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Reactions to Merit Pay Increases: A Longitudinal Test of a Signal Sensitivity Perspective

Jason D. Shaw and Michelle K. Duffy
University of Kentucky

Atul Mitra
University of Northern Iowa

Daniel E. Lockhart
University of Kentucky

Matthew Bowler
University of North Texas

The relationships among merit pay raises, trait positive affectivity (PA), and reactions to merit pay increases (pay attitudes and behavioral intentions) were explored in a longitudinal study of hospital employees. Drawing on signal sensitivity theory, the authors expected that PA would moderate the relationship between merit pay raise size and reactions to the increase such that pay raise size would be more strongly related to pay attitudes and behavioral intentions among those low in PA. Results strongly supported the predictions in the case of reactions to the raise amount (happiness and effort intentions) but not for pay level satisfaction. Implications of the results and directions for future research are identified.

Despite its considerable influence and use, employee reactions to merit pay systems are best described as mixed (Lawler & Jenkins, 1992). Some links have been established between perceptions of merit pay system characteristics or actual characteristics (e.g., merit increase size, performance appraisal method, and the link between behavior and pay) and pay-related attitudes (e.g., Harris, Gilbreath, & Sunday, 1998; R. L. Heneman, Greenberger, & Strasser, 1988; Miceli, Jung, Near, & Greenberger, 1991; Mitra, Gupta, & Jenkins, 1997), but after exhaustive reviews of the merit pay literature, R. L. Heneman (1990, 1992) concluded that negative attitudes about merit pay systems were central factors in the demise of many programs. Indeed, although some research progress was made in the past decade (e.g., see H. G. Heneman & Judge, 2000, for a review), R. Heneman's (1990) conclusion that the merit pay literature base is underdeveloped "at both a conceptual and operational level" (p. 257) is still largely true.

Among the underdeveloped areas is research on dispositional differences in reactions to pay increases. Very few studies have explicitly examined the role of disposition in reactions to pay systems (cf. Cable & Judge, 1994, and Shaw, Duffy, Jenkins, & Gupta, 1999, for exceptions), and no studies, to our knowledge, have examined the role of disposition in explaining reactions to merit pay increases. Several factors may be responsible for the lack of attention. First, in the past, organizational researchers often took an interventionist approach to explaining employee attitudes and behavior because situational characteristics are more malleable and are presumed to be more relevant in a practical sense than disposition or personality. However, despite criticisms that dispositional research is futile (e.g., Davis-Blake & Pfeffer, 1989), researchers have outlined the theoretical and practical applications of such investigations (e.g., House, Shane, & Herold, 1996). Investigating the role of dispositional affectivity in reactions to merit pay increases can provide boundary conditions of theory and research on situational effects, supplement the knowledge base by helping explain how and why certain relationships do or do not appear in organizational settings, allow more accurate estimates of situational effects on attitudes and behaviors, and foster our understanding of similar dynamics with other important outcomes (Shaw et al., 1999). Moreover, economists and others have often speculated that stable individual differences may underlie preferences for difference compensation systems and spending patterns (e.g., Mitchell & Mickel, 1999; Schaubroeck & Shaw, 2000). Isolating the complex role of disposition in reactions to pay increases may help organizations design more effective compensation systems and contribute to increased fit between individuals and organizations (Cable & Judge, 1994).

In two recent reviews, H. G. Heneman and Judge (2000) and Barber and Bretz (2000) called for researchers to more fully explore the role of personality and dispositional variables in pay system research. We aim to take theoretical and methodological steps in this direction in this study. First, we integrated the merit pay literature with dispositional research by using a signal sensitivity perspective. We developed the prediction that PA will moderate the relationship between merit pay increase size and reactions to those increases. We extended this prediction to an array of pay-related outcomes, including affective reactions and behavioral intentions regarding the merit pay increases. To our knowledge, these steps have not been taken in the literature to date. Second, we tested these expectations among a sample of hospital employees in two time periods (pre- and postraise) separated by 8 months. Third, we discuss the implications for research and pay administration in light of the results.

Jason D. Shaw, Michelle K. Duffy, and Daniel E. Lockhart, School of Management, University of Kentucky; Atul Mitra, Department of Management, University of Northern Iowa; Matthew Bowler, Department of Management, University of North Texas.

