaction or a measure of overall pay satisfaction. Several studies attempted to confirm the structure of pay satisfaction (see Judge & Welbourne, 1994, and Carraher & Buckley, 1996, for reviews). Many of these studies derived a four-dimension structure consisting of pay level, pay raise, administration/structure, and benefits satisfaction. This is also the structure we use. For readability, we refer to the specific dimensions only when necessary, and generally use the terminology “pay satisfaction” when referring to the multi-dimensional model.

Background

Pay satisfaction research is important for at least two reasons: (1) pay is a significant organizational expense; and (2) pay is a valued individual outcome. From a cost perspective alone, pay is a critical organizational resource. Compensation costs are estimated to account for between 10 and 50 percent, and in some cases as much as 90 percent, of an organization’s operating expenses (Gerhart & Milkovich, 1992). Money also plays a vital role in employees’ lives (Wernimont & Fitzpatrick, 1972). The compensation system communicates a wealth of information about organizational priorities, policies, and procedures to employees. Pay provides employees with information about issues such as their progress toward internal and external goals (Thierry, 1992), and about social standing, security, achievement, and success in life (Brief & Aldag, 1989; Gerhart & Milkovich, 1992). In essence, pay serves many functions for individuals; their attitudes toward and their reactions to pay are critical in shaping overall affective and behavioral reactions to the organization. These are reasons why it is important to understand the dynamics and antecedents of pay satisfaction, and why many studies have focused on this issue. We classify studies of pay satisfaction under three groupings (background characteristics, actual pay levels, and discrepancy or fairness approaches), and summarize the major findings below.

The largest volume of pay satisfaction research has concentrated on background characteristics as predictors. The results of these studies are varied and generally show that background and individual characteristics (e.g., age, gender, education, and tenure) are inconsistent predictors of pay satisfaction (e.g., Dreher, Ash, & Bretz, 1988; Heneman, 1985; Heneman, Greenberger, & Strasser, 1988; Judge, 1993; Rice, Phillips, & McFarlin, 1990; Ronan & Organt, 1973).

By contrast, actual pay level is consistently positively related to pay satisfaction, although the magnitude of the relationship is quite variable from study to study. Motowidlo (1982), for example, reported r's ranging from .13 to .46. In general, the relationship between actual pay and pay satisfaction appears positive and of moderate strength (Carraher & Buckley, 1995, is an exception). It makes
intuitive sense that the higher the pay, the higher the satisfaction with it; empirical research generally supports this intuitive notion. Still, the etiology of pay satisfaction cannot be fully understood with a single, intuitively obvious variable. It is important to explore other factors that may play a critical explanatory role in pay satisfaction.

The third primary focus of pay satisfaction research concerns discrepancy or fairness models (e.g., Heneman, 1985; Lawler, 1971). These models view pay satisfaction as the result of discrepancies between (a) an individual's own inputs and pay level, and (b) other individuals' inputs and their pay levels. A handful of studies provides empirical support for discrepancy propositions with respect to pay satisfaction (e.g., Folger & Konovsky, 1989; Rice et al., 1990; Sweeney, McFarlin, & Inderrieden, 1990). Miceli and Lane (1991) argue that perceptions of fairness are equivalent to feelings of satisfaction, and that significant relationships between the two may be attributable to the same construct being measured twice (Mulvey, 1990). The argument that pay fairness causes pay satisfaction may be tautological. But to the extent that pay satisfaction and pay fairness are similar constructs, research on pay fairness (Folger & Bies, 1989; Greenberg, 1990a) and organizational justice (Greenberg, 1990b) does shed some light on the antecedents of pay satisfaction. It is beyond our scope to debate the equivalence of pay satisfaction and fairness. Nonetheless, substantial variance in pay satisfaction remains unexplained by variables identified in discrepancy models.

Overall, few consistent predictors of pay satisfaction are evident. Theoretical and empirical examinations of pay satisfaction typically focus on easily accessible and obvious predictors, such as demographic characteristics. Conspicuous by their absence are dispositional factors that cause people to react differently to the same or similar situations. Since pay is an important variable for individuals and organizations, and since higher pay satisfaction could improve individual/organizational integration (Jenkins & Lawler, 1981), it is important that the relationship between dispositions and pay satisfaction be examined systematically.

