

## Destructive leader traits and the neutralizing influence of an “enriched” job

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### Abstract

This study tested a model of the interactive effects of perceived job characteristics and potentially destructive leader traits on the physical and psychological strain of their subordinates and their job attitudes and commitment to the organization. A composite measure of the characteristics of enriched jobs (job scope) was positively related to more favorable outcomes (e.g., organizational commitment) and negatively related to unfavorable outcomes (e.g., somatic complaints). Hierarchical linear modeling tested the moderating effects of leader hostility and leader negative affectivity on the effects of perceived job scope. Subordinates ( $n=203$ ) with leaders ( $n=47$ ) scoring high on hostility and low job scope consistently exhibited less favorable outcomes than subordinates with *low hostility* supervisors and *low job scope* and *high hostility* supervisors and *high job scope*. Leader trait negative affectivity exhibited similar interaction effects for three of the outcomes (organizational commitment, overall job satisfaction, and anxiety). The implications of these findings for leadership are discussed.

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### 1. Introduction

Whereas a small number of characteristics (e.g., intelligence, dominance, self-confidence, high energy level) tend to be correlated with leadership status and effectiveness, a striking feature of the personality variables studied in the leadership/supervisory context is their almost exclusive focus on desirable characteristics, i.e. those that are plausible attributes of *effective* leaders (e.g., Yukl, 2006). More recent evidence, however, suggests that the “dark side” of supervisors, traits that are potentially destructive for followers and the organization, also merits attention (Baron, 1989; Conger, 1990; Frost, 2004; Tepper, 2000). This somewhat new way of thinking is aligned with the trend toward investigating “the dark side of organizational behavior,” which is concerned with traits and behaviors that have negative consequences for individuals, groups of individuals, or organizations (Griffin & O’Leary-Kelly, 2004). In the present paper we examine two dispositional constructs, hostility and trait negative affectivity (NA), that have been the

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focus of much epidemiological research. Considerable evidence exists concerning the nomological validity of these dispositions and their associations with mental and physical health (Richards, Hof, & Alvarenga, 2000; Sirois & Burg, 2003). In addition, social psychologists have explored how these traits influence interpersonal behavior. Together, the epidemiological and social psychological literatures provide a basis for predicting how leaders who exhibit these two traits could adversely influence the well being, attitudes, and affective reactions of their subordinates.

We argue that subordinates with more enriched jobs are less strongly influenced by destructive leader characteristics because they have less functional interaction with the supervisor than do subordinates with relatively unenriched jobs. Our approach differs from past studies in mainly three ways: (1) our emphasis is on potentially undesirable traits of leaders rather than on predictors of leadership status and success, (2) we consider the impact of these traits not on the health of the actor, as has previous research, but on others in his or her social environment, and (3) the hypotheses are tested using data collected from three distinct sources (i.e., observers, the supervisor, and his or her subordinates).

### *1.1. Effects of leaders on follower distress*

The original stream of research concerning leader behavior patterns, and its later variants such as Path–Goal theory, examined behaviors that involved supporting others by structuring their work, encouraging participation, and providing counsel and empathy. The trait approach to leadership (see Lord, DeVader, & Alliger, 1986) has been integrated with the behavioral stream to some extent, and the focus of trait research has tended to be on traits and behaviors that are either appealing for subordinates (e.g., extraversion, emotional intelligence) or rather neutral in terms of such appeal (e.g., dominance). More recent leadership research has tested what can be roughly categorized as the new theories of leadership, including charismatic leadership theories (e.g., Shamir, Zakay, Breinin, & Popper, 1998), transformational leadership theories (e.g., Bass, 1985), and most recently authentic leadership (Avolio, Gardner, Walumbwa, Luthans, & May, 2004). These theories are more normative than the trait and behavioral theories, as they postulate what leaders should do to engage and motivate subordinates. Here again, the primary focus is on positive traits and behaviors, such as exhibiting courage, inspiring others, providing intellectual stimulation and individualized support, serving as a positive role model, and encouraging self-sacrifice. As reviewed by Zaccaro, Kemp, & Bader (2004), research on “destructive personal attributes that contribute to harmful or negative leadership influences [...] has begun to provide a counter-perspective to the overwhelming body of research that has pointed to the personality attributes that facilitate leadership” (p. 113). These authors provided examples of studies that examined destructive personal attributes, but none of these studies examined personality traits.

The present study is rooted in a separate and smaller literature concerning “toxic” leaders (see Frost, 2004). Based largely on reports from the field and case studies, the “toxic” leader approach references subordinates’ reports about their bosses’ excessive demands and personal insensitivity. These perceived behaviors of leaders are seen to interfere with subordinates’ performance and create strain for them. Many workers cite their bosses as being the top or at least among the primary sources of their stress at work (Schabracq & Cooper, 1998). In fact, recently publicized litigation has extracted damages from companies on the charge that bullying from a supervisor in their employ was instrumental in the deterioration of a subordinate’s health (Hannan & Young, 2004). Clearly, leaders often play a large role in how subordinates cope with strain on the job, and they are often an unnecessary source of that strain (Schaubroeck, Ganster, Sime, & Ditman, 1993).

However, knowing that distress-inducing leaders exist provides only a starting point for understanding the characteristics of these leaders and the situations in which they are more or less “toxic” for subordinates. The nascent literature on abusive supervision (Tepper, Duffy, & Shaw, 2001) is an important first step in developing a more scientific understanding of destructive leadership. This research has identified consequences of abusive leadership (Tepper, 2000) and has examined how and under what conditions subordinates are undermined or otherwise abused by certain leaders (Duffy, Ganster, & Pagon, 2002). Our own research does not examine leader behavior. Rather, we identified two aspects of personality that are known to influence the health and satisfaction of individuals, hostility and trait NA, and tested their interaction with a broad index of how subordinates perceive the characteristics of their jobs, independent of supervision. As such, we did not examine subordinates’ perceptions of their leaders. Although critical to understanding follower reactions, attributions and other perceptions about leaders may be significantly influenced by the history of the leader–member relationship and biases (attributional or motivational) on the part of subordinates. Our objective was to determine if a situational variable that is consistently shown to promote positive subordinate outcomes, the extent to which the job is “enriched” as per Hackman & Oldham’s (1975, 1980) Job Characteristics Model, neutralizes potentially destructive supervisor attributes across a range of subordinate outcomes.

## 1.2. Potentially destructive leader traits

Our study focuses on the interaction of job scope with two leader traits, hostility and trait NA. As we review below, these personality constructs are implicated as causal factors in the ill health of the trait-holder and they are also observed to create problems in interacting with others. Specifically, persons who score high on hostility and, separately, trait NA, have been shown to report more psychological and physical health problems than persons scoring lower on these dimensions, even after controlling for other significant risk factors (Watson & Pennebaker, 1989; Williams, 1989). In this sense, higher scores on these traits are destructive to one's own health. But our interest lies in studying the effects of these traits on other people; employees who have a dependency relationship with the trait-holder. The behavioral literature pertaining to these traits suggests a number of behavioral, verbal, and nonverbal manifestations that may be expected to create stress for subordinates. We first review parts of this literature that are pertinent to interpersonal interaction and then we develop hypotheses about how organizational supervisors who possess high levels of these traits may adversely influence the well being of their subordinates.

### 1.2.1. Hostility

The characteristic behaviors associated with the personality trait of hostility are consistent with the behaviors associated with abusive supervisors, such as laying blame on others and providing destructive feedback (see [Tepper, 2000](#)). [Williams \(1989\)](#) characterized hostility as a cynical mistrust of others that leads to the frequent experience of anger, which in turn is overtly expressed to those around him or her (p. 70). The hostility trait has received particular attention in more recent years because it has been frequently found to predict cardiovascular health ([Sirois & Burg, 2003](#); [Wielgosz & Nolan, 2000](#)).