Correspondence concerning this article should be addressed to Jason D. Shaw, Gatton College of Business and Economics, School of Management 445L, University of Kentucky, Lexington, Kentucky 40506-0034. E-mail: jdshaw@uky.edu

Theoretical Foundation

Gray (1970, 1981) theorized that there are two neurologically based systems responsible for the emotional and behavioral differences of individuals—the behavioral inhibition system and the behavioral activation system. Of these, the behavioral activation system regulates behavior in the presence of reward signals such that some individuals are more sensitive or susceptible to signals of reward. This signal sensitivity system is often discussed in trait-like or dispositional terms (e.g., see Gorenstein & Newman, 1980; Zuckerman, 1987), and indeed Tellegen (1985) noted that variations in self-rated trait PA reflect the operation of the behavioral activation system, that is, high-PA individuals are reward-signal sensitive. Larsen and Ketelaar (1989) further noted that differences in state PA were likely the result of stable underlying differences, presumably trait PA, in reward-signal sensitivity. In addition to being reward-signal sensitive, high-PA individuals are characterized as being socially potent and volatile (Larsen & Ketelaar, 1991) and are described as being energetic, active, and alert (Watson, Clark, & Tellegen, 1988). Individuals low in PA, by contrast, are described as lethargic, listless, and apathetic (Cropanzano, James, & Konovsky, 1993).

Thus, PA can be viewed as a reflection of individual differences in sensitivity to reward signals. It seems reasonable then to assume that if individuals differ systematically in their ability to detect and interpret signals of reward, they will exhibit differential reactions to merit increases; merit pay increase size can be meaningfully interpreted as a reward signal. According to the signal sensitivity perspective, high-PA individuals are more sensitive to signals of rewards than are low-PA individuals, that is, a small reward signal should be "picked up" or noticed more easily or frequently by individuals who are sensitive to such signals (Shaw et al., 1999). Moreover, the constitutive definition of PA also suggests that high-PA individuals tend to construe situational conditions more positively than low-PA individuals and indeed tend to interpret even neutral stimuli positively. These differential interpretations of situational conditions should also be reflected in attitudinal and behavioral reactions to merit pay increases. Specifically, among high-PA individuals, even small merit pay increases (i.e., reward signals) should be noticed and interpreted positively. Given that high-PA individuals are sensitive to signals of reward and tend to interpret situational conditions positively, it seems reasonable to expect that the relationship between merit pay raise size and reactions to the raise will be attenuated among high-PA individuals. It is clear that high- and low-PA individuals would prefer more pay to less pay, but the characteristics of high-PA individuals suggest that they would "pick up" and react more positively to smaller reward signals than would low-PA individuals (Shaw et al., 1999). In essence, small and large reward signals should result in similar affective and behavioral responses among high-PA individuals.

Among low-PA individuals, a much larger merit pay increase (reward signal) would theoretically be necessary to evoke positive reactions. Recall that low-PA individuals are reward-signal insensitive and are characterized as being listless and apathetic. A small merit increase would likely escape detection among reward-signal insensitive individuals, that is, only under conditions of a large pay raise would low-PA individuals receive the reward signal and interpret it positively. In a very limited test of the signal sensitivity perspective, Shaw et al. (1999) found that PA interacted with salary level in relating to dimensions of pay satisfaction. This study was limited, however, as pay or salary level (as opposed to actual pay increases) was used as a proxy for reward signal. The study failed to examine changes in pay that are germane to the reward-signal sensitive perspective. Moreover, the study was cross-sectional, and therefore attitude change (or reactivity) to reward signals could not be addressed, and baseline levels of satisfaction could not be controlled. Despite the limitations, some preliminary support was found for the expected relationships.

To summarize, the signal sensitivity perspective provides a foundation for examining the relationships among merit pay raises, PA, and attitudinal and behavioral intent reactions to merit pay increases. Our expectations concerning these relationships are as follows: First, we expect that the size of the merit pay raise size (pay raise amount as a percentage of initial pay level) (*Hypothesis 1*) and PA (*Hypothesis 2*) will relate directly and positively to affective and behavioral intentions outcomes. Prior research convincingly demonstrates that incentive size is positively related to affective and behavioral outcomes (e.g., George & Hopkins, 1989; Mitra et al., 1997), and PA is directly related to pay attitudes (Shaw et al., 1999). Second, we also expect to find a significant interaction between merit pay raise size and PA in predicting merit pay reactions (*Hypothesis 3*). The form of the predicted interaction is such that the relationship between pay increase size and pay reactions will be positive but weaker among high-PA individuals (signal sensitive individuals interpret small and large reward signals positively) than the relationship between pay increase size and pay reactions among low-PA individuals (a large raise is necessary to elicit positive reactions among signal insensitive individuals).