Theoretical Framework

Centrality of Affect

A growing body of work on dispositions concerns the influence of affective traits on attitudes, cognitive processing, and social behaviors. A finding that affect underlies pay satisfaction has many theoretical and practical implications: It would (1) move us a long way toward identifying stable predictors of pay satisfaction; (2) assist research on situational determinants of pay satisfaction—situational research can focus on the significance of relevant variables controlling for individual dispositions; (3) help us understand similar dynamics with respect to other affective outcomes (e.g., job involvement, organizational commitment, organizational citizenship, etc.); and (4) enable the interaction between dispositional and situational factors in predicting pay satisfaction to be extrapolated to achieve a better understanding of similar interactions with respect to other outcomes.
Positive and negative affect (PA and NA) are theoretically and empirically independent affective traits (Watson, Clark, & Tellegen, 1988) that are relatively stable over time and that are related to a variety of work-related outcomes, such as job satisfaction (George, 1992; Staw, Bell, & Clausen, 1986), prosocial behavior (George, 1991; George & Bettenhausen, 1990), and managerial effectiveness (House, Howard, & Walker, 1991). PA is a dimension of affective structure that can be characterized by the extent to which a person feels enthusiastic, active, and alert, and is empirically related to the personality factor of extraversion (Watson et al., 1988). People high in PA are also described as having social potency and volatility (Larsen & Ketelaar, 1991). NA is not the conceptual polar opposite of PA, but a conceptually distinct dimension correlated with neuroticism (George, 1992). People high on NA have high levels of subjective distress, nervousness, and anxiety. NA is sometimes referred to as trait anxiety (Schaubroeck, Ganster, & Kemmerer, 1996). High NA individuals are more prone to feelings of anger, contempt, disgust and fear (Watson et al., 1988).

**Signal Sensitivity Perspective**

Current theory with respect to trait affect implies a direct relationship between affect (PA and NA) and pay satisfaction. In general, empirical research substantiates a positive relationship between PA and overall and facet job satisfaction. The assumption, therefore, is that PA would also be positively related to pay satisfaction. We do not refute this. In fact, we also posit a positive relationship between PA and pay satisfaction. But we also propose that the relationship between PA and pay satisfaction in particular may not be as simple as what previous research implies. Personality and dispositional factors such as PA often interact with situational factors to produce complex patterns of results (Bolger & Schilling, 1991; Cropanzano, James, & Konovsky, 1993). Theory and research on signal sensitivity (e.g., Larsen & Ketelaar, 1989) offer a fruitful way to examine these complex patterns.

Gray (1970) argued that people differ in their sensitivity to rewards and punishments; people high on extraversion (trait PA) are extremely sensitive to reward signals, whereas people high on neuroticism (trait NA) are extremely sensitive to punishment signals. Larsen and Ketelaar (1989, 1991) extended this perspective, arguing that PA and NA are the “subjectively reportable representations of reward-signal sensitivity and punishment-signal sensitivity, respectively” (1989: 1222).

**PA, pay, and pay satisfaction.** Salary (or pay) level can be interpreted as a reward signal. High salary is a strong reward signal; low salary is a weaker reward signal. High-PA individuals, being more sensitive to reward signals, will notice even very small rewards, such as low pay (Larsen & Ketelaar, 1989), and interpret them positively (George, 1992; Gerhart, 1987; Staw & Ross, 1985; Staw et al., 1986). Low-PA individuals, on the other hand, would not necessarily pick up and respond positively to these weaker reward signals. That is, individuals high in PA are likely to interpret the same situational conditions more positively than those low in PA (Gerhart, 1987; Staw & Ross, 1985). They are also more likely than
low-PA individuals to pick up and react positively to *weaker* reward signals (Larsen & Ketelaar, 1989).