Persons with high trait hostility are more often angry when they are disappointed, and they express their anger outwardly to others ([Williams, 1989](#)). Not surprisingly, hostility is associated with a proclivity to argue with others and instigate violent acts ([Siegman, Dembroski, & Ringel, 1987](#)). Hostile people have a low frustration tolerance and are seen to create an impression of threat that makes others cautious and more likely to avoid them ([Prkachin & Silverman, 2002](#); [Richards et al., 2000](#)). A study of adolescents by [Farber & Burge-Callaway \(1998\)](#) found that more hostile individuals were more prone to complaining, being stubborn, and expressing a dim view of their circumstances.

### 1.2.2. Trait negative affectivity

The concepts of neuroticism and trait anxiety are closely related personality constructs. Neuroticism is conceptualized as “a broad dimension of individual differences in the tendency to experience negative, distressing emotions and to possess associated behavioral and cognitive traits” ([Costa & McCrae, 1987](#), p. 301). [Costa, McCrae, & Dembroski \(1989\)](#) stated that neurotics tend to experience intense anger and “antagonistic hostility, which is characterized by cynicism, callousness, and uncooperativeness” (p. 48). Similarly, trait anxious persons live in a constant state of psychological vigilance and physiological arousal, and tend to project their fears onto the environment. Neuroticism and trait anxiety measures are mutually posited to represent the broader concept space of trait NA. Trait NA was defined by [Watson & Clark \(1984\)](#) as “[...] a mood dispositional dimension. It reflects pervasive individual differences in negative emotionality and self-concept” (p. 465). Trait NA “subsumes a broad range of aversive mood states, including anger, disgust, scorn, guilt, fearfulness, and depression [...]. High NA subjects [...] tend to focus on the negative side of others and are less satisfied with themselves and their lives” ([Watson & Pennebaker, 1989](#), pp. 234–235).

As reviewed above, the characteristic behaviors of hostile and high trait NA individuals have much in common. Both traits are associated with a negative outlook, a lack of interpersonal sensitivity, and a less effective style of interacting with others. Although theoretically related, the discriminant validity of these constructs has been demonstrated ([Watson & Clark, 1992](#)). Hostility is a part of the constellation of features associated with trait NA, but an individual may chronically experience such negative emotions as fear, shame, sadness, and loss without a corresponding proclivity to hostility. However, [Hart & Hope \(2004\)](#) found that trait NA as measured by a neuroticism index explained much of the correlation between hostility (as measured using a self-report) and life stress, trait anger, loneliness and irrational beliefs. Trait NA includes tendencies toward hostility, but many of these tendencies are distinct from the hostility construct we reviewed in the previous section. Specifically, “neurotic hostility” refers to the feeling of cynicism, contempt and mistrust of others that is not manifest in expressive behavior. Within the health psychology literature the hostility trait usually (including the present study) refers to “expressive hostility,” which consists of outward displays of aggression, intimidation, and contempt ([Felsten, 1996](#)).

A meta-analytic review conducted by Judge, Bono, Ilies, & Gerhardt (2002) identified several studies that found high trait NA individuals were less likely to emerge as leaders, or, if they were leaders, they tended to be rated as less effective than low NA leaders. More recently, in a laboratory simulation, Gaddis, Connelly, & Mumford (2004) found that leaders who exhibited negative affect in delivering failure feedback were seen as less effective and had more poorly performing subordinate groups. Also, Lim & Ployhart (2004) observed that high NA among military leaders was negatively related to a transformational style of leadership (e.g., inspiring, stimulating). High NA persons have been found to be more defensive in their social interactions (Barrett & Pietromonaco, 1997), more prone to conflict with others (Brisette & Cohen, 2002), and they seek to distance themselves from others (O'Brien & DeLongis, 1996). George & Brief (1992) proposed that the affect of the leader is a potent source of the affective tone of the work unit. Their argument is that the mood of managers “rubs off” on their subordinates. As with hostility, however, the effects of high trait NA individuals on the physical and psychological well being of others with whom they interact has not been studied.

### *1.3. Job scope and coping with destructive leaders*

As reviewed above, it may be expected that persons prone to various expressive and neurotic forms of negative emotionality are likely to be callous, antagonistic, fearful of subordinate initiative, and prone to exhibit frustration. Such supervisors may be unwilling to communicate effectively with subordinates and are likely to limit subordinates' abilities to cope with day-to-day problems. Our review also suggests that high hostility or high trait NA leaders may tend to be socially distant, unpleasant, and intimidating. Dasborough & Ashkanasy (2002) suggested that when leaders exhibit negative affect their subordinates tend to infer they have manipulative intentions. Moreover, the negative outlook of such bosses could be very discouraging to subordinates and they may seek to cope by avoiding the supervisor. Taking together the various destructive behaviors of hostile and high NA individuals, supervisors exhibiting high levels of these traits seem more likely to create a stressful milieu for their subordinates. An emotionally unstable supervisor is a potential source of distress that is constant and cannot be resolved by using active (i.e., problem-focused) coping strategies. Subordinates are rarely in a position to exert problem-focused coping to overcome difficulties they experience in interacting with a hostile supervisor. Such a chronic source of distress over which subordinates have no control, be it in the form of feeling belittled by the supervisor's contempt, frustration, blaming, intimidation, excessive control, unrealistic expectations, or just poor communication, may be expected to create anxiety, somatic complaints, and general dissatisfaction. Ultimately, this may reduce their psychological commitment to and desire to stay employed by the organization.

Situational variables matter a great deal in how traits influence individual behavior (Weiss & Adler, 1984). But to what extent do situations influence how leaders' traits impact subordinate outcomes? Starting in the 1970's with House's (1971) Path-Goal theory of leadership, researchers examined how particular norms for leader behavior (e.g., high initiating structure) influenced relationships between subordinates' perceptions of job characteristics and their personal outcomes such as psychological strain, job dissatisfaction, and organizational commitment (for a review see Podsakoff, Niehoff, MacKenzie, & Williams, 1993). Johns (1978), for instance, found that the extent to which a job was enriched along the core dimensions of meaningfulness and growth, knowledge of results, and autonomy (i.e., “job scope”) influenced the relationship between leader behavior and subordinate outcomes. Leadership consideration had a less favorable effect on supervision satisfaction, attendance, and the desire to stay employed by the organization among subordinates with more enriched jobs. This suggests that job scope moderates the relationship between leader behavior and subordinate outcomes such that higher job scope can compensate for some leader behaviors. This is consistent with the leadership substitutes perspective developed by Kerr & Jermier (1978). Within this perspective, characteristics of the job compensate for deficiencies in the relationship with the supervisor (see Podsakoff et al., 1993). One prediction of the leadership substitutes model was that jobs that are intrinsically satisfying and which naturally provide meaningful feedback to the incumbent neutralize the effects of leader behavior on subordinate outcomes such as satisfaction and commitment. Although Kerr and Jermier's work focused on the leader behavior patterns of consideration and initiating structure, they stated that a broader range of leader behavior patterns would exert similar effects. In support of this view, studies by Podsakoff, Mackenzie, & Bommer (1996) and Whittington, Goodwin, & Murray (2004) found that persons reporting more enriched jobs exhibited weaker effects of transformational leadership.

