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# The Moderating Effect of Negative Affectivity in the Procedural Justice-Job Satisfaction Relation

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P. GREGORY IRVING, Wilfrid Laurier University  
DANIEL F. COLEMAN, University of New Brunswick  
D. RAMONA BOBOCEL, University of Waterloo

## Abstract

We examined the potential moderating effect of negative affectivity in the relation between perceptions of procedural justice and job satisfaction in two studies. In the first study, we conducted a cross-sectional survey of 232 individuals working for a Canadian public-sector organization that was being partially privatized. In the second study, we conducted a two-wave panel study of 173 university students participating in a co-operative education work term. In both studies, we found that the relation between procedural justice and job satisfaction was stronger for those who were low in negative affectivity than for those who were high in negative affectivity. These findings support the notion that employee dispositions influence the manner in which organizational factors are perceived. In addition, these findings suggest that fair procedures do not uniformly result in positive organizational outcomes (i.e., job satisfaction).

## Résumé

Nous nous sommes livrés à deux études en vue d'examiner l'effet modérateur potentiel de l'affectivité négative sur la relation entre les perceptions de justice procédurale et la satisfaction professionnelle. La première étude a consisté d'une enquête transversale menée auprès de 232 personnes au service d'un organisme public canadien en voie d'être en partie privatisé. Dans le cadre de la seconde, nous avons tenu un panel à deux volets composé de 163 étudiants d'université qui effectuaient un stage professionnel comme condition d'un programme d'alternance travail-études. Les résultats des deux études nous ont amenés à constater que le rapport entre la justice procédurale et la satisfaction professionnelle était plus forte chez ceux dont l'affectivité négative était faible. Nos constatations tendent à confirmer que la disposition de l'employé influence sa perception des facteurs organisationnels. De plus, elles laissent entendre que des procédures équitables ne conduisent pas à tout coup à des aboutissements organisationnels positifs (comme la satisfaction professionnelle).

A growing body of research demonstrates the importance of employees' perceptions of fair treat-

ment for predicting a number of their work attitudes and behaviours. For instance, justice perceptions have been linked to such outcomes as organizational commitment, organizational citizenship behaviour, and trust in management (for some recent reviews, see Colquitt, Conlon, Wesson, Porter, & Ng, 2001; Cropanzano, Byrne, Bobocel, & Rupp, 2001). Due to the longstanding interest in understanding the determinants of job satisfaction within the broader field of I/O psychology, the link between justice perceptions and job satisfaction has perhaps been examined most frequently. The results from numerous studies indicate that the more employees perceive their workplace as fair, the more likely they are to be satisfied with their jobs (e.g., Alexander & Ruderman, 1987; Folger & Konovsky, 1989; Kidwell & Bennett, 1994; Masterson, Lewis, Goldman, & Taylor, 2000; Mossholder, Bennett, & Martin, 1998; Randall & Mueller, 1995).

Despite strong evidence for the impact of procedural justice perceptions on job satisfaction, research (e.g., Staw, Bell, & Clausen, 1986; Staw & Ross, 1985) also supports the notion that dispositional factors influence job attitudes. As an example, research attention has focused on negative affectivity (NA: Watson & Clark, 1984), which is an individual's predisposition to experience aversive emotional states. These aversive emotional states result in the individual perceiving the environment (including the work environment) in negative terms, thereby resulting in low job satisfaction (Levin & Stokes, 1989; Moyle, 1995). Recent meta-analytic work (Connolly & Viswesvaran, 2000) supports the contention that NA is related to job satisfaction and it also appears that these dispositional effects are consistent over time (Watson & Slack, 1993).

Because emotional states influence individuals' perceptions of their work environment, it might also be argued that NA might interact with aspects of the work environment to influence attitudinal outcomes. Levin and Stokes (1989) noted that, "High levels of NA are associated with a type of cognitive bias through which people approach and evaluate their life experiences. This affective tendency and cogni-

tive style may influence how people experience and evaluate their jobs” (p. 753). Because high NA individuals tend to focus more on negative cues in the environment, positive aspects of the job might have less influence on their job attitudes. The purpose of this research is to examine the possibility that NA moderates the relations between procedural justice perceptions and job satisfaction. In the following sections, we will discuss research examining perceptions of justice in the prediction of job satisfaction, dispositional factors that influence job satisfaction (with an emphasis on NA), as well as the combined and interactive effects of dispositional and situational on job satisfaction. Finally, we describe two studies we conducted to examine the moderating effect of NA on relations between perceptions of procedural justice and job satisfaction.

#### *Justice as a Predictor of Job Satisfaction*

The concept of fairness is multifaceted. Early justice research (e.g., Adams, 1963) focused on understanding people’s perceptions of, and reactions to, the fairness of the distribution of outcomes (i.e., the study of distributive justice; see for a review, Greenberg & Cohen, 1982). Since the 1970s, researchers have examined the role of people’s perceptions of procedural justice, that is, the fairness of the process used to determine outcome distributions (e.g., Leventhal, 1980; Lind & Tyler, 1988; Thibaut & Walker, 1975). More recently, the study of procedural justice has led to recognition of the importance of people’s perceptions of the fairness of the interpersonal treatment that they receive from authorities who are implementing decision procedures, often referred to as the study of interactional justice (e.g., Bies & Moag, 1986).