The inclusion of outcome variables—pay level satisfaction, affective response (happiness) to the merit pay increases, and behavioral intentions (working harder) as a result of the pay increase—was based on the theoretical foundation and prior findings noted above. First, given that merit pay increases become part of base pay, we included pay level satisfaction to assess pay level satisfaction change by levels of merit pay increase and PA. Second, given that PA is an affective or emotional aspect of personality, we included a measure of affective reaction (unhappy–happy) to the size of the merit pay increase. Third, given that financial incentives are strongly related to performance quantity (Jenkins, Mitra, Gupta, & Shaw, 1998) we included a behavioral intention dimension (work less hard–work harder) as an outcome. Although merit increases are rewards for past performance, the merit raise size may be important information for individuals in forming instrumentality (performance-to-outcome) and valence (desirability of outcome) perceptions and hence affect their level of motivation for future periods (Lawler, 1973; Pinder, 1998). Fowles (1987), for example, noted that high-PA individuals respond to "incentives by activating behavior" (p. 418), whereas low-PA individuals are characterized by listlessness and apathy. If surgent, high-PA individuals respond positively to signals of reward of all types, the pay raise size → effort intention relationship should be attenuated among them. By contrast, a large pay increase should be necessary to elicit responses reflective of greater effort among low-PA individuals.

Method

Sample

The data for this study were collected in two waves—4 months before and 4 months following the administration of merit pay increases to full-time employees of a university hospital in a medium-sized midwestern U.S. city. At Time 1, 4 months prior to receiving merit pay increases, 432 employees completed questionnaires during their lunch break. At the request of hospital administration, the questionnaire was administered during the lunch break of the three employment shifts—first, second, and overnight. Members of the research team staffed a conference room near the cafeteria and administered the questionnaire during the lunch hour for these shifts (11 a.m–1 p.m., 7–9 p.m., 1–3 a.m.) for 5 consecutive days. One week prior to the administration of the questionnaire, hospital employees received an e-mailed memo from a hospital administrator that described the goals of the study, announced the time schedule, and encouraged voluntary participation in the study. Upon arrival in the conference room, participants were given confidentiality assurances by the research team and were entered into a prize raffle in return for their participation. Four months following the administration of merit pay increases (8 months after Time 1), the Time 2 questionnaire was administered during the lunch hour of all three shifts for a 5-day period. A hospital administrator again notified employees via e-mail. Four hundred sixty-four employees completed Time 2 questionnaires; 177 of these participants also participated in the first phase. Because the sample at Time 1 was not randomly selected, collecting additional data from Time 2-only participants allowed us to more systematically address sample selection and response bias issues; that is, longitudinal participants could be compared with a large sample of Time 1-only and Time 2-only participants across a range of relevant variables.

Participants' job titles included all major categories in the hospital, for example, nurse, physician, laboratory tech, administration, staff associate, and housekeeping. The average age of the longitudinal participants was about 37 years, the sample was 77% women, and the average tenure was 9 years. Pay information was collected from the state budget in the university's library. The average raise in our sample was 5%, and actual merit increases ranged from 0% to 25%. Pay information was publicly available for 161 of the 177 longitudinal participants. (Pay information was not available for 15 resident physicians who were coded as students by the university and therefore whose pay was not available publicly.) Missing data on key variables reduced the analysis sample size to 157.

Measures (Period Collected)

Positive affectivity (Time 1). PA was assessed with the PA markers from the Positive and Negative Affect Schedule (PANAS; Watson et al., 1988; $\alpha = .83$). Respondents were presented with a list of descriptors (e.g., enthusiastic, excited) and indicated the extent to which they experienced each descriptor in general. Higher scores reflected higher levels of PA.

Merit pay increase (interim). This variable was coded from publicly available data. It was operationalized as the difference between Time 2 and Time 1 pay level divided by the Time 1 pay level.

Pay level satisfaction (Time 1 and Time 2). Pay level satisfaction was measured with a five-item scale adapted from Cammann, Fichman, Jenkins, and Klesh (1983), H. Heneman (1985), and H. Heneman and Schwab (1985) at Time 1 ($\alpha = .90$) and again at Time 2 ($\alpha = .95$). A sample item is: "Considering my skills and efforts, my pay is fair." The items had 7 Likert-type response options.