Obviously, both high-PA and low-PA individuals will likely be more satisfied with high pay than low pay (this is the main effect prediction). But given their differential sensitivity to reward signals, the relationship between the actual pay level and pay satisfaction should be stronger for low-PA individuals than for high-PA individuals. Following the signal sensitivity argument, then, we expect actual pay levels and pay satisfaction to be strongly and positively related among low-PA individuals. These individuals' affective responses are triggered by stronger reward signals, and they would require greater salary rewards to be satisfied. Low-PA individuals should be *much more* satisfied with high pay than with low pay. On the other hand, high-PA individuals would register and respond positively even to low pay levels—their differential responses to different pay levels are tempered by their general positivity. High-PA individuals should be satisfied with low pay, but they should be a *little more* satisfied with higher pay. The relationship between pay level and pay satisfaction should, thus, show a flatter slope for high-PA individuals than for low-PA individuals. These arguments lead to the following interaction prediction: there is a *stronger* positive relationship between salary level and pay satisfaction for low-PA individuals than for high-PA individuals. This is a between-subjects prediction, i.e., a high-PA individual will react differently to the same salary *level* than will a low-PA individual. It is likely that different dynamics operate within subjects. It may be that the heightened signal sensitivity of high-PA individuals means they will react positively to even a small pay raise, while low-PA individuals require raises of larger magnitude for signal detection. The present study concerns between-subjects predictions and focuses on pay *levels* rather than pay raises; thus, within subjects dynamics and examinations of the impact of affective variables on pay raise thresholds fall beyond our scope and are not discussed in detail.

*NA, pay, and pay satisfaction.* Although not specifically discussed, previous research also implies a negative relationship between NA and pay satisfaction. For instance, George (1992) argued that *both* PA and NA are primary determinants of *job* satisfaction. But people high on NA are anxious and nervous (feelings that may describe a neurotic personality), but that does not imply across-the-board dissatisfaction. High-NA individuals may be dissatisfied with aspects of their jobs, but that does not necessarily mean that they would be more dissatisfied with their *pay*. In fact, the results of two recent empirical studies failed to find a significant relationship between NA and dimensions of pay satisfaction. Folger and Konovsky (1989) found NA to be unrelated to pay *raise* satisfaction, and Schaubroeck et al. (1996) found NA to be unrelated to *overall* pay satisfaction. Neither study offered an explanation for the lack of a significant effect.

The signal sensitivity perspective provides an explanation and a rationale to expect *no* consistent relationship between NA and pay satisfaction. According to Larsen and Ketelaar (1989), high-NA individuals are sensitive to signals of punishment (recall that PA heralds reward-signal sensitivity). An individual's pay level represents a reward signal (one could argue that a pay *cut* is a punishment; nonetheless, pay level *in toto* would not be considered a punishment). Logically,
since NA concerns punishment-sensitivity rather than reward-sensitivity, NA should be unrelated to pay satisfaction.

Indeed, the idea that NA concerns punishment rather than reward sensitivity probably explains previous findings that NA is related to various facets of job satisfaction. Some job facets (e.g., reprimands, unpleasant assignments) are more likely to evoke punishment-sensitivity than others. Job satisfaction encompasses elements that could evoke both reward-sensitivity and punishment-sensitivity. By contrast, our theoretical position and preliminary empirical evidence (e.g., Folger & Konovsky, 1989; Schaubroeck et al., 1996) suggest that pay satisfaction evokes reward-sensitivity only.

In summary, as described, NA does not lend itself to offering explanatory potential with respect to the dimensions of pay satisfaction. We include this factor in our study for a variety of reasons: (a) to explore the validity of conventional wisdom (e.g., George, 1992) that NA is negatively related to satisfaction; (b) to provide discriminant validity for our predictions with respect to PA; and (c) to examine both major dimensions of affect. We predict that NA will not be related to pay satisfaction.