Whereas the distinction between the concepts of procedural and interactional justice is relatively recent and, therefore, still debated (for reviews, see Bies, 2001; Bobocel & Holmvall, 2001), the distinction between distributive and procedural justice is longer standing. There is now a large volume of research that demonstrates the importance of both procedural and distributive justice perceptions for a number of work attitudes and behaviours (e.g., Folger & Greenberg, 1985; Lind & Tyler, 1988). The evidence pertaining to job satisfaction suggests that employees’ perceptions of procedural justice are more strongly associated with job satisfaction than are perceptions of distributive justice (e.g., Alexander & Ruderman, 1987; Folger & Konovsky, 1989; Scandura, 1997). As such, the primary focus of the present research is on the link between perceived procedural justice and job satisfaction.

In a seminal paper, Leventhal (1980) advanced the theoretical development of the concept of procedural justice by identifying six rules that people use to assess the fairness of allocation procedures. Leventhal suggested that allocation of procedures that: 1) incorporate the use of accurate data, 2) allow for input from representatives of the potential resource recipients, 3) are consistently applied to all potential resource recipients, 4) suppress any potential bias of decision makers, 5) allow for questionable allocative decisions to be reviewed, and 6) adhere to current ethical standards, will tend to be perceived as more procedurally fair than those that do not.

Using these rules as a guideline, it is thus conceivable that organizations can develop decision-making procedures that would, in general, be perceived as fair. Although few studies have attempted to validate Leventhal’s criteria directly, those that have done so are generally supportive (e.g., Greenberg, 1986). Moreover, organizational researchers have commonly used the Leventhal criteria as the conceptual basis for item development in research designed to measure employee perceptions of procedural fairness in organizations (e.g., Colquitt, 2001; Moorman, 1991) as well as for the development of experimental manipulations in laboratory research (see for reviews Brockner & Wiesenfeld, 1996; Cropanzano & Greenberg, 1997).<sup>1</sup>

A practical implication of this research is that organizations can influence the satisfaction of their employees by ensuring that fair procedures are implemented when allocating rewards and resources. Although procedural justice perceptions have been established as an important predictor of job satisfaction, research has suggested that satisfaction might also have a dispositional component. In the next section, we briefly discuss research linking dispositional affect to job satisfaction.

#### *Dispositional Predictors of Job Satisfaction*

Research by Staw and his colleagues (Staw & Ross, 1985; Staw et al., 1986) has examined the impact of dispositions on job satisfaction. Staw and Ross

1 More recently, theorists have extended the list of procedural justice criteria identified by Leventhal to include aspects of the manner in which decision procedures are implemented by leaders (e.g., whether employees are treated with dignity and respect during the implementation of formal decision procedures). Whereas some researchers include these latter, more interpersonally based, criteria under the rubric of procedural justice (e.g., Tyler & Lind, 1992), other researchers categorize them as components of the distinct but related concept of interactional justice (e.g., Moorman, 1991). For the present purposes, we focused on the formal characteristics of the privatization procedures in our measurement of procedural justice.

examined the correlation between job satisfaction at two points in time among individuals who changed both jobs and occupations between 1969 and 1971. These authors found a correlation of .33 between measures of job satisfaction taken at these two points in time. In a longitudinal study that spanned nearly 50 years, Staw et al. demonstrated that measures of affective disposition taken at an early age could predict job satisfaction over an extended period of time. Based on their findings, Staw and his colleagues cautioned organizations against the use of situationally based interventions such as job enrichment and job design as a means of influencing job satisfaction. Such interventions do not take into account dispositional factors that influence job satisfaction.

A dispositional variable that has garnered considerable research attention in recent years is negative affectivity (NA). NA is described as a stable trait in individuals that influences how they perceive the world around them (Watson & Clark, 1984). People high in NA tend to experience aversive emotional states and focus on the negative aspects of events. Given that jobs tend to have both positive and negative qualities, high NA individuals are expected to focus more on the negative qualities. Not surprisingly, then, researchers have found NA to be negatively related to job satisfaction in several studies (e.g., Brief, Butcher, & Roberson, 1995; Cropanzano, James, & Konovsky, 1993; Levin & Stokes, 1989; Watson & Clark). More recently, Connolly and Viswesvaran (2000) reported a mean corrected correlation between NA and job satisfaction of  $-.33$  across 27 studies. These authors concluded that organizations might have less ability to influence the job satisfaction of their employees than originally believed. A further implication of the importance of affect in determining job satisfaction is that organizational interventions designed to increase satisfaction might have less impact on employees with a particular affective disposition. We turn to a discussion of the potential interactive effects of NA and procedural justice on job satisfaction in the following section.

#### *Interactive Effects of Situational and Dispositional Factors on Job Attitudes*

In recent years, researchers have examined the influence on job attitudes of both situation- and person-based factors. In a 10-year longitudinal study of U.S. civil service employees, Steel and Rentsch (1997) found support for the notion that both situational and dispositional factors contributed to the development of work attitudes. These authors found evidence of attitudinal stability over the 10-year period covered in the study. In addition, they found that job

characteristics accounted for variance in job satisfaction beyond that accounted for by attitudinal stability. Therefore, situational and dispositional factors appear to contribute unique variance to job attitudes.

