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Counterproductive Work Behavior (CWB) in Response to Job Stressors and Organizational Justice: Some Mediator and Moderator Tests for Autonomy and Emotions

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Relations among job stressors, perceived justice, negative emotional reactions to work, counterproductive work behavior (CWB), autonomy, and affective traits were investigated. Participants representing a wide variety of jobs across many organizations were surveyed both inside and outside a university setting. Results were consistent with a theoretical job stress framework in which organizational constraints, interpersonal conflict, and perceived injustice are job stressors, CWB is a behavioral strain response, and negative emotion mediates the stressor–strain relationship. Only very weak support was found for the moderating role of affective disposition (trait anger and trait anxiety), and no support was found for the expected moderating role of autonomy in the stressor–CWB relationship.

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Recent years have seen an explosion of interest among organizational researchers in counterproductive work behaviors (CWB), such as aggression, interpersonal conflict, sabotage, and theft. Although most of this work has been directed toward validating integrity tests with the objective of devising ways to identify counterproductive employees so that companies can avoid hiring them, two streams of research have focused on ascertaining the causes of these behaviors. Spector and colleagues (Chen & Spector, 1992; Fox & Spector, 1999; Spector 1975, 1978; Storms & Spector, 1987) have portrayed CWB as an emotion-based response to stressful organizational conditions. Greenberg and colleagues (e.g., Greenberg, 1990) and Skarlicki, Folger and colleagues (Skarlicki & Folger, 1997; Skarlicki,

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Folger, & Tesluk, 1999) have taken an organizational justice perspective, viewing CWB as a cognition-based response to experienced injustice. These two perspectives are not incompatible, and in fact Spector (1978) noted links with the equity (justice) concept, and Greenberg (1990) noted links with frustration theory. The current study integrates both perspectives, assessing relations among job stressors, perceptions of injustice, and CWB within the framework of job stress theory. It is further proposed that, consistent with this theoretical framework, emotional reactions to job stressors and injustice perceptions, affective disposition, and perceived control over work are key links in these relations.

The Nature of Counterproductive Work Behavior (CWB)

CWB is behavior that is intended to have a detrimental effect on organizations and their members. It can include overt acts such as aggression and theft or more passive acts, such as purposely failing to follow instructions or doing work incorrectly. CWB has been conceptualized in a number of ways, including organizational aggression (Neuman & Baron, 1998; Fox & Spector, 1999), antisocial behavior (Giacalone & Greenberg, 1997), delinquency (Hogan & Hogan, 1989), deviance (Hollinger, 1986; Robinson & Bennett, 1995), retaliation (Skarlicki & Folger, 1997), revenge (Bies, Tripp, & Kramer, 1997), and mobbing/bullying (Knorz & Zapf, 1996). The common theme is that these behaviors are harmful to the organization by directly affecting its functioning or property, or by hurting employees in a way that will reduce their effectiveness. A number of researchers (Fox & Spector, 1999; Robinson & Bennett, 1995) have found evidence that perceptions of CWBs and/or relations of CWBs to individual and organizational variables allow us to distinguish two categories of behaviors: those targeting the organization and those targeting other persons in the organization.

A Job Stress/Emotion/CWB Model

Integrating both the CWB and job stress literatures, Spector (1998) and Spector and Fox (in press) developed a job stress/emotion/CWB model that suggests these behaviors are responses to job stressors at work. According to this view, people monitor and appraise events in the environment (Lazarus, 1991), and certain events that are seen as threats to well-being are job stressors that induce negative emotional reactions, such as anger or anxiety (Spector, 1998). Common examples of job stressors are role conflict and ambiguity (Kahn et al., 1964), interpersonal conflict (Spector, Dwyer, & Jex, 1998), and situational constraints (Peters & O'Connor, 1990). Strain is an outcome of the job stress process that can be psychological (e.g., job dissatisfaction or turnover intention), physical (e.g., somatic symptoms such as headache, physiological changes such as increased blood pressure, and long-term pathology), or behavioral (e.g., smoking or withdrawal from work). CWB is a manifestation of behavioral strain.