Control Variables

For a systematic examination of the relationship between dispositions and pay satisfaction, it is important to control the effects of potentially confounding variables. As noted above, a critical situational variable in this context is actual pay level; this variable is used as a control. Since previous research also shows some relationships between background characteristics and pay satisfaction, we use these as controls as well. In addition, a measure of job satisfaction is used as a control based on the following reasoning. We are interested in examining the dynamics of pay satisfaction, independent of whether or not individuals in the study like their jobs. While some job satisfaction measures include pay satisfaction (usually pay level satisfaction) as a dimension, we control for job satisfaction using a global measure which taps the extent to which participants like their job and the organization (Berkowitz, Fraser, Treasure, & Cochran, 1987). Controlling for global job satisfaction precludes this potential confound from clouding the results and leading to spurious observed effects (Dobbins, Platz, & Houston, 1993; Freeman, Russell, & Rohricht, 1996). If PA is related to pay satisfaction over and above the shared variance with job satisfaction, the logic of our theoretical arguments becomes that much more compelling.

Summary

This study proposes to examine the relationship between PA and NA on the one hand and pay satisfaction on the other hand, controlling for other known correlates of pay satisfaction. We propose that PA interacts with actual salary levels in predicting pay satisfaction, and that NA is statistically unrelated to pay satisfaction. In these examinations, pay satisfaction is viewed as a multi-dimensional construct, and all predicted effects are examined separately for each dimension of pay satisfaction.
Method

Sample
Participants in the study were 220 full-time and part-time workers in two southern states. Sixty-six percent of the subjects were male; the average age of respondents was 28.5 years (range: 22–54); their average job tenure was 3.2 years (range: 8 months–28 years). Reported job titles were generally of a professional nature (e.g., consultant, human resource manager, accountant), but also included part-time workers (e.g., part-time waiter). Respondents were registered for graduate business courses at one of four small universities in or near major metropolitan areas and completed questionnaires during class time. Participation in the study was completely voluntary. None of the 220 potential participants refused to participate in the study, but usable information on all the variables of interest was obtained from only 194 respondents. These 194 responses constitute our data base.

Measures

Pay satisfaction. The dimensions of pay satisfaction were measured with the Pay Satisfaction Questionnaire (PSQ) (Heneman & Schwab, 1985) which uses a 5 response option format with anchors from 1 (Very Dissatisfied) to 5 (Very Satisfied). We conducted a Confirmatory Factor Analysis (CFA) on the PSQ scales using LISREL VII (Jöreskog & Sörbom, 1989) which revealed a more adequate fit for a four-dimension, than either a three-dimension or a five-dimension solution, ($\chi^2 = 301.49 \ (p < .000)$, GFI = .82, AGFI = .78, RMSR = .05). This solution is similar to that frequently found in previous research (e.g., see Carraher & Buckley, 1996; Carraher & Scarpello, 1993; Lance & Scarpello, 1989). The dimensions were labeled satisfaction with pay level, pay raise, structure/administration, and benefits. Coefficient $\alpha$ estimates for the dimensions were .96 (level), .89 (raise), .88 (structure/administration), and .96 (benefits).

Affect. PA and NA were measured using the Positive and Negative Affect Schedule (PANAS) (Watson et al., 1988). The PANAS comprises 20 items representing two independent affective dimensions. The PANAS has been extensively validated and is often used to measure trait PA and NA (e.g., Cropanzano et al., 1993; Czajka, 1990). Respondents were presented with a list of descriptors (e.g., upset, enthusiastic), and indicated the extent to which they experienced each descriptor in the past few weeks. Responses were based on 5-point scales ranging from (1) Not At All to (5) All The Time. Coefficient $\alpha$ was .94 and .87 for PA and NA, respectively.

Overall Job Satisfaction. Job satisfaction was measured on 7-point Likert-type scales using the three-item global job satisfaction measure ($\alpha = .88$) from Cammann, Fichman, Jenkins, and Klesh (1983).

Actual Salary Level. Salary level was assessed by asking respondents which of the nine salary ranges included their current salary. The response options were (1) Under $15,000, (2) $15,000–19,999, (3) $20,000–29,999, (4) $30,000–39,999, (5) $40,000–49,999, (6) $50,000–59,999, (7) $60,000–69,999, (8) $70,000–79,999, and (9) $80,000 or more. Salary was measured categorically because respondents are often reluctant to report the exact amount of their pay.
Background Characteristics. Information on background characteristics was obtained by asking respondents their age (in years), their gender (coded 1 [male] and 2 [female]), and the month and year they began working in their current job. Tenure was coded in months.