Recent evidence also supports the notion that situational and dispositional factors interact with one another to predict job attitudes. In particular, Witt and his colleagues (Witt, 1991; Witt & Broach, 1993) provided direct evidence for the idea that disposition can moderate the relation between procedural justice perceptions and employee satisfaction. Witt and Broach, for example, found that exchange ideology moderated the procedural justice-satisfaction relation. Exchange ideology is described as an individual difference variable that affects employees' responses to the perception that their organization treats them fairly. Individuals with a strong exchange ideology work hard when their organizations treat them well, but not when they are treated poorly. In contrast, individuals with a weak exchange ideology work hard irrespective of how they are treated by their organizations. Witt and Broach found that procedural justice and satisfaction with a training program were positively related for individuals with a strong exchange ideology, but unrelated for individuals with a weak exchange ideology.

Several studies have examined the moderating role of NA in relations between aspects of the job and satisfaction. In a study of nursing employees, Agho (1993) found that NA moderated the impact of promotional opportunities on job satisfaction. Specifically, the impact of promotional opportunities on job satisfaction was less pronounced for high NA individuals than for low NA employees. More recently, Brief et al. (1995) examined the role of NA as a moderator of relations between situational factors and job satisfaction. These authors used a positive mood-inducing event (i.e., providing study participants with cookies) prior to measuring job satisfaction. Previous research (Kraiger, Billings, & Isen, 1989) demonstrated that individuals in whom positive moods were induced by being shown humorous films reported higher task satisfaction than individuals in whom positive moods were not induced. Brief et al. found that positive mood-inducing events had less of an impact on job satisfaction for high NA individuals than they did on low NA individuals.

Brief et al. (1995) advanced several potential explanations for their findings. First, high NA individuals might be less sensitive to positive events than are low NA individuals. Second, high NA people might react less positively to positive events. Third, the effects of positive events might wear off more quickly for high NA individuals (cf. Lam, Yik, &



Schaubroeck, 2002). Finally, high NA individuals might not be as affected by mood when making judgments.

#### *The Present Research*

In the current research, we examined the potential moderating effect of NA, a dispositional variable, on the relation between perceptions of procedural justice and job satisfaction. As noted above, both NA (cf. Connolly & Viswesvaran, 2000) and procedural justice (cf. Colquitt et al., 2001) have well-established relations with job satisfaction. Consequently, we expected to find similar results in our research. That is, we hypothesized that:

Hypothesis 1: NA will be negatively related to job satisfaction, and

Hypothesis 2: Procedural justice perceptions will be positively related to job satisfaction.

However, based on research by Witt and Broach (1993) in which a dispositional variable (i.e., exchange ideology) moderated the procedural justice-employee satisfaction relation, and the results presented by Agho (1993) and Brief et al. (1995) in which NA moderated the impact of aspects of the job or work environment on job satisfaction, we also hypothesized that:

Hypothesis 3: NA will moderate the relations between procedural justice and job satisfaction such that the relations will be weaker among high NA individuals than among low NA individuals.

To date, few studies have examined the role of NA as a moderator of justice effects. Hochwarter, Amason, and Harrison (1995) found that NA moderated the relations between perceived inequity and turnover intentions. In this instance, the relations between these variables were weaker for high NA individuals than for low NA individuals. Thus, low NA individuals were more likely to be influenced by unfair treatment when developing turnover intentions than are high NA individuals. More recently, Skarlicki, Folger, and Tesluk (1999) examined the roles of NA and agreeableness as moderators of the justice perception-organizational retaliatory behaviour (ORB) relation, which was documented in their earlier research (Skarlicki & Folger, 1997). In particular, they examined the role of the personality variables as moderators of a three-way interaction between distributive, procedural, and interactional justice on retaliatory behaviour (as rated by peers).

The researchers found both NA and agreeableness to moderate one of the four higher-order justice interactions test involving NA, namely the Distributive x Interactional justice interaction. As they state, "For low-NA individuals, the interaction between distributive and interactional justice was not a significant predictor of ORB. In contrast, when NA was high, the combination of low interactional and low distributive justice was associated with ORB" (p. 103). Skarlicki et al.'s (1999) findings imply that those who tend to see things negatively (high NA) were more likely than those who do not (low NA) to react to a negative situation (i.e., low distributive and interactional justice) with a negative behaviour (i.e., ORB). Following similar logic, we predicted that, because of their tendency to view things more negatively or attend to things that are more negative, high NA individuals are less likely than low NA individuals to react positively to fair procedures.

Skarlicki et al.'s (1999) data are clearly consistent with the notion that NA may be an important moderator of justice effects. Our research elaborates and extends this initial line of work in two primary ways. First, our first study differs from most studies (including Skarlicki et al.) that examine justice effects in that we assessed perceptions of procedural fairness *before* participants knew the final outcome of the decision process (see Method for more details). In most of the previous research examining the role of justice perceptions on organizational variables, respondents are asked to rate the fairness of decision procedures and outcomes with past events in mind (i.e., *after* the outcomes are known). In contrast, in our first study, we measured perceptions of procedural fairness of an organizational change that was ongoing, and hence the final outcome was unknown. Thus, one could argue that our measure of procedural justice was more "pure" in that it is not confounded by participants' knowledge of the actual outcome. On the basis of recent experimental research by Van den Bos and his colleagues, which demonstrated that the effects of procedural justice may be particularly strong when information about outcomes is not available (Van den Bos, Lind, Vermunt, & Wilke, 1997), it was conceivable that employees' perceptions of procedural justice would have a particularly strong influence on their job satisfaction. For the present purposes, then, we were interested in examining the possible moderating role of NA in the relation between employees' perceptions of procedural justice and their job satisfaction, under conditions where they do not yet know the outcome of the decision process. Second, we believe that there is utility in extending the initial findings regarding the potential

moderating role of NA in justice effects reported by Skarlicki et al. given that a) they measured NA one year after they measured the other variables, and b) they examined the effects on a different criterion variable (i.e., peer reports of employee organizational retaliatory behaviour vs. work attitudes).