The leadership substitutes model does not specify how subordinates' situations, such as their job scope, might influence their relationships with the leader. Instead, the substitutes perspective implies that various leader behaviors

should be observed in relatively equal amounts across types of subordinate jobs, such that a particular set of jobs, but not others, neutralizes the effect of the leader behavior under investigation. But there is also evidence that leaders do not engage as actively with subordinates who have more enriched jobs. Drach-Zahavy (2004) noted that incumbents of more enriched jobs receive less support from their supervisors because such support would tend to undermine their desired autonomy and professionalism. These incumbents can maintain greater distance from their nominal supervisors. From this perspective, supervisors recognize that their attempts to support or otherwise motivate incumbents of enriched jobs will fail either because they lack the knowledge required to understand the worker's contingencies and/or the worker will view the supervisory actions as intrusive and unnecessary. The distance between supervisor and subordinate can be physical in the sense that the supervisor does not need to be nearby to supervise the subordinate or to be accessible to provide support. In addition, the distance can be functional in the sense that there is little need for interaction between the incumbent and his/her supervisor when the former has an enriched job (Antonakis & Atwater, 2002). This perspective is consistent with the leadership substitutes perspective in that incumbents of more enriched jobs may respond negatively to what they perceive as infringements by the leader. This functional distance perspective further proposes that whatever the characteristic behavior or trait of a given leader, incumbents of enriched jobs will have less exposure to the behavior. Thus, a hostile or high trait NA supervisor may be more toxic to workers with less enriched jobs because they are more often exposed to the supervisor's toxic behavior.

A supervisor's hostility and NA may manifest itself in many different ways that do not fit neatly into conventional leader behavior formulations. For example, supervisors high in trait NA may discourage questions and feedback seeking, their personal comments and demeanor may create a depressing work climate, or they may accord little freedom and initiative to subordinates. This is a situation that subordinates cannot change or control, but they can avoid its toxic effects by maintaining functional distance from their boss. This strategy is more pragmatic for incumbents of enriched jobs because their supervisors should recognize that they require less supervision and support. Therefore, we predicted that destructive leader traits would be less strongly related to unfavorable subordinate outcomes, as well as less strongly related to favorable outcomes, among workers having more enriched jobs.

The attitudinal variables of turnover intentions, overall job satisfaction, workload satisfaction, and organizational commitment have been examined as outcomes in the leadership substitutes literature and, as we noted above, the characteristic behaviors of persons prone to negative emotionality may be expected to have a deleterious influence on subordinate morale. We rely on a fairly rich behavioral literature suggesting that high hostility and trait NA hold the potential for destructive behavior. Most likely these kinds of traits become manifest to subordinates in different ways, but one commonality is that subordinates do not look to them as being leaders with whom they want to interact. We may expect that any negative effects of having a more hostile or high trait NA leader may be explained to some degree by the leader's perceived behavior, but we did not expect that these behaviors would necessarily be manifest in conventional leader behaviors such as supportiveness, direction, transformational and charismatic behaviors, or reward and punishment behaviors. Because toxic leader behavior is stressful for subordinates, we also expected that subordinates who are often exposed to such leaders would suffer more stress symptoms such as somatic complaints and anxiety, than subordinates who are rarely exposed to hostile and/or high trait NA leaders. Further, negatively affected subordinates may experience lower levels of satisfaction and commitment and, as a result, seek to cope by considering employment elsewhere.

**Hypothesis 1.** Job scope will moderate the effects of supervisor hostility on somatic complaints, depression, experienced anxiety on the job, overall job satisfaction, workload satisfaction, organizational commitment, and turnover intentions. There will be a weaker relationship between supervisor trait hostility and these outcomes among subordinates reporting more enriched jobs than among subordinates reporting less enriched jobs. (The effect of supervisor hostility will be positive in sign for somatic complaints, depression, experienced anxiety on the job, and turnover intentions and negative for overall job satisfaction, workload satisfaction, and organizational commitment.)

**Hypothesis 2.** Job scope will moderate the effects of supervisor trait NA on somatic complaints, depression, experienced anxiety on the job, overall job satisfaction, workload satisfaction, organizational commitment, and turnover intentions. There will be a weaker relationship between supervisor NA and these outcomes among subordinates reporting more enriched jobs than among subordinates reporting less enriched jobs. (The effect of supervisor trait NA will be positive in sign for somatic complaints, depression, experienced anxiety on the job, and turnover intentions and negative for overall job satisfaction, workload satisfaction, and organizational commitment.)

## 2. Methods

### 2.1. Sample

Data were obtained from employees of a large contracting firm as part of a larger study on job characteristics, individual differences, and employee well being. Respondents were queried at two of the firm's job sites and at its corporate headquarters. Complete self-report questionnaire data were provided by 203 direct reports; 154 of the direct reports provided both complete questionnaire data and interview data about the hostility of their supervisor. Ninety-two percent (92%) of the direct reports who had complete data on all variables were males, and participants self-reported an average education of 13.7 years and averaged 34.6 years of age. Approximately 60% occupied construction trades while the rest were employed as accountants, engineers, clerical support staff, and middle to upper level managers. Participants received time off from their jobs to provide data at a location near their work site. The median number of respondents per subordinate group included four persons. As the median supervisor span of subordination was six persons, this represents a two-thirds response rate from the sampled work groups. Supervisors averaged 39 years of age and 14 years of education. Ninety-four percent (94%) were males and 33% were positioned at a level in the organization higher than first-line supervisor.

### 2.2. Procedures and measures

We used the Stanford Research Institute (SRI) version of the Structured Interview (SI) (Dembroski, MacDougall, & Lushene, 1979) to measure the supervisors' trait hostility. The SI utilizes a patterned questionnaire including 25 items that structure the interview procedure. Several items have two or more follow-up questions and some include instructions to the interviewer to modulate delivery of the question in order to elicit characteristic responses. A key feature of the SI is that it combines the asking of questions about different kinds of behavior (e.g., hostile behavior) in one's daily life with subtle attempts to elicit a particular type of response, such as by asking a question very slowly to encourage interruption, or interrupting the interview subject to determine if doing so elicits a hostile response. By coding speech characteristics, the SI captures both neurotic (from answer content) and expressive (from speech characteristics, nonverbal behavior) hostility. Ratings were made on a 1–5 scale based on the supervisors' observed behavior (e.g., glaring) and speech characteristics during the interview (e.g., voice surliness), as well as their responses to questions about their behavior in daily life. For the interview ratings, the hostility content scores and hostile speech behavior provided separate scales that were highly correlated ( $r = .75$ ). Therefore these two indexes were combined to form a composite measure of hostility.

An SRI-certified interviewer trained the two interviewers involved in the current study and supervised the study interview process. Each interview was conducted by a single interviewer and all interviews were tape-recorded for subsequent review and content rating. Although we initially had each interview recording rated by two scorers (the actual interviewer and either the second interviewer or an additional independent scorer), ultimately, the decision was made to use only the ratings of the interviewer who conducted the interview. Our decision was based on the fact that (1) the second scorer did not participate in the interview and was, therefore, unable to make visual references from the audiotapes that were instrumental in rating the participants' hostility; and (2) the inter-rater reliability was not particularly high ( $r = .45$ ).

Trait NA was measured by supervisor self-report. This index combined neuroticism and trait anxiety instruments. The personality concept of neuroticism was measured using the Eysenck Personality Inventory (EPI; Eysenck & Eysenck, 1963). The instrument includes 23 dichotomously scored ("Yes" or "No") items ( $KR20 = .85$ ). The 19 item trait anxiety measure ( $\alpha = .87$ ; Spielberger, Gorsuch, & Lushene, 1970) asked respondents how they "generally feel." On a four point continuum ("almost never" to "almost always") respondents evaluate how often they experience various psychological conditions indicative of anxiety (e.g., "feel secure"). These instruments demonstrated considerable convergent validity ( $r = .75$ ). The mean of their standard normal deviates (Z-scores) formed the trait NA index.