Emotions play a central role in the job stress process. Because emotions represent the immediate response to situations that are perceived as stressful (Lazarus, 1991; Lovallo, 1997; Payne, 1999), and because they energize and motivate subsequent

behavior and physiological change (Cartwright & Cooper, 1997; Spector, 1998), we can define their role as a mediator between job stressors and strains, therefore serving a mediator role for CWB. In fact, Fox and Spector (1999) found evidence of this mediating role for emotions in the relation between organizational constraints (a stressor) and CWB. The Spector and Fox (in press) model suggests a flow from environment to perception, to negative emotion, to CWB, but there are several mitigating factors. Individuals vary in their propensity to appraise situations as stressful both among one another and across time, so perceptions of control and personality are two important factors to consider.

Much has been written concerning the importance of control as both an additive and moderator factor in the job stress process (e.g., Frankenhaeuser & Johannson, 1986; Karasek, 1979; Spector, 1986; Thompson, 1981). The core common to this literature is that it is not the objective events or stimuli in the environment that cause adverse outcomes (strains), but rather the perceptions of the individual of not having the control (which Karasek further specifies to include decision latitude and task autonomy) to cope with these threats or demands. In the CWB arena, Allen and Greenberger (1980) suggested that perceptions of control are an important determinant of counterproductive work behavior, as nonconstructive behavioral responses are more likely when a person perceives low control of the situation. Support for this idea in the work context was provided by Storms and Spector (1987). Yet, it is not control in general that is important, but rather control over the job stressor itself. Having control over specific tasks (i.e., task autonomy) may be helpful in reducing the stressfulness of task-related stressors such as workload, but it will not affect the stressfulness of unrelated stressors such as interpersonal conflict.

Personality traits are also relevant factors in CWB, and an entire integrity test industry has grown around the idea that personality tests can predict these behaviors (Ones, Viswesvaran, & Schmidt, 1993). Affective dispositions, the tendency to experience similar emotions across situations, seem particularly relevant. Negative affectivity (NA), a generalized dispositional tendency for an individual to experience negative emotions across time and situations, has been studied widely in relation to perceptions of job stressors, injustice, constraints, and strains (Chen & Spector, 1991; Skarlicki, Folger, & Tesluk, 1999; Spector & O'Connell, 1994). Trait anxiety (Spielberger & Sydeman, 1994), the relatively stable tendency to perceive stressful situations as threatening, has been used frequently in stress research in place of NA (Ganster & Schoebroeck, 1991). Fox and Spector (1999) found trait anxiety to be associated with CWB.

Another potentially important personality characteristic is trait anger, the likelihood that individuals perceive a wide range of situations as anger-provoking (Spielberger, Krasner, & Solomon, 1988). Individuals high in trait anger have reported experiencing more frequent and intense day-to-day anger across a wide variety of provocative situations, stronger tendencies to respond to provocations with physical and verbal antagonism, and lower instances of constructive coping (Deffenbacher, 1992). Fox and Spector (1999) found trait anger to be particularly associated with CWBs targeting persons in the organization.

Organizational Justice as a Stressor

Organizational justice is concerned with employee perceptions of fair or just treatment on the job. It fits definitions of job stressors as being situations that elicit an adaptive response (Jex & Beehr, 1991) or situations that elicit negative emotional reactions (Spector, 1998). For example, the seminal equity theory and empirical work by Adams (1963) suggests that inequity (injustice) motivates people to make adaptive responses in a variety of ways, both cognitive and behavioral. More recent work on justice has linked perceptions of injustice to negative emotions (e.g., Skarlicki & Folger, 1997). Zohar (1995) specifically demonstrated the role of organizational justice in the job stress process as a role stressor, in the elicitation of both negative emotion and consequent strain responses, but did not link stress to counterproductive behavior.