### Study 1

#### *Method*

##### *Participants and Setting*

Participants were 232 (166 men and 66 women) employees of a regional branch of the Air Navigation System (ANS) of Transport Canada (a Canadian governmental agency) who completed questionnaires as part of a larger study on reorganization. The average age of these employees was between 31 and 35 years (because responses were made on a computer readable sheet, age was a categorical variable defined in 5-year increments), and they had been with the organization for an average of 12 years. Of those who completed questionnaires, 70% had some postsecondary education, 78% were married, and 30% were in supervisory positions.

Data were collected almost a year after it was announced that a portion of the organization was to be privatized, but before the privatization occurred. The organization established implementation teams consisting of representatives of both management and employees whose mandates were to conduct some planning, make employee assignments, and provide information to employees. During this time, many decisions concerning the status of the affected employees were being made. The single most important decision that would affect the study participants was whether their jobs would be assigned to the new entity (which would eventually be called NavCan), or remain with Transport Canada. The consequence of the assignment of jobs and individuals to the new entity would have many important residual implications for those employees assigned to NavCan, such as pension portability and whether employees would receive severance pay upon being released by the Canadian Government to NavCan. Interviews conducted by the second author with members of the regional implementation team, an examination of archival sources, and discussions with a focus group of employees affected by the changes suggested that the policies guiding the change (more specifically, the manner in which jobs were assigned to the new entity) followed most of Leventhal's (1980) procedural justice rules.

A consistent set of rules was provided by a policy manual on how or whether jobs were to be assigned to the new entity because these assignments were

based upon the incumbents' roles in the organization. For example, air traffic controllers by definition dedicated 100% of their time to the ANS, the part of the organization to be privatized. However, support staff such as human resources and finance dedicated differential amounts of time directly to ANS. The organization went to great lengths to gather accurate information regarding the role of each incumbent's position in the ANS. Information was requested from and supplied by supervisors and incumbents and an appeal process was established so that job assignments could be reconsidered. Although most participants knew the outcome of the decision process in terms of job assignment, they did not know whether the impact would be positive or negative on an individual basis.

Because all the study variables were self-report and collected at a single point in time, we were concerned with the potential effects of common method variance on our findings (cf. Williams & Brown, 1994). Although not ideal, one potential means of assessing the extent to which common method variance is present among a set of variables is to include at least two scales that are theoretically unrelated to each other in the questionnaire so that there is an a priori justification for predicting a zero correlation (Lindell & Whitney, 2001). Lindell and Brandt (2000) argued that the smallest correlation among a set of manifest variables provides a reasonable estimate for the amount of common method variance that is present among these variables. As Study 1 was part of a larger examination of employee attitudes in response to the privatization process, we also included measures of affective and continuance organizational commitment (Meyer & Allen, 1991, 1997). Meyer and his colleagues (Meyer & Allen; Meyer & Herscovitch, 2001) suggested that commitment to an organization might result from different mind-sets whereby affective commitment reflects a *desire* to remain with the organization and continuance commitment reflects recognition of the *need* to remain with the organization. A recent meta-analysis (Meyer, Stanley, Herscovitch, & Topolnytsky, 2002) reported that the correlation between these two components of commitment is near zero. Therefore, we examined the relations between affective and continuance commitment in Study 1 as a proxy for common method variance.

##### *Measures*

Responses to all the following multi-item scales were averaged to form composite variables.

*Negative affectivity.* We used Levin and Stokes'

TABLE 1  
Means, Standard Deviations, and Correlations Among Study Variables (Study 1)

Variables	M	SD	Correlations					
			1	2	3	4	5	
1. Negative Affectivity	2.56	0.47	(.85)					
2. Procedural Justice	2.64	0.63	-.33**	(.93)				
3. Job Satisfaction	3.42	0.63	-.38**	.31**	(.92)			
4. Affective Commitment	4.19	1.22	-.27**	.34**	.44**	(.84)		
5. Continuance Commitment	4.77	1.17	.34**	-.19**	-.21**	-.02	(.82)	

Note. Scale reliabilities are along the diagonal. Ns range from 213 to 232 because of missing data.  
\*\* $p < .01$ .

(1989) 21-item measure of negative affectivity. Responses were made on a 5-point scale (1 = strongly disagree; 5 = strongly agree). Coefficient alpha for this scale was .85.

*Procedural justice.* We measured employees' perceptions of the fairness of the decision-making procedures used to undertake privatization of the organization using an 18-item scale adapted from previous research (Bruning, Keup, & Cooper, 1995). Similar to measures developed by other researchers (e.g., Folger & Konovsky, 1989; Moorman, 1991), this scale tapped Leventhal's (1980) six procedural justice criteria outlined earlier. Two example items are: "Senior management based the assignment of job functions on accurate data" and "Senior management allowed employee requests for reconsideration of new job assignments." Responses were made on a 5-point scale (1 = not at all; 5 = very much). Coefficient alpha for this scale was .94.<sup>2</sup>

*Job satisfaction.* We used the 20-item short form of the Minnesota Satisfaction Questionnaire (Weiss, Davis, England, & Lofquist, 1967) to assess employees' satisfaction with their current job. Responses to the items were made on a 5-point scale (1 = very dissatisfied; 5 = very satisfied). Coefficient alpha for this measure was .92.