The various outcome variables were measured by self-reports of the subordinates. Physical symptomatology was measured by a 17 item expanded version of Caplan, Cobb, French, Harrison, & Pinneau (1975) somatic complaints index ( $\alpha = .86$ ). Respondents were asked, "How often have you experienced any of the following during the past month? e.g., were bothered by a headache?" Depression and anxiety were also measured by self-report instruments. The depression scale is a 10-item instrument ( $\alpha = .85$ ) adapted from one developed by Quinn & Shepard (1974). Anxiety was measured using an 11-item instrument ( $\alpha = .92$ ) developed by Hoy & Endler (1969). On a 1–5 scale (e.g., "Not at all" (1) to "Very Much" (5)) respondents were asked about their "reactions in general" to those situations where you are being evaluated or observed by other people..." (e.g., "feel anxious;" "feel nervous").

Organizational commitment was measured using the nine-item short form of the Organizational Commitment Questionnaire ( $\alpha = .89$ ; Mowday, Steers, & Porter, 1979). Turnover intentions were measured using two items developed specifically for the study: “Which of the following statements most clearly reflects your feelings about your future with this employer? ‘Definitely will not leave’ (1) to ‘Definitely will leave’ (5);” “Do you expect to leave your job in the near future? ‘Will definitely leave in the near future’ (1) to ‘Definitely will not leave in the near future’ (5).” The latter item was reverse-scored. The two items demonstrated acceptable reliability ( $\alpha = .78$ ).

Overall job satisfaction was measured using a sexless version of Kunin’s (1955) Faces scale. Respondents evaluated seven faces ranging from frowns (1) to wide smiles (7) and were asked to rate, “Which best describes how you feel about your overall job?” Workload satisfaction ( $\alpha = .89$ ) was measured using a three-item instrument from the Job Diagnostic Survey (JDS; Hackman & Oldham, 1975). The JDS also provided the 21 items used to measure job scope ( $\alpha = .86$ ). The job scope items included the three-item JDS subscales for measuring task identity, task variety, task significance, job autonomy, task and agent feedback, and dealing with others. Given the high reliability of the overall instrument and previous confirmatory factor analyses of these items that observed one-factor solutions (Hogan & Martell, 1987; Schaubroeck, Ganster, & Kemmerer, 1994), we used the mean of all items as a single composite measure of job scope.

The analyses also controlled for age and gender as self-reported by subordinates. Age is commonly controlled in studies involving job attitude dependent variables. There is a tendency for older employees to have more favorable attitudes (Hanlon, 1986; White & Spector, 1987), and there is some positive correlation between age and job enrichment (Lee & Wilbur, 1982). We also controlled for gender because we thought it is possible that a female employee might react differently to a male boss’s hostility than would a male employee, as might a male employee respond differently to a female boss’s negative emotionality.

### 2.3. Analysis strategy

Data in the present study were multilevel in nature, with supervisor hostility and trait NA analyzed at the unit-level and job scope and all outcome variables analyzed at the individual-level. It is suitable to examine the supervisor traits at the unit-level because, whereas characteristic behavior patterns such as supervisor consideration may differ across the direct reports of a particular supervisor, the supervisor’s trait remains constant across all of his or her subordinates. We also have no reason to believe that supervisors would manifest more or less negative emotionality for different subordinates. Job scope is measured and analyzed at the individual-level because this is conventional in job scope research and this construct refers to a perceptual phenomenon about jobs, not an objective difference between jobs. We used hierarchical linear modeling (HLM) Version 6.01 to test the hypotheses. HLM has several advantages including

Table 1  
Means, standard deviations, and zero-order correlations among study variables<sup>a</sup>

	Mean	SD	1	2	3	4	5	6	7	8	9	10	11	12
1. Age	34.62	9.99	–											
2. Sex	1.08	.27	–.19	–										
3. Job scope	5.01	1.04	–.02	.09	.86									
4. Supervisor hostility	3.15	.91	–.01	.03	–.01	– <sup>b</sup>								
5. Supervisor negative affectivity	.00	.50	.07	–.05	–.17	.19	– <sup>c</sup>							
6. Overall job satisfaction	5.10	1.44	.05	.18	.44	.03	.00	–						
7. Organizational commitment	3.70	1.38	–.08	.16	.39	.07	.04	.48	.89					
8. Satisfaction with workload	5.10	1.26	.07	–.06	.17	.03	.09	.51	.27	.89				
9. Depression	1.75	.48	–.07	.10	–.27	.12	.10	–.22	–.25	–.23	.92			
10. Somatic complaints	1.59	.43	–.12	.12	–.05	–.06	–.06	–.09	–.09	–.22	.50	.86		
11. Turnover intentions	2.95	1.13	–.09	–.04	–.21	–.09	.07	–.33	.57	–.29	.13	.08	.78	
12. Anxiety on the job	1.50	.50	–.14	.06	–.19	.08	.02	–.23	–.09	–.28	.58	.44	.17	.85

Correlations outside the range  $-.16, .16$  are significant ( $p < .05$ ).

<sup>a</sup> Reliabilities reported in diagonal.

<sup>b</sup> Based on Structured Interview.

<sup>c</sup> Mean of trait anxiety ( $\alpha = .87$ ) and neuroticism (KR20 = .85) Z-scores.