Analyses. A series of hierarchical multiple regressions was conducted to determine the proportion of variance in each dimension of pay satisfaction attributable to the following blocks: background characteristics; actual salary and overall job satisfaction; PA and NA; and PA × salary interaction. An increase in the explained variance for the block was tested at each step. To test for the influence of each variable independently, we conducted another series of hierarchical regressions. In these analyses, we entered each variable separately after controlling for all variables in the block and for all other variables in previous blocks, where appropriate (Darlington, 1968a, 1968b). This allows us to examine the unique variance explained by each variable.

We considered the possibility that the number of hours an individual worked per week could confound our results. Since the data set did not contain a measure of the number of hours worked, we dummy coded job title for full- versus part-time work status as a surrogate. In all, 144 respondents were coded as full-time (1) and 50 were coded as part-time (0). This dummy variable was used as an additional background characteristic in Block 1 of the analyses. The results showed the dummy variable to be unrelated to any dimension of pay satisfaction. Furthermore, the regression results with and without the dummy variable were substantively equivalent. We concluded that the results were not confounded by this variable. For clarity, we report only the results without the working status variable in the analyses.

Results

Table 1 shows the means, standard deviations, and intercorrelations for all the variables used in the study. The results of the regression analyses are contained in Table 2. The first block of predictors included the background characteristics of age, gender, and tenure. For the most part, these variables were not predictive of any dimension of pay satisfaction. Background characteristics did not predict pay level satisfaction, pay raise satisfaction, or administration/structure satisfaction. As a block, these variables did predict benefits satisfaction ($R^2 = .09, p < .01$), but job tenure was the only significant predictor for this dimension ($\Delta R^2 = .03, p < .05$).

As expected, the second block (containing actual salary level and job satisfaction) significantly increased explained variance for each dimension of pay satisfaction. Both variables were significantly related to pay satisfaction dimensions. Although these results are not the central substantive focus of the study, they reinforce earlier findings that background characteristics are not consistent predictors of pay satisfaction and actual salary level bears a moderate positive relationship with pay satisfaction. They also give some credence to Berkowitz et al.'s (1987) suggestion that job satisfaction may influence pay satisfaction.
Table 1. Descriptive Statistics and Zero-Order Correlations for All Variables

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>Std Dev</th>
<th>1.</th>
<th>2.</th>
<th>3.</th>
<th>4.</th>
<th>5.</th>
<th>6.</th>
<th>7.</th>
<th>8.</th>
<th>9.</th>
<th>10.</th>
<th>11.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Pay Level Satisfaction</td>
<td>4.12</td>
<td>1.80</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(.96)</td>
</tr>
<tr>
<td>2. Pay Raise Satisfaction</td>
<td>4.08</td>
<td>1.67</td>
<td>.73**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(.89)</td>
</tr>
<tr>
<td>3. Admin/Structure Satisfaction</td>
<td>4.05</td>
<td>1.38</td>
<td>.69**</td>
<td>.69**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(.88)</td>
</tr>
<tr>
<td>4. Benefits Satisfaction</td>
<td>4.39</td>
<td>1.80</td>
<td>.57**</td>
<td>.48**</td>
<td>.48**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(.96)</td>
</tr>
<tr>
<td>5. Age</td>
<td>28.46</td>
<td>8.52</td>
<td>.05</td>
<td>-.09</td>
<td>-.09</td>
<td>.26**</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>6. Gender</td>
<td>1.44</td>
<td>.50</td>
<td>-.09</td>
<td>-.06</td>
<td>-.13</td>
<td>-.03</td>
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<td></td>
<td></td>
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<tr>
<td>7. Tenure</td>
<td>38.20</td>
<td>55.48</td>
<td>.10</td>
<td>-.05</td>
<td>-.05</td>
<td>.28**</td>
<td>.55**</td>
<td>.00</td>
<td></td>
<td></td>
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<tr>
<td>8. Salary</td>
<td>2.40</td>
<td>1.67</td>
<td>.39**</td>
<td>.21**</td>
<td>.19**</td>
<td>.51**</td>
<td>.59**</td>
<td>-.12</td>
<td>.49**</td>
<td></td>
<td></td>
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<tr>
<td>9. Job Satisfaction</td>
<td>5.26</td>
<td>1.39</td>
<td>.38**</td>
<td>.35**</td>
<td>.40**</td>
<td>.29**</td>
<td>.06</td>
<td>.02</td>
<td>.04</td>
<td>.10</td>
<td></td>
<td></td>
<td>(.88)</td>
</tr>
<tr>
<td>10. Positive Affect</td>
<td>3.44</td>
<td>.92</td>
<td>.38**</td>
<td>.36**</td>
<td>.40**</td>
<td>.32**</td>
<td>.15*</td>
<td>.07</td>
<td>.05</td>
<td>.20**</td>
<td>.57**</td>
<td></td>
<td>(.94)</td>
</tr>
<tr>
<td>11. Negative Affect</td>
<td>1.74</td>
<td>.65</td>
<td>-.02</td>
<td>-.07</td>
<td>-.10</td>
<td>.00</td>
<td>-.04</td>
<td>-.04</td>
<td>.00</td>
<td>.01</td>
<td>-.18*</td>
<td>-.01</td>
<td>(.87)</td>
</tr>
</tbody>
</table>