Two major forms of justice have been studied. Distributive justice relates to people's perceptions of the fairness of the outcomes they receive relative to their contributions and to the outcomes and contributions of others. Procedural justice involves people's perceptions of the fairness of procedures used to determine those distributions (Folger & Greenberg, 1985; Levanthal, Karusa, & Fry, 1980). Several studies have linked both forms of justice perceptions with counterproductive organizational behaviors. Skarlicki and Folger (1997) summarized research that indicates employees may respond to perceptions of unfair treatment with negative emotions, such as anger, outrage, and resentment (Folger, 1993); desire for retribution; and a range of direct and indirect behavioral responses such as theft (Greenberg, 1990), vandalism, sabotage, reduction of citizenship behaviors, withdrawal, and resistance (Jermier, Knights, & Nord, 1994). Skarlicki, Folger, and Tesluk (1999) further demonstrated that the relation between perceived injustice and what they call organizational retaliatory behavior (ORB) is moderated by personality factors such as negative affectivity and agreeableness. Cropanzano and Baron (1991) linked injustice to emotions and workplace conflict.

Indeed, many parallels have emerged between the job stress and organizational justice explanations of counterproductive organizational behavior, including the central roles of emotional responses and affective dispositions. By viewing perceived injustice as a type of job stressor, we arrive at a unifying framework for understanding CWB that incorporates constraints, conflict, justice perceptions, control (autonomy), emotional responses, and affective dispositions as antecedents of distinct categories of behavioral responses.

The Current Study

The purpose of the current study was to explore this unified job stress/injustice/emotions approach to counterproductive work behavior. Our primary objective was to investigate whether job stressors and organizational justice relate in a similar fashion to CWB. The job stressor/emotion/CWB model posits a mediating role for emotions. Thus we set out to investigate the extent to which relations of job stressors (interpersonal conflict and organizational constraints) and organizational justice with CWB are mediated by negative emotions. We also looked at the

possibility suggested by the job stress literature that employee control (autonomy) and affective dispositions moderate the relations between job stressors/organizational justice and CWB. Throughout, we looked for distinct patterns of relations with CWB behaviors targeting the organization versus people. Specifically, we hypothesized the following:

Hypothesis 1: High levels of conflict and organizational constraints and low levels of perceived justice are associated with high levels of negative emotions and CWB.

Hypothesis 2: High levels of negative emotions are associated with high levels of CWB.

Hypothesis 3: Negative emotions mediate the relation between stressors/injustice and CWB.

Hypothesis 4: Perceived task autonomy, trait anxiety, and trait anger moderate the relations between job stressors/injustice and CWB. Those individuals perceiving low autonomy and those individuals who are high in these affective traits are more likely to respond to job stressors/injustice with CWB.

METHOD

Participants

Participants were 292 employees at a variety of organizations in southern and central Florida. Of these, 214 (73%) were University of South Florida psychology and management students who also were employed, and 78 (27%) were nonstudent employees from manufacturing, financial, utility, entertainment, and academic organizations in Tampa. The nonstudent employees were given the questionnaire booklets on a strictly voluntary basis by their supervisors. The supervisors who distributed the surveys were part-time graduate students in a Human Resource Management class designed for practicing managers. Participants returned the surveys directly to the researchers by U.S. mail or in sealed envelopes in sealed containers at work. Of the 292 participants, 109 (37%) were men and 183 (63%) were women.

Measures

The anonymous self-report survey included measures of job stressors (autonomy, constraints, conflict, and justice), affect (positive emotions, negative emotions, trait anger, and trait anxiety), and counterproductive work behaviors (CWB). These measures were ordered following the model from left to right, that is, stressors, affective responses, and behavioral responses.

Job stressors. Work constraints were measured by the Organizational Constraints Scale (OCS; Spector & Jex, 1998), an 11-item scale based on constraint areas identified by Peters and O'Connor (1980). Respondents indicated the frequency with which their job performance was hindered by constraints such as rules and procedures, availability of resources, co-workers, interruptions, and inadequate training. Spector and Jex (1998) reported a mean Cronbach's α of .85 across eight samples. Predictive validity was demonstrated with mean correlations of .26 with physical symptoms across five studies and $-.38$ with job satisfaction across seven studies.