Table 2  
Preliminary model for Hypotheses 1 and 2

Model	Parameter estimates						
	$\gamma_{00}$	$\gamma_{01}$	$\gamma_{02}$	$\gamma_{03}$	$\gamma_{10}$	$\gamma_{20}$	$\gamma_{30}$
<b>Model 1: Overall job satisfaction</b>							
L1: $OJS_{ij} = \beta_{0j} + \beta_{1j} (Age_{ij}) + \beta_{2j} (Sex_{ij}) + \beta_{3j} (JS_{ij}) + r_{ij}$							
L2: $\beta_{0j} = \gamma_{00} + \gamma_{01} (Mean JS_j) + \gamma_{02} (SH_j) + \gamma_{03} (NA_j) + U_{0j}$	4.09 <sup>a</sup>	.35 <sup>a</sup>	.05	.07	.01	.51 <sup>c</sup>	.45 <sup>a</sup>
L2: $\beta_{1j} = \gamma_{10} + U_{1j}$							
L2: $\beta_{2j} = \gamma_{20} + U_{1j}$							
L2: $\beta_{3j} = \gamma_{30} + U_{1j}$							
<b>Model 2: Organizational commitment</b>							
L1: $OC_{ij} = \beta_{0j} + \beta_{1j} (Age_{ij}) + \beta_{2j} (Sex_{ij}) + \beta_{3j} (JS_{ij}) + r_{ij}$							
L2: $\beta_{0j} = \gamma_{00} + \gamma_{01} (Mean JS_j) + \gamma_{02} (SH_j) + \gamma_{03} (NA_j) + U_{0j}$	2.99 <sup>a</sup>	.17	-.02	.08	.01 <sup>c</sup>	.37	.38 <sup>a</sup>
L2: $\beta_{1j} = \gamma_{10} + U_{1j}$							
L2: $\beta_{2j} = \gamma_{20} + U_{1j}$							
L2: $\beta_{3j} = \gamma_{30} + U_{1j}$							
<b>Model 3: Workload satisfaction</b>							
L1: $WS_{ij} = \beta_{0j} + \beta_{1j} (Age_{ij}) + \beta_{2j} (Sex_{ij}) + \beta_{3j} (JS_{ij}) + r_{ij}$							
L2: $\beta_{0j} = \gamma_{00} + \gamma_{01} (Mean JS_j) + \gamma_{02} (SH_j) + \gamma_{03} (NA_j) + U_{0j}$	5.21 <sup>a</sup>	.19	.05	.11	.01	-.46	.41 <sup>a</sup>
L2: $\beta_{1j} = \gamma_{10} + U_{1j}$							
L2: $\beta_{2j} = \gamma_{20} + U_{1j}$							
L2: $\beta_{3j} = \gamma_{30} + U_{1j}$							
<b>Model 4: Depression</b>							
L1: $DP_{ij} = \beta_{0j} + \beta_{1j} (Age_{ij}) + \beta_{2j} (Sex_{ij}) + \beta_{3j} (JS_{ij}) + r_{ij}$							
L2: $\beta_{0j} = \gamma_{00} + \gamma_{01} (Mean JS_j) + \gamma_{02} (SH_j) + \gamma_{03} (NA_j) + U_{0j}$	1.63 <sup>a</sup>	-.06	.06	-.08 <sup>b</sup>	.00	.08	-.15 <sup>a</sup>
L2: $\beta_{1j} = \gamma_{10} + U_{1j}$							
L2: $\beta_{2j} = \gamma_{20} + U_{1j}$							
L2: $\beta_{3j} = \gamma_{30} + U_{1j}$							
<b>Model 5: Somatic complaints</b>							
L1: $SC_{ij} = \beta_{0j} + \beta_{1j} (Age_{ij}) + \beta_{2j} (Sex_{ij}) + \beta_{3j} (JS_{ij}) + r_{ij}$							
L2: $\beta_{0j} = \gamma_{00} + \gamma_{01} (Mean JS_j) + \gamma_{02} (SH_j) + \gamma_{03} (NA_j) + U_{0j}$	1.59 <sup>a</sup>	-.00	.03	-.05	-.00	.09	.08 <sup>b</sup>
L2: $\beta_{1j} = \gamma_{10} + U_{1j}$							
L2: $\beta_{2j} = \gamma_{20} + U_{1j}$							
L2: $\beta_{3j} = \gamma_{30} + U_{1j}$							
<b>Model 6: Turnover intentions</b>							
L1: $TI_{ij} = \beta_{0j} + \beta_{1j} (Age_{ij}) + \beta_{2j} (Sex_{ij}) + \beta_{3j} (JS_{ij}) + r_{ij}$							
L2: $\beta_{0j} = \gamma_{00} + \gamma_{01} (Mean JS_j) + \gamma_{02} (SH_j) + \gamma_{03} (NA_j) + U_{0j}$	3.36 <sup>a</sup>	-.07	-.07	-.02	.01	.12	-.45 <sup>a</sup>
L2: $\beta_{1j} = \gamma_{10} + U_{1j}$							
L2: $\beta_{2j} = \gamma_{20} + U_{1j}$							
L2: $\beta_{3j} = \gamma_{30} + U_{1j}$							
<b>Model 7: Anxiety on the job</b>							
L1: $AJ_{ij} = \beta_{0j} + \beta_{1j} (Age_{ij}) + \beta_{2j} (Sex_{ij}) + \beta_{3j} (JS_{ij}) + r_{ij}$							
L2: $\beta_{0j} = \gamma_{00} + \gamma_{01} (Mean JS_j) + \gamma_{02} (SH_j) + \gamma_{03} (NA_j) + U_{0j}$	1.72 <sup>a</sup>	-.06	.03	-.03	-.01	.01	-.08 <sup>b</sup>
L2: $\beta_{1j} = \gamma_{10} + U_{1j}$							
L2: $\beta_{2j} = \gamma_{20} + U_{1j}$							
L2: $\beta_{3j} = \gamma_{30} + U_{1j}$							

Note: In the Level 1, job scope group mean centered. L1=Level 1; L2=Level 2; SH=Supervisor hostility; NA=Supervisor trait negative affectivity; JS=Job scope;  $\gamma_{00}$ =Slopes of Level 2 regression predicting  $\beta_{0j}$ ;  $\gamma_{01} - \gamma_{02}$ =Slopes of Level 2 regression predicting  $\beta_{0j}$ ;  $\gamma_{10}$ =Intercept of Level 2 regression predicting  $\beta_{1j}$ ;  $\gamma_{20}$ =Intercept of Level 2 regression predicting  $\beta_{2j}$ ;  $\gamma_{30}$ =Intercept of Level 2 regression predicting  $\beta_{3j}$ .

<sup>a</sup> $p < .01$ ; <sup>b</sup> $p < .05$ ; <sup>c</sup> $p < .10$  (two tailed).

allowing researchers to simultaneously investigate effects at a single level and cross-level effects, such as is the case in the present study (Gavin & Hofmann, 2002; Hofmann, Griffin, & Gavin, 2000; Raundenbush & Bryk, 2002).

In all the analyses, we used group mean centering for job scope at Level 1 and grand mean centering for supervisor hostility and supervisor trait NA at Level 2. Group mean centering is a better choice of scaling for Level 1 predictors when investigating cross-level interactions, because it allows the researcher to distinguish the cross-level interaction from a between-group interaction (Hofmann & Gavin, 1998). Similarly, grand mean centering is recommended for