*Organizational commitment.* We assessed affective and continuance commitment with Meyer, Allen, and Smith's (1993) measures. Each component consists of six items for which responses were made on a 7-point scale (1 = strongly disagree; 7 = strongly agree).

2 The procedural justice scale originally comprised 31 items. On the basis of a principal components factor analysis (with oblique rotation), there was clearly one predominant procedural justice factor as expected based on scale development (indeed, coefficient alpha for full scale was .93). We selected the 18 items that loaded most clearly on this first factor. The results did not differ as a function of whether we used the longer or the shorter scale. For simplicity, we present the results based on the shorter 18-item measure.

TABLE 2  
Hierarchical Moderated Multiple Regression Analysis of Negative Affectivity and Procedural Justice on Job Satisfaction (Study 1)

Predictor	$\beta$	B	$\Delta R^2$	F	df
Step 1					
Tenure	.05	.02			
Salary	-.12	-.04			
Job Level	.23**	.19**	.05*	3.15*	3, 203
Step 2					
Negative Affectivity (NA)	-.31***	-.41***			
Procedural Justice (PJ)	.23***	.20***	.17***	11.24***	5, 201
Step 3					
NA x PJ	-.18*	-.22*	.02*	10.30***	6, 200

\* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$ .

Coefficient alphas for affective and continuance commitment were .84 and .82, respectively.

### Results

To test our hypotheses, we conducted moderated multiple regression analyses with job satisfaction as the criterion measure. After controlling for tenure, job level, and salary, we entered NA and procedural justice at Step 2 followed by the product term of the two predictors at Step 3 (Cohen & Cohen, 1983). The NA and procedural justice predictor variables were centered to reduce the problems associated with multicollinearity (Aiken & West, 1991).

The means, standard deviations, and correlations among the study variables are reported in Table 1. As can be seen, the zero-order correlations of the variables of interest were all significant. Consistent with previous research, then, people who scored high on NA also tended to be less satisfied with their job, and those who perceived that the procedures used to privatize the organization were fair also tended to be more satisfied with their job. Finally, NA was negatively related to perceptions of the fairness of the privatization process.

To test the interaction hypothesis, we regressed job satisfaction on the control variables, followed by

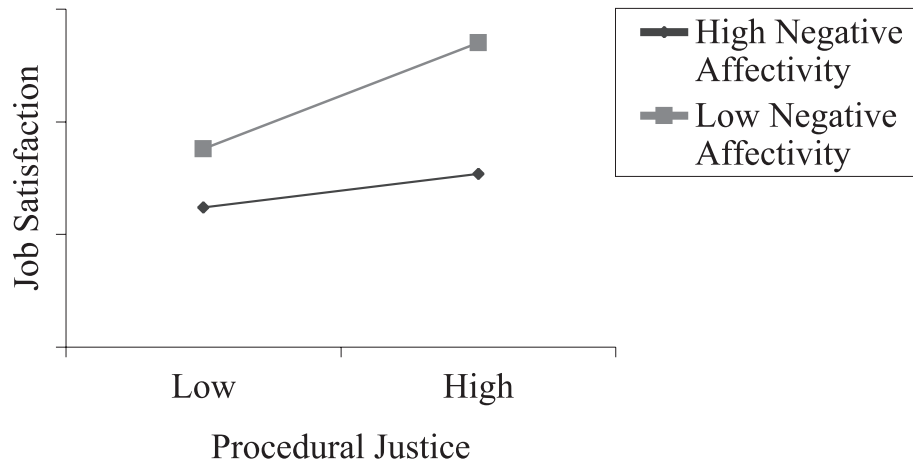


Figure 1. Regression of job satisfaction on procedural justice for those high and low in negative affectivity (Study 1).

NA and procedural justice in the second step. In the third step, we entered the interaction term of the predictor variables. Together, NA and procedural justice accounted for an additional 17% of the variance in job satisfaction beyond that accounted for by the control variables,  $DF(2, 201) = 22.39, p < .001$ . The regression coefficients for both NA ( $b = -.41, p < .001$ ) and procedural justice ( $b = .20, p < .001$ ) were significant. Thus, consistent with the first two hypotheses and the correlational results, NA was negatively related and procedural justice positively related to job satisfaction. In addition, each of the predictor variables contributed unique variance to the prediction of job satisfaction. When we entered the interaction term for negative affectivity and procedural justice at Step 3, the interaction term was also statistically significant ( $b = -.22, p < .05$ ), accounting for an additional 2% of the variance in job satisfaction. The regression results are presented in Table 2.

To assist in the interpretation of the interaction, we conducted simple slopes tests and plotted the regression lines according to procedures outlined in Aiken and West (1991). The interaction is presented in Figure 1. As illustrated, the positive relation between perceptions of procedural justice and job satisfaction is most pronounced among people scoring low on NA<sup>3</sup> ( $b = .30, p < .001$ ). In contrast, among those who score high on NA, there is no significant relationship between the perception of procedural justice and job satisfaction ( $b = .09, ns$ ). Thus, our third hypothesis was also supported in the present data.