Conflict was assessed with Spector and Jex's (1998) four-item Interpersonal Conflict at Work Scale (ICAWS), which measures how often the employee experienced arguments, yelling, and rudeness in interactions with co-workers. For the conflict scale (ICAWS), Spector and Jex (1998) reported a mean Cronbach's α of .74 across 13 samples. Predictive validity was demonstrated with mean correlations of .26 with physical symptoms across 7 studies and $-.32$ with job satisfaction across 10 studies. For both the OCS and ICAWS measures, five response choices range from 1 = *Less than once per month or never* to 5 = *Several times per day*. High scores represent high levels of constraints or conflict.

Work autonomy was measured with the Factual Autonomy Scale (FAS; Fox, Spector, & Van Katwyk, 1997), which was developed with the objective of providing items that are factual in nature and resistant to affective bias. Six items begin with "Do you have to ask permission to . . ." and end with an aspect of scheduling, such as "take a rest break" or "change the hours you work." Three items begin with "Does someone tell you . . ." and end with "what," "when," or "how" the person was to work. The five response choices range from 1 = *never* to 5 = *always*. Fox et al. found a Cronbach's α of .81; they found the self-reported FAS to correlate significantly ($r = .22$) with supervisory ratings of job performance (which the more commonly used autonomy subscale of the Job Diagnostic Survey failed to do).

Perceptions of organizational justice were assessed with distributive and procedural justice scales reported in Moorman (1991). The Distributive Justice Index, consisting of 6 items tapping the extent to which the employee is fairly rewarded considering work inputs, was developed by Price and Mueller (1986). Five response choices range from 1 = *very unfairly* to 5 = *very fairly*, with a high score representing a high level of distributive justice. The 12-item procedural justice scale, which Moorman (1991) based on Levanthal's (1980) rules of procedural justice, was designed initially to assess two factors, fairness of formal procedures and interactional justice. The present data confirm Moorman's (personal e-mail correspondence, February 3, 1999) findings that these factors are highly intercorrelated and lack an interpretable factor structure. Therefore we combined the 12 items into a single Procedural Justice scale (as did Moorman et al., 1998). Response choices range from 1 = *strongly disagree* to 5 = *strongly agree*, with high scores representing high levels of procedural justice. Moorman (1991) found Cronbach's αs of .94, .94, and .93 for the distributive, procedural, and interactive justice scales. He reported that distributive justice predicted the altruism, courtesy, sportsmanship, and conscintiousness components of organizational citizenship behavior ($r = .15$, .18, .22, and .23, respectively); procedural justice predicted courtesy, sportsmanship, and conscientiousness ($r = .17$, .16, and .22, respectively); and interactive justice predicted altruism, courtesy, sportsmanship, and conscientiousness ($r = .16$, .32, .29, and .32, respectively).

Affect. A wide range of emotions experienced in response to the job was measured with the Job-Related Affective Well-Being Scale (JAWS), developed by Van Katwyk, Fox, Spector, and Kelloway (2000). Items on the JAWS ask employees to indicate how often any part of the job has made them feel each of 30 emotional

states. The five response choices range from 1 = *almost never* to 5 = *extremely often or always*. High scores represent high levels of each emotion. A positive emotions score was obtained by summing the scores on the 13 positive affect items; a negative emotions score was obtained by summing scores on the 17 negative affect items. Only the negative emotions score was used in the current study. Van Katwyk et al. (2000) reported a Cronbach's α of .95 for the overall JAWS scale; this score was related to organizational constraints ($r = -.39$), conflict ($r = -.34$), turnover intentions ($r = -.60$), and physical symptoms ($r = -.33$). Negative item subscales (Cronbach's $\alpha = .80$) predicted these variables as well, with *r*'s ranging from .34 to .58.