Pay raise reactions (Time 2). Pay raise affect (happiness) and intentions to work harder as a result of the merit pay raise were assessed with responses on a 100-mm continuous dependent-response rating line. Because these variables referred explicitly to the merit pay increase, they were collected only at Time 2. Participants were instructed to compare their current pay ("what you are paid now") with their old pay level ("what you were paid last year") and to record their response with an *X* on the line where it reflected their happiness (*very unhappy* to *very happy*) and their behavioral intentions (*I will give less effort* to *I will give more effort*). The anchor statements were developed by Mitra (1992). Russell and Bobko (1992) examined the properties of continuous dependent-response rating formats such as these and demonstrated that they were superior to coarser Likert-type rating scales when attempting to detect moderator effects in multiple regression analysis.

Control variables (Time 1). We included age, gender (male = 0, female = 1), tenure (Dreher, Ash, & Bretz, 1988; H. G. Heneman, 1985), actual pay level (e.g., Motowidlo, 1982), and pay-for-performance perceptions (R. L. Heneman et al., 1988) as controls because they may relate to pay attitudes and influence reactions to merit raises. Pay-for-performance perceptions were assessed with the four-item scale from Perry and Pearce (1983) at Time 1 ($\alpha = .89$). A sample item is: "The best performers will get the highest raises." The items had 7 Likert-type response options. Because an array of occupations was represented in our sample, it was also necessary to control for factors that may reflect differences in job demands and intrinsic task characteristics. Therefore, we coded job titles into three categories and included two dummy variables in the regressions to capture these categories. The first category included physicians, administrators, and managers; the second included nurses, technicians, and other professional and technical occupations; and the third included food service, housekeeping, and related occupations. We also included Time 1 pay satisfaction in all equations. Demographics, job titles, and pay-for-performance perceptions were collected on the Time 1 questionnaire, whereas pay level was collected from public sources. Pay level is reported as an hourly rate.

Results

Response Bias Checks

We conducted several analyses to examine the potential for response and self-selection bias among the longitudinal participants in our sample. We coded longitudinal participants as "1" and Time 1-only participants ($N = 255$) as "0" and included this dichotomy as the dependent variable in a logistic regression analysis with Time 1 predictors. The independent variables were the control variables (Time 1 pay level satisfaction, age, gender, tenure, job title dummy codes, pay level, and pay-for-performance perceptions) as well as PA and pay raise. Only one variable, initial pay level, was significant in the analysis, indicating that longitudinal participants had slightly higher pay levels than Time 1-only participants. We conducted a parallel analysis to compare the longitudinal participants (coded "1") with those participating only at Time 2 ($N = 287$; coded "0"). Again, only pay level, but not demographics, pay outcomes, or pay raise size, emerged as a significant predictor. Thus, across these sets of tests, we found no differences in terms of pay attitudes, dispositions, or other control variables, with the exception of actual pay level. It was also possible to descriptively compare the participants' age and gender with the broader hospital population by using estimates provided by hospital administration. The age (37.40 years) and gender (77% female) were similar to estimates (≈38–39 years; 79% female) provided by the hospital. Finally, the profile of job titles of the longitudinal respondents (the percentage of respondents in each category) was very similar across the five categories to the actual percentages provided by the hospital.

Regression Results

Means and standard deviations for, and correlations among, the study variables are shown in Table 1. Hierarchical multiple regressions (Cohen & Cohen, 1983) are shown in Table 2. Examining the control variable block in Table 2 across the three dependent variables yielded some interesting findings. As expected, Time 1 pay level satisfaction was strongly related to satisfaction at Time 2 but was also significantly related to pay raise happiness and intentions to work harder as a result of the raise. Actual pay level was related to Time 2 pay level satisfaction and happiness with the pay raise, but not to intentions to work harder. In contrast to prior research, pay-for-performance perceptions were not related to merit raise reactions.