Table 3  
Hierarchical linear modeling models and results for Hypotheses 1 and 2

Model	Parameter estimates							
	$\gamma_{00}$	$\gamma_{01}$	$\gamma_{02}$	$\gamma_{10}$	$\gamma_{20}$	$\gamma_{30}$	$\gamma_{31}$	$\gamma_{32}$
<b>Model 1: Overall job satisfaction</b>								
L1: $SS_{ij} = \beta_{0j} + \beta_{1j} (\text{Age}_{ij}) + \beta_{2j} (\text{Sex}_{ij}) + \beta_{3j} (\text{JS}_{ij}) + r_{ij}$								
L2: $\beta_{0j} = \gamma_{00} + \gamma_{01} (\text{SH}_j) + \gamma_{02} (\text{NA}_j) + U_{0j}$								
L2: $\beta_{1j} = \gamma_{10} + U_{1j}$								
L2: $\beta_{2j} = \gamma_{20} + U_{2j}$								
L2: $\beta_{3j} = \gamma_{30} + \gamma_{31} (\text{SH}) + \gamma_{32} (\text{NA}) + U_{3j}$	4.20 <sup>a</sup>	-.28	.60	.55 <sup>a</sup>	.01	.46 <sup>a</sup>	.48 <sup>a</sup>	.03
<b>Model 2: Organizational commitment</b>								
L1: $SS_{ij} = \beta_{0j} + \beta_{1j} (\text{Age}_{ij}) + \beta_{2j} (\text{Sex}_{ij}) + \beta_{3j} (\text{JS}_{ij}) + r_{ij}$								
L2: $\beta_{0j} = \gamma_{00} + \gamma_{01} (\text{SH}_j) + \gamma_{03} (\text{NA}_j) + U_{0j}$								
L2: $\beta_{1j} = \gamma_{10} + U_{1j}$								
L2: $\beta_{2j} = \gamma_{20} + U_{2j}$								
L2: $\beta_{3j} = \gamma_{30} + \gamma_{31} (\text{SH}) + \gamma_{32} (\text{NA}) + U_{3j}$	2.81 <sup>a</sup>	-.28	-.64	.01 <sup>a</sup>	.51 <sup>c</sup>	.31 <sup>a</sup>	.27 <sup>b</sup>	.23 <sup>b</sup>
<b>Model 3: Workload satisfaction</b>								
L1: $SS_{ij} = \beta_{0j} + \beta_{1j} (\text{Age}_{ij}) + \beta_{2j} (\text{Sex}_{ij}) + \beta_{3j} (\text{JS}_{ij}) + r_{ij}$								
L2: $\beta_{0j} = \gamma_{00} + \gamma_{01} (\text{SH}_j) + \gamma_{02} (\text{NA}_j) + U_{0j}$								
L2: $\beta_{1j} = \gamma_{10} + U_{1j}$								
L2: $\beta_{2j} = \gamma_{20} + U_{2j}$								
L2: $\beta_{3j} = \gamma_{30} + \gamma_{31} (\text{SH}) + \gamma_{32} (\text{NA}) + U_{3j}$	5.18 <sup>a</sup>	1.13	.39	.01	-.41	.26 <sup>c</sup>	.36 <sup>a</sup>	.12
<b>Model 4: Depression</b>								
L1: $SS_{ij} = \beta_{0j} + \beta_{1j} (\text{Age}_{ij}) + \beta_{2j} (\text{Sex}_{ij}) + \beta_{3j} (\text{JS}_{ij}) + r_{ij}$								
L2: $\beta_{0j} = \gamma_{00} + \gamma_{01} (\text{SH}_j) + \gamma_{02} (\text{NA}_j) + U_{0j}$								
L2: $\beta_{1j} = \gamma_{10} + U_{1j}$								
L2: $\beta_{2j} = \gamma_{20} + U_{2j}$								
L2: $\beta_{3j} = \gamma_{30} + \gamma_{31} (\text{SH}) + \gamma_{32} (\text{NA}) + U_{3j}$	1.69 <sup>a</sup>	.70 <sup>a</sup>	-.58	-.00	.08	-.17 <sup>a</sup>	.09 <sup>b</sup>	-.06 <sup>b</sup>
<b>Model 5: Somatic complaints</b>								
L1: $SS_{ij} = \beta_{0j} + \beta_{1j} (\text{Age}_{ij}) + \beta_{2j} (\text{Sex}_{ij}) + \beta_{3j} (\text{JS}_{ij}) + r_{ij}$								
L2: $\beta_{0j} = \gamma_{00} + \gamma_{01} (\text{SH}_j) + \gamma_{02} (\text{NA}_j) + U_{0j}$								
L2: $\beta_{1j} = \gamma_{10} + U_{1j}$								
L2: $\beta_{2j} = \gamma_{20} + U_{2j}$								
L2: $\beta_{3j} = \gamma_{30} + \gamma_{31} (\text{SH}) + \gamma_{32} (\text{NA}) + U_{3j}$	1.62 <sup>a</sup>	.58 <sup>a</sup>	.11	-.00	.09	.08	.08 <sup>b</sup>	.03
<b>Model 6: Turnover intentions</b>								
L1: $SS_{ij} = \beta_{0j} + \beta_{1j} (\text{Age}_{ij}) + \beta_{2j} (\text{Sex}_{ij}) + \beta_{3j} (\text{JS}_{ij}) + r_{ij}$								
L2: $\beta_{0j} = \gamma_{00} + \gamma_{01} (\text{SH}_j) + \gamma_{02} (\text{NA}_j) + U_{0j}$								
L2: $\beta_{1j} = \gamma_{10} + U_{1j}$								
L2: $\beta_{2j} = \gamma_{20} + U_{2j}$								
L2: $\beta_{3j} = \gamma_{30} + \gamma_{31} (\text{SH}) + \gamma_{32} (\text{NA}) + U_{3j}$	3.37 <sup>a</sup>	-.92	-.08	-.02 <sup>a</sup>	.08	-.04	-.16 <sup>b</sup>	.06
<b>Model 7: Anxiety on the job</b>								
L1: $SS_{ij} = \beta_{0j} + \beta_{1j} (\text{Age}_{ij}) + \beta_{2j} (\text{Sex}_{ij}) + \beta_{3j} (\text{JS}_{ij}) + r_{ij}$								
L2: $\beta_{0j} = \gamma_{00} + \gamma_{01} (\text{SH}_j) + \gamma_{02} (\text{NA}_j) + U_{0j}$								
L2: $\beta_{1j} = \gamma_{10} + U_{1j}$								
L2: $\beta_{2j} = \gamma_{20} + U_{2j}$								
L2: $\beta_{3j} = \gamma_{30} + \gamma_{31} (\text{SH}) + \gamma_{32} (\text{NA}) + U_{3j}$	1.69 <sup>a</sup>	.25	.10	-.01 <sup>c</sup>	.04	-.09 <sup>c</sup>	.12 <sup>b</sup>	.11 <sup>b</sup>

Note: In the Level 1, job scope group mean centered. L1=Level 1; L2=Level 2; SH=Supervisor hostility; NA=Supervisor trait negative affectivity; JS=Job scope;  $\gamma_{00}$ =Slopes of Level 2 regression predicting  $\beta_{0j}$ ;  $\gamma_{01} - \gamma_{02}$ =Slopes of Level 2 regression predicting  $\beta_{0j}$ ;  $\gamma_{10}$ =Intercept of Level 2 regression predicting  $\beta_{1j}$ ;  $\gamma_{20}$ =Intercept of Level 2 regression predicting  $\beta_{2j}$ ;  $\gamma_{30}$ =Intercept of Level 2 regression predicting  $\beta_{3j}$ ;  $\gamma_{31}$ =Slope of Level 2 regression predicting  $\beta_{3j}$ ;  $\gamma_{32}$ =Slope of Level 2 regression predicting  $\beta_{3j}$ .

<sup>a</sup> $p < .01$ ; <sup>b</sup> $p < .05$ ; <sup>c</sup> $p < .10$  (two tailed).

Level 2 predictors because it helps to reduce the covariance between intercepts and slopes, thereby reducing potential problems associated with multi-collinearity (Kreft, De Leeuw, & Aiken, 1995).

Although our treatment of job scope at the individual-level of analysis is consistent with theory (Hackman & Oldham, 1980), our examination of this variable revealed that there was also meaningful between-unit variance  $F(62, 185) = 3.40$ ,  $p < .001$ ;  $ICC(1) = .41$ ;  $ICC(2) = .71$ . Hofmann & Gavin (1998) suggested that if the variable having the

moderated effect contains both individual- and unit-level variance, researchers need to separate the two components. We therefore examined whether the supervisor hostility and trait NA moderation suggested in Hypotheses 1 and 2 represented across-level or between-unit interactions (see Hofmann, Morgeson, & Gerrass, 2003, for similar analyses). These results are available from the second author.

### 3. Results

The means, standard deviations, and zero-order correlations for the study variables for all subordinates who provided complete data are presented in Table 1. Relationships and significance tests associated with these variables should be viewed with caution given the non-independence and the multilevel nature of the data.

Because we were examining cross-level effects, a necessary precondition was to assess whether there was significant within- and between-unit variance in outcome variables (Hofmann et al., 1998; Gavin & Hofmann, 2002). To meet this precondition, we assessed the magnitude of between-unit variance in all our outcome variables by estimating an HLM model with no Level 1 or Level 2 predictors. This model forces all of the within-group variance in the outcome variable into Level 1 and all of the between-group variance in the outcome variable into the Level 2 residual term (Gavin & Hofmann, 2002; Hofmann, 1997; Raudenbush & Byrk, 2002). Results indicated that variances in outcome variables resided between groups (ICC ranged from .06 to .36). The chi-square tests also indicated that the between-group variances were significant; that is, the intercept terms significantly varied across groups. Taken together, this suggests that individuals' ratings of outcome variables were to some extent due to group membership. Thus, the results supported the precondition for all outcome variables.