Notes: N = 194, * p < .05, ** p < .01. Coefficient α’s are reported in parenthesis in the diagonal where appropriate.
| Table 2. Hierarchical Regression Results—PSQ Dimensions |
|---------------------------------------------|-------------|----------------|----------------|----------------|----------------|
|                                           | Level       | Raise          | Admin/Structure | Benefits       |
|                                           | $R^2$ Total | $\Delta R^2$ Block Variable SE | $R^2$ Total | $\Delta R^2$ Block Variable SE | $R^2$ Total | $\Delta R^2$ Block Variable SE | $R^2$ Total | $\Delta R^2$ Block Variable SE |
| BLOCK 1—Background Characteristics       | .02 .02     | .01 .01        | .03 .03         | .09** .09**    |
| a. Age                                   | .00 .02     | .01 .02        | .01 .01         | .01 .02        |
| b. Gender                                | .01 .26     | .00 .24        | .02 .20         | .01 .25        |
| c. Tenure                                | .01 .00     | .00 .00        | .00 .00         | .03* .00       |
| BLOCK 2—Job Satisfaction/Salary          | .32** .30** | .21** .20**    | .26** .23**     | .32** .23**    |
| a. Salary                                | .06** .08   | .08** .08      | .06** .07       | .15** .08      |
| b. Job Satisfaction                      | .12** .08   | .11** .08      | .15** .06       | .06** .08      |
| BLOCK 3—Affect                           | .35** .03*  | .24** .03*     | .31** .05**     | .33** .01      |
| a. Positive                              | .03* .15    | .03* .14       | .05** .12       | .01 .15        |
| b. Negative                              | .00 .17     | .00 .17        | .00 .13         | .00 .17        |
| BLOCK 4—Interaction                      | .35** .00   | .24** .00      | .33** .02*      | .35** .02*     |
| a. Salary $\times$ PA                    | .00 .08     | .00 .08        | .02* .06        | .02* .07       |

Notes: Notes: N = 194, $*p < .05$, $**p < .01$.  
The $\Delta R^2$ Block column depicts the change in $R^2$ in the model controlling for variables in previous blocks. The $\Delta R^2$ Variable column shows the $\Delta R^2$ for each variable controlling for the variables in the previous blocks and for all other variables in the current block. SE shows the standard error for each variable.
The third step was the main effect affect block. As a block, affect significantly increased explained variance by 3 percent each for pay level and pay raise satisfaction, and by 5 percent for administration/structure satisfaction, but did not contribute significantly to benefits satisfaction. An examination of the individual $R^2$'s shows that the increases in explained variance in level, raise, and administration/structure satisfaction are solely accounted for by PA. The results support our expectation that NA is unrelated to pay satisfaction dimensions.