The control variable block explained 54% ($p < .01$) of the variance in Time 2 pay level satisfaction. Block 2 (PA and pay raise main effects) contributed an additional 2% ($p < .05$) to explained variance, but the critical third step containing the PA by merit pay raise interaction term was not significant; therefore Hypothesis 3 was not supported. Thus, Model 2 is the appropriate model for analysis. Merit raise size was related to a positive change in pay level satisfaction ($\beta = .14$, $p < .05$), supporting Hypothesis 1, but no support was found for Hypothesis 2, the expected positive relationship between PA and pay level satisfaction. Thus, only merit pay raise size was related to the change in pay level satisfaction; no support is found for the signal sensitivity perspective in this equation.

In terms of happiness with the pay raise, control variables explained 34%, PA and merit raise increase main effects explained 6% ($p < .01$), and as predicted, the PA $\times$ Merit Raise interaction was significant ($\beta = -.17$, $p < .05$), explaining an additional 2% of variance. To fully support Hypothesis 3, however, the form of the interaction should conform to expectations. We plotted the interaction by using the standardized coefficients and *z*-score values of 1 and -1. The form of the interaction is depicted in Figure 1. The form of the interaction provides strong support for the signal sensitivity theory. Whereas high-PA individuals reported higher levels of happiness with the raise in general, the relationship between raise size and happiness was not significant among high-PA individuals. Among low-PA individuals, the relationship between merit pay increase size and happiness was strong and positive.

Control variables explained only 6% (*ns*) of the variation in intentions to work harder as a result of the merit increase, whereas the main effect block (accounted for primarily by merit pay raise size; $\beta = .29$, $p < .01$) explained 9% ($p < .01$). The PA $\times$ Merit Pay Raise interaction was again significant ($\beta = -.25$, $p < .01$), accounting for an additional 5% of explained variance. The plot of this significant interaction is shown in Figure 2. Among high-PA individuals, the relationship between merit pay raise and intentions to work harder is again not significant. Among low-PA individuals, the relationship is strongly positive. Thus, strong support for Hypothesis 3 was also found in the "intentions to work harder" equation.

Discussion

Merit pay systems are in place in nearly all U.S. organizations presumably because of their ability to enhance motivation, performance, and retention. Despite this, the success of merit pay systems overall is mixed, and unanswered questions have led researchers to call for additional theory-based predictors of merit pay reactions, including personality and dispositional variables (e.g., Barber & Bretz, 2000; H. G. Heneman & Judge, 2000). The findings here demonstrate that PA is one such factor that can increase our understanding of reactions to merit pay.

These findings should be of interest to future researchers interested in assessing the impact of pay increase size on the subsequent attitudes and behaviors of employees. Indeed, without an explicit consideration of individual affectivity, main effects of pay raise magnitude, bonuses, and other forms of incentives may fail to appear or yield biased results. What is interesting is that researchers have been perplexed by the weak (albeit positive) relationship between pay level and pay satisfaction in prior research (H. G. Heneman & Judge, 2000), but the current findings, and those of Shaw et al. (1999), provide some evidence that differences in dispositional PA can increase our understanding of this relationship. Although merit pay size was significantly related to the outcomes across the board in this study, the interaction findings

Table 1
Descriptive Statistics and Correlations Among All Study Variables

Variable	*M*	*SD*	1	2	3	4	5	6	7	8	9	10
1. Age (T1)	37.40	9.23	—									
2. Gender (T1)	1.77	0.41	−.12	—								
3. Tenure (T1)	9.04	7.02	.55**	.05	—							
4. Pay level (T1)	16.46	7.18	.24**	−.15*	.28**	—						
5. Pay-for-performance perceptions (T1)	3.47	1.58	.03	−.10	.02	−.04	(.89)					
6. Positive affectivity (T1)	3.54	0.61	−.08	.02	.01	.16*	.27**	(.83)				
7. Merit raise (interim)	0.05	0.05	−.12	.02	−.05	−.19*	−.12	−.08	—			
8. Pay level satisfaction (T1)	3.20	1.54	−.08	−.16*	−.08	.16	.38**	.24*	−.07	(.90)		
9. Pay level satisfaction (T2)	3.47	1.71	−.11	−.14*	−.05	.27**	.17*	.16*	.04	.69**	(.95)	
10. Pay raise affect (happiness; T2)	46.62	28.56	−.11	−.02	.01	.27**	.11	.20**	.16*	.45**	.64**	—
11. Pay raise behavior intentions (work harder; T2)	59.06	22.26	.00	.01	.06	.12	.10	.14*	.24**	.23**	.37*	.62**

Note. $N = 157$. Coefficient alpha reliabilities are reported in parentheses along the main diagonal where appropriate. Pay level is reported as an hourly rate, women are scored higher in the sex dichotomy, and tenure is reported in years. T = Time.
* $p < .05$. ** $p < .01$.