#### Study 2

There are several limitations of the first study that should be noted. First, the cross-sectional nature of the study makes it impossible to draw firm conclu-

sions about causality. However, NA has been demonstrated in previous research to be a dispositional variable that is relatively stable over time and so it is more likely that NA influences attitudes than the reverse. A related concern stems from our exclusive use of self-report measures, raising the potential for common method variance as an alternative explanation for the findings. Based on suggestions by Lindell and his colleagues (Lindell & Brandt, 2000; Lindell & Whitney, 2001), we included two theoretically unrelated scales for which the correlation was nonsignificant (i.e., affective and continuance commitment; Meyer et al., 2002). Although this indicates that common method variance was unlikely to have a significant effect on our findings, this does not rule out that possibility.

To further alleviate concerns that the results in Study 1 were a function of the cross-sectional methodology, we conducted a follow-up study in which we used a longitudinal design whereby affect was measured separately from the procedural justice and satisfaction variables. In addition, we used different measures of the study variables to address the potential that the effects found in the first study were a product of the way in which the constructs were measured.

#### Method

##### Participants and Procedure

Participants were 268 (125 men, 142 women, and one who did not indicate gender) students at a medium-sized Canadian university who were employed by a variety of organizations during a four-month cooperative education work term. Their average age was approximately 21 years. The students were enrolled in either the Honours Bachelor of Business Administration or the Honours Economics program.



TABLE 3  
Means, Standard Deviations, and Correlations Among Study Variables (Study 2)

Variables	M	SD	Correlations		
			1	2	3
1. Negative Affectivity	1.81	0.51	(.78)		
2. Procedural Justice	3.99	0.67	-.15*	(.85)	
3. Job Satisfaction	5.53	0.72	-.19*	.67**	(.83)

Note. Scale reliabilities are along the diagonal. N = 173.  
\**p* < .05; \*\**p* < .01.

Prior to beginning their placement with their co-op employer, participants were invited by e-mail to complete a web-based questionnaire. This e-mail was sent via the Cooperative Education office to all potential respondents approximately three weeks prior to the end of the academic term preceding the cooperative education work term. Approximately three weeks following the end of the four-month placement, an e-mail with a link to the second questionnaire was sent to the participants. Completed second questionnaires were received from 173 individuals for a response rate of approximately 65%. No significant differences between respondents and non-respondents were found for any of the demographic variables.

*Measures*

Responses to all the following multi-item scales were averaged to form composite variables.

*Negative affectivity.* This variable was measured at Time 1 using NA items from the Positive and Negative Affect Schedule (PANAS; Watson, Clark, & Tellegen, 1988). The NA items of PANAS consist of 10 adjectives for which respondents indicate the extent that each adjective is descriptive of how they generally feel. Responses were made on a 5-point scale (1 = very slightly or not at all; 5 = extremely). Coefficient alpha for this measure was .75.

*Procedural justice.* We measured employee’s perceptions of procedural justice using a 5-item scale. Sample items include: “To what degree did your supervisor ensure that you understood how and why decisions were made?” and “In general, how fair was the process by which decisions were made at your work term organization?” Responses were made on a 5-point scale (1 = minimally or not at all; 5 = to a very large extent, or 1 = very unfair; 5 = very fair). Coefficient alpha for this scale was .85.

TABLE 4  
Hierarchical Moderated Multiple Regression Analysis of Negative Affectivity and Procedural Justice on Job Satisfaction (Study 2)

Predictor	$\beta$	B	$\Delta R^2$	F	df
Step 1					
Grade Point Average	-.04	-.03			
Number of Interviews	-.07	-.08			
Ranking	.07	.04	.01	0.91	3, 167
Step 2					
Negative Affectivity (NA)	-.08	-.11			
Procedural Justice (PJ)	.72***	.67***	.45***	28.40***	5, 165
Step 3					
NA x PJ	-.13*	-.25*	.02*	25.00***	6, 164

\**p* < .05; \*\**p* < .01; \*\*\**p* < .001.

*Job satisfaction.* We measured job satisfaction with 11 items drawn from Warr, Cook, and Wall (1979) asking participants to indicate the extent to which they were satisfied with a variety of aspects of their job (e.g., the physical work conditions, the amount of responsibility given, the amount of variety in the job), as well as an item that assessed overall satisfaction with their job. Responses to the items were made on a 7-point scale (1 = extremely dissatisfied; 7 = extremely satisfied). Coefficient alpha for this measure was .83.

*Results*

As was the case in Study 1, we conducted moderated multiple regression analyses with job satisfaction as the criterion measure. Because individuals who are more active in the job search process or who are better students might obtain better jobs, we controlled for number of job interviews, number of employers who ranked individuals as their first choice, and grade point average. We entered NA and procedural justice at Step 2 followed by the product term of the two predictors at Step 3 (Cohen & Cohen, 1983). Once again, the predictor variables were centered to reduce the problems associated with multicollinearity (Aiken & West, 1991).

The means, standard deviations, and correlations among the Study 2 variables are reported in Table 3. Once again, the zero-order correlations of the variables of interest were all significant with NA negatively related to job satisfaction. Consistent with previous research, then, people who scored high on NA also tended to be less satisfied with their jobs. Perceptions of procedural justice were strongly (and positively) related to job satisfaction. NA was also related to perceptions of procedural justice in the expected direction.