The final step was critical, focusing on the predicted interaction. To test the prediction, the product of PA and actual salary level was entered as the fourth block in the regressions. Results show a significant increase in explained variance (2%) for both administration/structure satisfaction and benefits satisfaction, but not for pay level or raise satisfaction. The significant interaction effects are plotted and shown in Figure 1a and 1b. The plots for benefits satisfaction and administration/structure satisfaction were constructed using values of one standard deviation above and below the mean for both salary level and PA. The form for each of the significant interactions is such that high-PA individuals are satisfied with benefits and administration/structure at high and low salary levels. Low-PA individuals are not satisfied with benefits or administration/structure at low salary levels, but their level of satisfaction increases monotonically as salary level

![Figure 1a. Interaction between Positive Affect and Salary in Predicting Administration/Structure Satisfaction](image-url)
Satisfaction

Figure 1b. Interaction between Positive Affect and Salary in Predicting Benefits Satisfaction

increases. In both cases, the slopes are flatter, as predicted, for high-PA than for low-PA individuals.

**Discussion and Conclusions**

The results of this study offer partial support for the predictions, and provide some interesting insights into the relationship between dispositional positive affect and pay dynamics. For the most part, the empirical findings show the following: (a) background characteristics (age, gender, and tenure) are not strong predictors of pay satisfaction; (b) actual salary level has a moderate positive relationship with pay satisfaction; (c) PA accounts for significant unique variance in pay satisfaction after controls; (d) NA is unrelated to pay satisfaction; and (e) PA interacts significantly with actual salary level in predicting two (benefits and administration/structure) of four dimensions of pay satisfaction. Each of these issues is discussed briefly below.

Background characteristics are historically inconsistent predictors of pay satisfaction. The present study is no exception, with tenure being the only factor contributing unique variance. That tenure should exhibit some relationship with pay satisfaction is reasonable—salary and benefits levels typically increase with tenure. That actual salary was related to pay satisfaction coincides with the established pattern of results and affirms the value of including both situational and dispositional variables in research on pay satisfaction.
PA explained significant variance in three of four dimensions of pay satisfaction after controlling for the effects of situational factors and other potential predictors. This finding counters purely situational approaches (e.g., Davis-Blake & Pfeffer, 1989). As George (1992) indicated, individuals cannot leave their dispositions behind when they come to work, and organizational attempts to influence employee attitudes must acknowledge the susceptibility of these attitudes to dispositional influences.

We expected NA to be unrelated to pay satisfaction, and indeed it was. Although in and of itself, this could be viewed as confirmation of the null hypothesis, several factors militate against this: (1) we derived our predictions theoretically; (2) the null relationship was embedded in a network of other significant relationships; and (3) NA was related to job satisfaction ($r = -.18, p < .05$), but not to any dimension of pay satisfaction. This provides discriminant validity evidence, in that our predictions were confined to, and confirmed solely with respect to, pay satisfaction.

We expected PA and actual salary levels to interact in predicting pay satisfaction. The results supported this prediction for two pay satisfaction dimensions, and refuted it for two others. In general, the significant interactions between PA and actual salary support the idea of sensitivity to reward and punishment signals. The substance of the interactions is puzzling nonetheless. The interactions are not significant with respect to pay level and pay raise satisfaction, but they are significant with respect to benefits and administration/structure satisfaction. We predicted that all four interactions would be significant, but we expected stronger results in terms of pay level and pay raise satisfaction than the other two. As Figures 1a and 1b show, the slopes are flatter for high-PA individuals than for low-PA individuals, indicating that satisfaction levels are less affected by salary levels for high-PA than for low-PA individuals. This pattern is evident for all four pay satisfaction dimensions, although the relationship is only significant for two.