Hypotheses 1 and 2 predicted that job scope would moderate the relationships between supervisor hostility and supervisor trait NA, respectively and outcome variables. To investigate these hypotheses, we estimated two models. In the first model, the outcome variable was regressed on age and sex, job scope (treated as both individual-level and group-level variable), supervisor hostility and trait NA. By specifying job scope at both the individual-level (Level 1) and the unit-level (Level 2) we were able to partition the total variance of job scope into its within-group and between-group components to assess which source of variance was interacting with supervisor hostility and supervisor trait NA. More importantly, this model provided an overall assessment of the relationships between outcome variables and job scope. In addition, the model provided an assessment of the variability in the relationships between job scope and outcome variables across groups. If, for example, significant variance in the relationship across groups is present, the tests of Hypotheses 1 and 2 are the extent to which supervisor hostility and supervisor trait NA account for this variability (Hofmann et al., 2000).

The results of these preliminary analyses are summarized in Table 2. The results suggested significant within-group relationships between job scope and overall job satisfaction ( $\gamma_{30} = .45, p < .001$ ), job scope and organizational commitment ( $\gamma_{30} = .38, p < .01$ ), job scope and workload satisfaction ( $\gamma_{30} = .41, p < .01$ ), job scope and depression ( $\gamma_{30} = -.15, p < .01$ ), job scope and somatic complaints ( $\gamma_{30} = -.08, p < .05$ ), job scope and turnover intentions ( $\gamma_{30} = -.45, p < .01$ ), and job scope and anxiety on the job ( $\gamma_{30} = -.08, p < .05$ ). Regarding the main effects of supervisor hostility and supervisor trait NA, support was received only for supervisor trait NA and depression ( $\gamma_{03} = -.08, p < .05$ ).

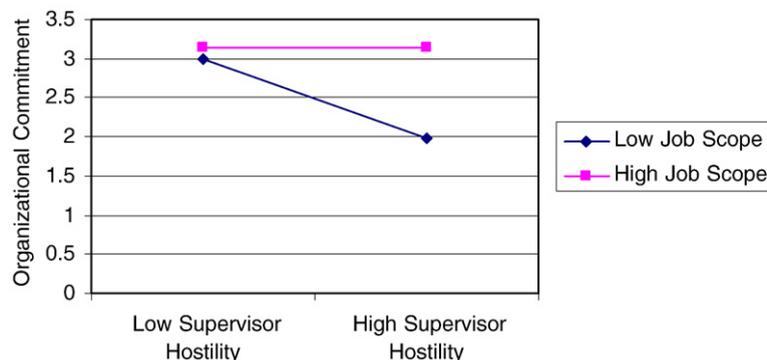


Fig. 1. Moderating effect of job scope on the relationship between supervisor hostility and organizational commitment.

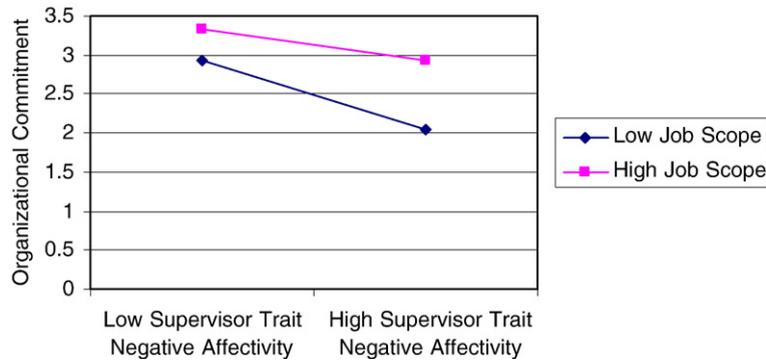


Fig. 2. Moderating effect of job scope on the relationship between supervisor trait negative affectivity and organizational commitment.

Table 3 presents a summary of the cross-level interactions (i.e., interaction of unit-level supervisor hostility and supervisor trait NA with the individual-level job scope).<sup>1</sup> In HLM, interactions are tested by estimating the relationship between a Level 2 variable (leader traits in this case) and the slope of a Level 1 variable. The coefficients representing these effects are denoted  $\gamma_{31}$  and  $\gamma_{32}$  in Table 3. When these coefficients are significant, it means that a leader trait moderates the relationship between job scope and the outcome variable. Each outcome variable was analyzed in a separate model and the results are displayed in Table 3. Altogether, these results provided mixed support for Hypotheses 1 and 2, as the predicted interaction was observed for some hypothesized outcomes but not others. The predicted effects were significant for ten of the 14 interactions tested. The significant interaction effects included (1) supervisor hostility ( $\gamma_{31} = .48, p < .01$ ) on overall job satisfaction, (2 and 3) supervisor hostility ( $\gamma_{31} = .27, p < .05$ ) and supervisor trait NA ( $\gamma_{32} = .23, p < .05$ ) on organizational commitment, (4) supervisor hostility ( $\gamma_{31} = .36, p < .01$ ) on workload satisfaction, (5 and 6) supervisor hostility ( $\gamma_{31} = .09, p < .05$ ) and supervisor trait NA ( $\gamma_{32} = -.06, p < .05$ ) on depression, (7) supervisor hostility ( $\gamma_{31} = .08, p < .05$ ) on somatic complaints, (8) supervisor hostility ( $\gamma_{31} = -.16, p < .05$ ) on turnover intentions, (9 and 10) supervisor hostility ( $\gamma_{31} = .12, p < .05$ ), and supervisor trait NA ( $\gamma_{32} = .11, p < .05$ ) on anxiety on the job.

To further explore the nature and form of the interactions, we plotted the significant ones following the guidelines of Aiken & West (1991). These cross-level interactions represent how between-unit relationships between leader traits and outcome variables differ as a function of job scope within units. The plotted interactions were consistent with the relationships specified in the hypotheses. Figs. 1 and 2 show examples of the supervisor hostility  $\times$  job scope and supervisor trait NA  $\times$  job scope interactions.

#### 4. Discussion

Much previous leadership research has focused on the traits that are plausibly associated with effective leader behavior, charisma, or unit performance, and they have ignored traits that plausibly create strain for other people. This study explored the effects of two such characteristics, hostility and trait negative affectivity. To the extent that subordinates reported less enriched jobs, there was a stronger relationship between their leaders' hostility and/or trait NA and subordinates' anxiety, somatic complaints, depression, dissatisfaction, organizational commitment, and turnover intentions. The main differences were associated with the intercepts of the averaged (across units) within-unit slopes, such that subordinates reporting low job scope who also had a boss with high hostility or high NA reported less well being and organizational attachment than those with high job scope. Experiencing high job scope thus appeared to

<sup>1</sup> Note that in our hypotheses we specified that job scope will moderate the effects of supervisor hostility and supervisor trait negative affectivity on outcomes variables. However, in conducting our HLM analyses, we treated supervisor hostility and supervisor trait negative affectivity as moderators because HLM cannot test the effect of a variable at a one level (e.g., individual) on the slope of an effect observed at a higher level (e.g., unit; see Hofmann & Gavin, 1998 for a discussion of testing cross-level interactions). This reordering in HLM, however, does not change the hypotheses being tested. All moderated relationships are simply an interaction, and this interaction can occur between two Level 1 predictors, two Level 2 predictors, or between a Level 1 and a Level 2 predictor.

neutralize the potential effect of having a leader with these undesirable traits. Put another way, supervisors characterized by these destructive traits have a negative influence on the well being and attachment of subordinates who report low job scope, but not subordinates who report high job scope.