Table 2
Hierarchical Regression Analyses

Variable	Pay level satisfaction (T2)			Pay raise affect (happiness; T2)			Pay raise behavior intentions (work harder; T2)		
	Model 1	Model 2	Model 3	Model 1	Model 2	Model 3	Model 1	Model 2	Model 3
Pay level satisfaction (T1)	.70**	.71**	.71**	.48**	.46**	.45**	.18*	.17*	.16*
Job level (Dummy 1)	.06	.08	.07	.01	.04	.06	.06	.11	.12
Job level (Dummy 2)	.06	.07	.07	.08	.09	.09	.09	.10	.11
Age (T1)	−.08	−.07	−.07	−.10	−.05	−.05	.01	.05	.06
Gender (T1)	.00	.01	.00	.06	.06	.05	.10	.10	.09
Tenure (T1)	−.02	−.02	−.01	.02	.00	−.01	.00	−.06	−.03
Pay level (T1)	.15*	.17*	.17*	.20**	.22**	.22**	.11	.12	.13
Pay-for-performance perceptions (T1)	−.05	−.04	−.04	−.03	−.03	−.04	−.01	.00	−.02
Positive affectivity (PA; T1)		−.01	−.02		.15*	.16*		.10	.13
Merit pay raise (interim)		.14*	.14*		.24**	.16*		.29**	.16*
PA × Merit Pay Raise			.04			−.17*			−.25**
Total R^2	.54**	.56**	.56**	.34**	.40**	.42**	.06	.15**	.20**
ΔR^2 block	.54**	.02*	.00	.34**	.06**	.02*	.06	.09**	.05**

Note. $N = 157$. Standardized regression coefficients are shown in columns marked Model 1, 2, and 3. T = Time.
* $p < .05$. ** $p < .01$.

demonstrated that the positive relationship was only evident among those low in PA.

Trait research is often criticized as being impractical because it is not possible to change the personality of employees, but this criticism does not diminish the general practical importance of these findings. If PA plays a role in how employees react to merit pay increases (as our results strongly suggest), then any attempt to assess the success or failure of merit pay systems without explicitly incorporating disposition will likely yield incorrect results. The financial impact (e.g., bottom-line performance effects) of human resource management systems in general (Becker, Huselid, & Ulrich, 2001) and compensation systems in particular (e.g., Gerhart, 2000) is of increasing importance to researchers, practitioners, and consultants alike. All legitimate and influential factors should be incorporated to estimate the impact accurately. Moreover, the results should be of use to managers and decision-makers in the sense that an understanding of the role of disposition in organizational life, including reactions to pay systems, may lead to better decision making about organizational interventions and ultimately a better understanding of how individuals may or may not react to pay system changes.

We encourage several lines of research to extend the findings of this study. In line with calls from H. G. Heneman and Judge (2000) and Barber and Bretz (2000), we encourage additional investigations of the role of personality and disposition as factors in reactions to compensation systems and in the determination of pay attitudes. As these authors suggested, exploring Big Five dimensions of personality would be a logical next step in evaluating how individuals react to changes to compensation systems and in terms of how pay system preferences are developed. Explorations of the role of personality in other areas of pay research are also needed. As H. G. Heneman and Judge (2000) noted, the extant compen-

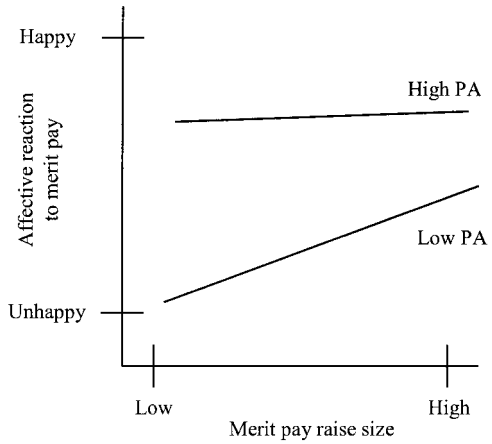

Figure 1. Interaction between merit pay raise and positive affectivity (PA) in predicting affective reactions (unhappy–happy) to merit pay increases.