Why should benefits satisfaction be high when pay is higher for these individuals? Perhaps because higher pay levels are associated with higher benefits levels as well. Why should higher administration/structure satisfaction be higher? Perhaps because when pay is high, people attribute better process characteristics—“the system must be working right if I am getting paid a lot.” In other words, higher pay levels may covary with higher benefits levels and better pay structures (explanations we cannot test in this data set), or they may evoke different kinds of attributions.

These ideas perhaps explain the results. They also suggest other interesting pay dynamics. For instance, the signal sensitivity of high-PA individuals could make them more, rather than less, sensitive to changes in reward levels, i.e., pay raises. They would thus pick up, and react positively to, smaller pay raises than would low-PA individuals. Thus, the pattern of relationships between pay raises and pay satisfaction could take a different form than does the observed pattern of relationships between pay levels and pay satisfaction among high- and low-PA individuals. The signal sensitivity perspective suggests that a linear relationship between pay raises and pay satisfaction would be evident among high-PA individuals; but pay raises would need to be higher than a certain threshold before low-
PA individuals were satisfied with them. The dynamics of pay raise thresholds are the subject of an entire body of research (e.g., Krefting & Mahoney, 1977; Mitra, Gupta, & Jenkins, 1997; Rambo & Pinto, 1989; Worley, Bowen, & Lawler, 1992), but this research has not explored differential threshold predictions for different levels of affect. We could not examine this issue in our study also. It, nonetheless, offers an intriguing avenue for future research.

It is also possible, of course, that the results are data-specific and chance phenomena. The results may also be a function of our inference, rather than direct measurement, of reward- and punishment-signal sensitivity. Our study represents an initial attempt to use signal sensitivity to understand organizational dynamics. The partial support we obtained suggests that the approach may be useful. Given our mixed results, it also suggests that we still have a long way to go to achieve comprehensive understanding. Replication or falsification of the signal-sensitivity argument and/or other logical explanations for these findings remains a task for future investigations. We hope the specific dynamics will be explored in greater depth in the future.

Overall, this study provides theoretical and practical lessons about dispositional factors, situational factors, and pay satisfaction. Nevertheless, the study should be considered in light of its limitations. One, it used a self-report questionnaire, opening it to the charge of mono-method bias in the results. At the same time, our key independent variables (PA and NA) had a zero-order correlation close to zero, theory-driven differential hypotheses were confirmed, and several key situational and contextual variables were used as controls. These factors substantially diminish the possibility that our findings can be explained by unmeasured variables and suggest that mono-method bias was not a substantial problem. Two, this was a cross-sectional investigation; therefore, causality cannot be shown. Conceptually, dispositions should precede affective reactions, but our research design precluded us from testing this causal sequence. Some evidence also suggests that situational factors may influence dispositions (e.g., Kohn & Schooler, 1982). Following House et al. (1996), PA and NA were entered into the models after controlling for other effects, allowing us to focus on the unique effects of dispositions. It is clearly important to design future studies that enable testing for causal and reciprocal relationships. Three, the measurement of NA may have suffered from some restriction of range. The mean for NA was only 1.74 (on a 5-point scale) with a standard deviation of .65. It is possible that the inclusion of more high-NA individuals in the study may have altered the findings somewhat and, thus, results should be viewed with this cautionary note in mind. Four, the participants in this study were registered for graduate business courses at several universities and the study may have suffered from some self-selection bias. Although the sample was slightly younger than the general population (mean age of about 29 years), it does represent the general working population of the region fairly well. The sample included a wide range of job titles, and the reported salary levels were very similar to those in the region. Berkowitz et al. (1987) report that most studies of pay satisfaction have been conducted in a single organization, making the generalizability of their results to other organizations problematic. Our study is an important step in assessing the determinants of pay satisfaction.
across jobs and organizations. Five, our arguments are based on signal sensitivity, a construct not measured directly in the study. We hope this shortcoming is overcome in future research.

In summary, this study furthers our knowledge about the influence of PA and NA in predicting outcomes relevant to individuals and organizations. It shows the utility of dispositional and interactionist approaches in understanding organizational dynamics, and it supports the value of signal sensitivity in the study of organizationally relevant outcomes.

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Note
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References