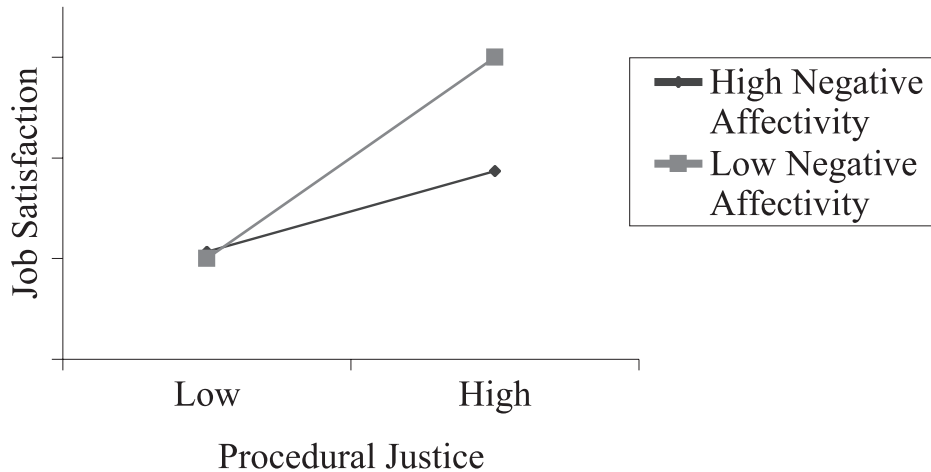


Figure 2. Regression of job satisfaction on procedural justice for those high and low in negative affectivity (Study 2).

To test the interaction hypotheses, after entering the control variables, we regressed job satisfaction on NA and procedural justice in the second step followed by the interaction term of these variables in the third step. An examination of the standardized residuals suggested the removal of a single outlier. NA and procedural justice accounted for approximately 45% of the variance in job satisfaction beyond that accounted for by the control variables,  $\Delta F(2, 165) = 68.54, p < .001$ . The regression coefficient for procedural justice ( $b = .72, p < .001$ ) was significant. Although the regression coefficient for NA was in the expected direction, it did not reach generally accepted levels of statistical significance. When we entered the interaction term for negative affectivity and procedural justice at Step 2, the interaction term was also statistically significant ( $b = -.25, p < .05$ ), accounting for an additional 2% of the variance in job satisfaction. The regression results are presented in Table 4.

As in Study 1, to assist in the interpretation of the interaction, we conducted simple slopes analyses and plotted the regression lines according to procedures outlined in Aiken and West (1991). The interaction is presented in Figure 2. As illustrated, the positive relation between perceptions of procedural justice and job satisfaction is most pronounced among low NA<sup>3</sup> people ( $b = .85, p < .001$ ). Among those who scored high on NA, the relation between the perception of procedural justice and job satisfaction was weaker, but still significant ( $b = .59, p < .001$ ). Thus, our third hypothesis concerning the interactive relations of NA and procedural justice with job satisfaction was also supported in Study 2.

3 On both predictors, low NA = one standard deviation below the mean; high NA = one standard deviation above the mean.

### General Discussion

Our findings from two independent samples provide further support for an interactionist perspective in the development of job attitudes, in that we found that employees' job satisfaction was jointly predicted by a dispositional (NA) and a situational (perceived procedural justice) variable. In addition, our findings suggest that the relation between perceptions of procedural justice and job satisfaction is influenced by individual dispositions – in this case, negative affectivity. More specifically, in Study 1 the relation between employees' perceived fairness of the privatization process and their job satisfaction was weaker for those who are high in NA than for those who are low in NA. These findings were replicated in a second, longitudinal study of cooperative work term employees.

Our data are consistent with previous research demonstrating the link between NA and job satisfaction (e.g., Brief et al., 1995; Connolly & Viswesvaran, 2000; Levin & Stokes, 1989; Watson & Clark, 1984) as well as research that suggests that fair procedures are positively related to job attitudes (e.g., Alexander & Ruderman, 1987). In addition, our findings are consistent with previous studies that suggest that dispositional factors influence the way that employees respond to various organizational events (Brief et al.; Witt & Broach, 1993). It may be important, then, for organizations to consider individual differences when developing organizational interventions. Our findings are consistent with the idea that developing fair procedures may work less well for high NA individuals than for low NA individuals in terms of enhancing positive reactions. Although one might legitimately argue that organizations can do little to influence dispositional variables, it might be useful

for managers to put more concerted effort into highlighting the fairness of organizational policies and procedures so that people high in NA are more likely to attend to this aspect of their environment (Ball, Trevino, & Sims, 1994).

We can only speculate on the mechanisms that make high NA individuals less responsive to fair procedures. Several of the possible reasons articulated by Brief et al. (1995) in their study of NA as a moderator of relations between a positive mood-inducing event and job satisfaction may be just as relevant here. For example, it may be that high NA individuals are less sensitive to fair procedures or they may not use judgments of fair procedures when assessing their affective response to the job as much as do low NA individuals. This notion is consistent with the findings of Hochwarter et al. (1995) who examined the moderating effect of NA on the relationship between perceived inequity and turnover intentions. These authors predicted and found that relations between perceived inequity and turnover intentions would be stronger for low NA individuals than for high NA individuals. What is noteworthy about Hochwarter et al.'s findings in relation to ours is that high NA individuals seemed less inclined to use contextual information in the development of attitudes or intentions than did low NA individuals. This might reflect the fact that the dispositional characteristics of high NA individuals are more influential in the development of attitudes and intentions. Necowitz and Roznowski (1994) reported that NA predicted satisfaction except when the task was quite aversive. In addition, high NA individuals recalled more negative features of tasks they performed whereas low NA individuals recalled more descriptive aspects of the tasks. Therefore, it appears that high NA individuals may have a tendency to "look through the glass darkly" when making affective judgments of tasks.