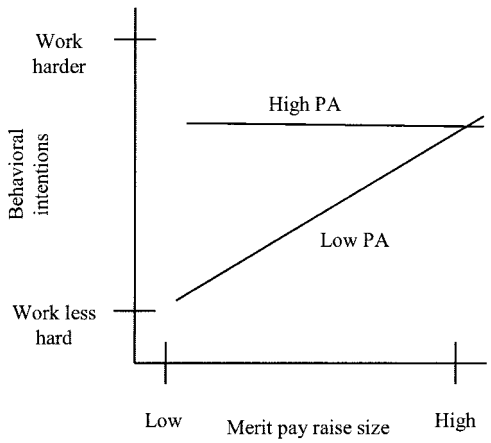

Figure 2. Interaction between merit pay raise and positive affectivity (PA) in predicting behavioral intentions (work less hard–work harder) as a result of merit pay increase.

sation research, with a few exceptions, tends to focus on traditional pay systems (e.g., merit and seniority pay) and lags far behind the pace of innovation in compensation practice. Investigations of the antecedents (including dispositional variables) and consequences of alternative pay systems (e.g., skill-, team-, and competency-based pay) are also needed. Although a few steps have been taken in this direction, much work remains to be done.

Further examinations of the consequences of actual versus perceived pay increases should also be pursued. Early research on pay secrecy demonstrated that individual perceptions about their pay increases and the actual amount distributed (e.g., as measured in this study) were often divergent (e.g., Lawler, 1971). These findings are ultimately congruous with H. G. Heneman and Judge's (2000) statement that they were "puzzled by the apparent weak empirical link between objective pay and pay satisfaction" (p. 85). In addition to incorporating performance level into theories' pay increase reactions, this line of research might pursue theory with regard to the frustration effect found among high-PA individuals (e.g, Duffy, Ganster, & Shaw, 1998). These authors argued that although high-PA individuals have generally positive reactions to the work environment, they would become frustrated with situational conditions (e.g., dissatisfying jobs) that were inconsistent with their affective disposition. In the case of the current study, high-PA individuals may be generally satisfied with their pay increase, but negative outcomes that exceed those exhibited by low-PA individuals may be elicited in cases in which high PA and pay raise reactions do not converge. Finally, we also propose that research incorporating actual behavioral outcomes of the dynamics examined here is sorely needed. The results here provide a point of departure for such investigations because our results were strongest in the case of intentions to work harder. Some research has examined the role of performance level in behavioral outcomes, such as voluntary turnover (e.g., Trevor, Gerhart, & Boudreau, 1997), but studies that explicitly incorporate performance, pay, disposition, and actual behavioral outcomes are sparse.

In terms of limitations, the sample of employees included in the study was not randomly drawn from the population, and therefore representativeness and generalizability are a concern. Although we were able to statistically assess differences between those who participated in both phases with larger samples of Time 1- and Time 2-only participants and with descriptive information provided by the hospital, it is not possible to conclusively determine that self-selection, nonrandom attrition, or other sampling bias did not have an impact on our study. Merit pay increases were the focus of our study and were collected from publicly available sources. This should minimize measurement error, but any deviation among pay administrators (pay decisions were made at the department level) in terms of decision rules for determining pay increases would constitute an uncontrolled source of error in our study. Finally, pay satisfaction is a multidimensional construct, and we were only able to assess changes in pay level satisfaction, although an examination of other dimensions (e.g., pay raise satisfaction, administration and structure satisfaction; H. G. Heneman, 1985) may also have been useful.

The study has several strengths that increase our confidence in the results and also offer methodological extensions to the existing literature base. First, we were able to study reactions to pay increases longitudinally, whereas several important studies in this research area have addressed reactions only with cross-sectional designs (e.g., R. L. Heneman et al., 1988; Judge, 1993; Miceli et al., 1991; Shaw et al., 1999). The longitudinal design also diminishes concerns about common method. We were also able to collect actual pay level and merit pay raise information from public records and to examine the predicted interaction across three distinct (although interrelated) dependent variables.

To summarize, we examined the relationships among merit pay increases, PA, and important pay outcomes in a longitudinal study of hospital employees. Consistent with expectations, the relationship between merit pay increase and happiness and intentions to work harder as a result of the raise was stronger among those low in PA. The results contribute to the literature on the functioning of merit pay systems, support the signal sensitivity perspective, and add to a growing body of literature demonstrating important person–situation effects in predicting workplace outcomes.

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