Much research in the past 75 years has focused on the positive or neutral traits of leaders (Zaccaro et al., 2004). Leaders are in a unique position to engage in destructive behavior, and their personality traits are useful for identifying a propensity to engage not only in conventionally poor supervisory behavior, as may be manifested by lower subordinate reports of their consideration behavior, but also a broader and deeper range of destructive actions. Baron's (1989) research on the conflict behavior of Type A's, who are known to have higher hostility, indicated that the greatest conflict effects engendered by this trait occurred between supervisors and subordinates. He speculated that this may be due to the lower behavioral constraints on supervisors as compared to less powerful organizational members. An in-basket experiment conducted by Mumford, Gessner, Connelly, O'Connor, & Clifton (1993) supported this view that when they are in authority positions, people are more comfortable taking action that is harmful to others. They found that in the role of manager, participants were willing to order harmful and destructive actions when they expected support from higher authorities. Bosses' relationships with their subordinates can be characterized as "weaker" situations, meaning situations that are not subject to potent situational reinforcement (Mischel, 1977). Within legitimate boundaries, supervisors are expected to impose their will on subordinates. This is rarely the case with upward or lateral relationships. For these reasons, supervisors' negative emotionality may become a pervasive and chronic influence on their behavior toward subordinates. Thus, subordinates who have more interaction with trait hostile or high NA supervisors, as we postulate is the case among subordinates with lower job scope, are more frequently confronted with negative emotionality. Because the source of the negative emotionality and behavior is their legitimate boss, they rarely can simply ignore the behavior or cope with it by problem-focused means.

#### 4.1. Implications

Looking only at the main effects of supervisor hostility and supervisor trait NA on subordinate outcomes, one might question whether these are potentially destructive traits. These main effects were not strong. But the main effects do not reveal the substantially higher levels of adverse outcomes, and lower levels of favorable outcomes, among individuals who had hostile and/or high NA supervisors and who perceived that their jobs were relatively unenriched. Such individuals likely experienced a dissatisfying work context derived from their supervisors' behavioral style, and we conjecture that unlike those who reported more enriched jobs, having a less enriched job brought them into closer contact with their bosses and their potentially destructive traits.

One approach to addressing this issue is to identify leaders who frequently exhibit intense hostility and/or other negative emotions and encourage them to receive therapy that will help them develop more adaptive approaches to stressful situations. We are not convinced that meaningful change of this nature can occur within a short time, however, so we would encourage more long-term and focused therapy provided by licensed professionals. Friedman (1992) noted that therapeutic interventions can reduce trait hostility and thereby reduce the risk for cardiovascular disease. Such therapy is in the interest of the leader her/himself as well as to the organization and people in its employ. Hostile employees have been linked to higher insurance claims for their own illnesses (Dwyer & Fox, 2000), and the linkage between hostility and cardiovascular ill health is well established (Richards et al., 2000; Sirois & Burg, 2003). Another approach would be to use a job design perspective. Subordinates benefit psychologically from having more enriched jobs. To better ensure employee well being and retention, organizations should seek to instill more purpose, initiative, and meaning into job designs for incumbents who believe their work lacks these characteristics.

Subordinates' dysfunctional responses to high hostility or high trait NA supervisors may also tend to create a spiral of hurtful interactions that accentuate the effects of subtle differences in leader traits. Tepper et al. (2001) found that some subordinates (especially those scoring higher in agreeableness and conscientiousness) exhibited less dysfunctional behavior in response to abusive supervisors than did their less agreeable and conscientious counterparts. This suggests that subordinates often play a catalyzing role in enacting hurtful interactions with the supervisor. Our analyses did not find evidence of such dyadic variation in the effects of supervisor hostility or trait NA within supervisory units. However, such effects may be observed for other dependent variables that we did not investigate, such as the subordinate's identification with or perceived similarity to the supervisor, or conflict with the supervisor. Subordinates should be cognizant of their complicity in creating a toxic work environment and strive hard to respond constructively to difficult interpersonal situations.

Trait negative affectivity is a predisposition toward negative, distressing emotions. Positive and enthusiastic leaders are more likely to have units that are similarly disposed (see [George & Brief, 1992](#)). Our finding that high trait NA leaders had subordinates with lower job and organization attitudes and more psychological and physical complaints aligns with George and Brief's theorizing (see also [Sy, Cote, & Saavedra, 2005](#)). Inasmuch as trait NA is also believed to be associated with excessive arousal and aversive mood states that diminish clarity of thought, it is possible too that high trait NA supervisors have a less developed repertoire for dealing with work exceptions and/or they have difficulty choosing the correct response from their existing repertoire. As with hostility, the present trait NA findings show much promise for explaining variance in leader behavior and important leadership outcomes.

Our study suggests possible mechanisms through which toxic leaders could negatively affect the workplace and, ultimately, unit-level performance. Therefore management selection should not only assess positive traits (e.g., conscientiousness) but also toxic traits such as hostility and NA when selecting individuals for supervisory positions. This may help limit the interpersonal strains that can increase health care costs (e.g., somatic complaints and anxiety) and/or lower employee productivity (e.g., low satisfaction and commitment as well as turnover intentions). Because these effects should reduce unit-level performance, selecting less toxic supervisors may have pervasive benefits.

#### *4.2. Limitations*

Our analyses separated the unit-level variable of leader traits from individual-level job scope and outcomes using HLM. This cross-level approach should yield more reliable assessments of the outcomes of the leader traits than analyses conducted solely at the unit-or individual-level of analysis. Given the cross-sectional, non-experimental nature of the design, however, there are various alternative explanations for the findings. These include ambiguity in the causal order and self-selection of subordinates into more or less enriched jobs based on their style of working relations with authority figures. Regarding the causal order, [Wong, Hui, & Law \(1998\)](#) found that over time, job scope and satisfaction have a reciprocal relationship, such that the perceived job characteristics influence satisfaction as well as vice versa. Although the cross-sectional nature of our design precludes testing of causal order, one interpretation of the findings relates to what people infer about their jobs based on the way they feel at work. Supervisors with high hostility and/or high trait NA may not form meaningful exchange or social relationships with their subordinates. Thus, when subordinates of such supervisors who have positive attitudes and feelings reflect on their jobs, as they do when completing a questionnaire, it is possible that they attribute less of this good feeling to the work context variables and more to the job itself. Likewise, subordinates with supervisors having positive traits could attribute positive feelings to the work context and less to characteristics of the work itself.

Although the interaction findings are consistent with a large literature about the interaction between leadership and job scope (e.g., [Johns, 1978](#)), our interpretation of the interaction findings is not conclusive because we do not know what actions or inactions characterized the supervisors across the continua of hostility and trait NA. These traits may affect conventionally studied leader behaviors, such that a leader who exhibits much negative emotionality may be perceived as more inconsiderate or excessively controlling. However, we believe there is a very broad range of behaviors through which these traits may become destructive to subordinates. For example, the supervisor's hostility or trait NA may also be manifest in his or her tolerance of insensitivity or incivility of others, and this may go unnoticed by observers. Therefore we chose to leave the specification and measurement of fine-grained mediation of these effects to future studies. Future research should incorporate subordinates' personal perceptions of a wide potential range of supervisor behaviors to more fully explain why supervisors characterized by these destructive traits have a negative influence on subordinates with low job scope. In addition, this study did not measure and assess the theoretical role of exposure to the supervisor. We argued that persons with more enriched jobs have more functional distance from their supervisors. This can be more directly tested in future research.

#### *4.3. Conclusions*

In this study we examined the interaction between job scope and two traits that have been widely studied as predictors of mental and physical health. We found that among individuals who reported having more enriched jobs, supervisor traits of expressive hostility and generally negative emotionality were more strongly associated with symptoms of psychological strain, dissatisfaction, and a desire to leave the organization. Research that further examines how these traits might lead to leadership behaviors in different kinds of settings is needed. Finally, given the

increased attention to employee claims of stress-related disability, further investigation of the effects that leaders characterized by these traits have on other organizational members should be a high priority.

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