Another finding of interest in our research was that NA and procedural justice were moderately negatively correlated in both samples. This finding is inconsistent with findings reported by Ball et al. (1994) and Aquino, Lewis, and Bradfield (1999) who found that NA was not related to perceptions of procedural justice. The finding is, however, consistent with the suggestion of Organ and Konovsky (1989) that there may be a dispositional component in the tendency to perceive, or at least attend to, unfairness. In other words, high NA individuals may have a somewhat greater tendency than low NA individuals to either focus on those aspects of organizational procedures that are unfair or to determine that most things are unfair.

Although conceptually we treat procedural justice as a situational variable in these studies, our measures of procedural justice were perceptual in nature. Whereas this may be somewhat problematic, the measure we used in Study 1 was designed to tap perceptions of the existence of features of the situation (i.e., the procedural criteria set out by Leventhal, 1980) rather than people's global or overall summary judgments of fairness. Nevertheless, the potential exists for dispositions to influence individual ratings of these criteria.

Post hoc simple slopes tests revealed that, as expected, procedural justice was not related to job satisfaction for high NA individuals in Study 1. However, in Study 2 procedural justice was significantly related to job satisfaction even among high NA individuals, although the relationship was weaker than for low NA respondents. This difference in findings might be accounted for by the different samples used in the two studies. In Study 2, the mean of NA was well below the midpoint indicating that the sample of cooperative education students did not have strong NA tendencies. Nevertheless, the same pattern of interaction emerged in both studies indicating that even slight NA tendencies weakened the relationship between procedural justice and job satisfaction.

As noted earlier, our Study 1 data were collected during the organizational privatization process. As such, we did not obtain typical measures of employee distributive justice or other outcome-focused ratings (e.g., instrumentality or control over decisions; Tyler & Lind, 1992) because people did not yet know the outcome of the process. We did, however, include multi-item measures to assess employees' expectations that the privatization process would ultimately yield fair outcomes and outcomes that were favourable to employees. To rule out the alternative explanation that our procedural justice findings are due instead to anticipated outcome fairness, we conducted the analyses reported in Study 1, controlling for employees' expectations regarding the outcome of the privatization. Controlling the outcome-oriented ratings had no effect on the results of the primary analysis; that is, the Procedural Justice  $\times$  NA interaction remained significant with or without controlling for the outcome-oriented variables. Thus, we presented the simpler analysis in the text. Following the argument that procedural justice and distributive justice may interact in influencing work attitudes (e.g., Brockner & Wiesenfeld, 1996), we also examined whether employees' ratings of expected outcome fairness interacted with procedural justice on job satisfaction or whether there was a three-way interaction among ratings of expected outcomes, procedural

justice, and NA for the Study 1 data. The expected outcome variable had no such interaction effects. Thus, whereas people's ratings of the fairness of outcomes that they have already received have been found to interact with ratings of procedural fairness on work attitudes, their ratings of expected outcome fairness did not. These preliminary findings are consistent with the idea that, in the absence of information about actual outcomes, people may be most affected by process considerations (see Van den Bos et al., 1997).

Despite its limitations, our research contributes to the growing procedural justice literature by demonstrating the additive and interactive relations between procedural justice perceptions and NA on job satisfaction. A particular contribution is that we found this interaction in two different contexts. Participants in Study 1 responded to perceived procedural justice about the specific job assignment decision, whereas Study 2 participants evaluated procedural justice more generally. Our findings also confirm previous research that suggests that fair procedures are related to increased job satisfaction. However, it appears that by focusing only on developing fair procedures, organizations may not influence the satisfaction levels of all employees. Just as Skarlicki et al. (1999) found that dispositional factors moderate the link between fair procedures and retaliatory behaviours, our findings suggest that the strength of relations between procedural justice and attitudes – specifically, job satisfaction – may vary depending on dispositional factors of individual employees. In particular, our findings highlight the need for organizations not only to ensure that fair procedures are implemented in the course of major organizational change as well as daily organizational life, but also to consider the potential influence of dispositional variables such as NA on individual reactions to organizational procedures. Indeed, extra effort might be needed to ensure that all employees clearly understand that the organization has been fair in their dealings with employees, including during any change process that is undertaken. This might, for example, involve ensuring that employees are given an opportunity to voice concerns and appeal decisions and that these options are made more salient through communications with employees.

Future research should continue to examine the unique and combined effects of person-based and situation-based variables on organizational attitudes and behaviours. Our research suggests that focusing on just one or the other provides an incomplete picture. In addition, future research might also provide us with a better idea of which individual difference

variables are important sources of influence on organizations' attempts to foster positive organizational attitudes. It appears that "one size fits all" interventions will not be universally effective. Finally, as suggested by Brief et al. (1995), we need to know more about the processes by which NA affects relations between organizational events and job attitudes. A better understanding of these processes would allow organizations to develop initiatives designed to positively influence work attitudes that are tailored to the unique characteristics of its employees.

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Correspondence concerning this article should be addressed to P. Gregory Irving, School of Business & Economics, Wilfrid Laurier University, 75 University Avenue West, Waterloo, Ontario, Canada N2L 3C5 (E-mail: girving@wlu.ca).

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