Spielberger's (1979) State-Trait Personality Inventory was used to measure affective disposition. The 10-item Trait Anxiety scale measures a generalized tendency to experience anxiety across time and situations. The 10-item Trait Anger scale assesses the likelihood of perceiving a wide range of situations as anger-provoking. Four response choices range from 1 = *almost never* to 4 = *almost always*, with high scores representing high levels of trait anxiety or trait anger. Spielberger (1979) reported α coefficients ranging from .80 to .92 for Trait Anxiety and .82 to .92 for Trait Anger across different ages and genders. In a prior study, Fox and Spector (1999) found trait anxiety and trait anger to be among the strongest predictors of counterproductive work behavior ($r = .36$ and .59, respectively).

Counterproductive work behavior (CWB). Counterproductive work behaviors were assessed with a behavioral checklist based on a master list compiled from a number of existing measures (Fox & Spector, 1999; Hollinger, 1986; Knorz & Zapf, 1996; Neuman & Baron, 1998; Robinson & Bennett, 1995, Skarlicki & Folger, 1997; Spector, 1975). Our goal was to avoid duplication while including as many distinct behaviors as possible. We put the resulting 64-item list into a scale format, asking participants to indicate how often they had done each of the behaviors on their present job. The five response choices range from 1 = *never* to 5 = *every day*, with high scores representing high incidence of counterproductive behaviors. In addition to an overall counterproductive behavior score, subscores were provided for behaviors targeting the organization or productivity (e.g., "Tried to look busy while doing nothing," "Put in to be paid for more hours than you worked," "Came to work late without permission," and "Told people outside the job what a lousy place you work for") and those targeting other persons in the organization (e.g., "Insulted someone about their job performance," "Made fun of someone's personal life," "Refused to help a coworker," and "Started an argument with a coworker"). This classification was consistent with Robinson and Bennett's (1995) taxonomy of organizational deviance and Fox and Spector's (1999) earlier measures of personal and organizational CWB. Fox and Spector (1999) reported a Cronbach's α of .86 for their earlier version of the CWB measure. Organizational CWB was related to constraints, locus of control, job satisfaction and frustration ($r = .37, .32, -.45$, and .36, respectively), and Personal CWB was related to constraints, locus of control, and frustration ($r = .26, .19$, and .23, respectively).

RESULTS

To determine if we were justified in combining the student and nonstudent samples, zero-order correlations were run separately for the two samples. The *z* tests comparing the resulting correlations for the two samples found differences in only 3 of the 55 correlations among the study variables, perhaps the level expected by chance. Differences were found for trait anger and procedural justice, CWB targeting the organization and procedural justice, and constraints and positive emotion. In all three cases, the relations were stronger for the nonstudent samples. The overall consistency between the results for the two samples was perhaps due to the nature of the University of South Florida, a primarily commuter university with an unusually high proportion of nontraditionally aged, employed students. Therefore for this study, the student and nonstudent samples were combined for further analysis.

Means, standard deviations, Cronbach's alphas, and zero-order correlations for all study variables are presented in Table 1.

To test Hypothesis 1, we looked at the relations between the four job stressor variables (conflict, constraints, distributive justice, and procedural justice) and negative emotion and between the four stressor variables and the two categories of CWB. Conflict was related significantly to negative emotion ($r = .49$), organizational CWB ($r = .32$), and personal CWB ($r = .40$). Organizational constraints were related significantly to negative emotion ($r = .47$), organizational CWB ($r = .32$), and personal CWB ($r = .25$). Distributive justice was related significantly to negative emotion ($r = -.38$) and organizational CWB ($r = -.17$) but not personal CWB. Procedural justice was related significantly to negative emotion ($r = -.44$), organizational CWB ($r = -.26$), and personal CWB ($r = -.15$). To rule out the possibility that these results capitalize on chance effects, we adjusted the alpha for the number of significance tests. Based on a corrected α of .004, all the above relations remained significant with the exception of that between procedural justice and personal CWB (paralleling the nonsignificance of distributive justice to personal CWB).

To test Hypothesis 2, we looked at correlations between negative emotion and the two categories of CWB (organizational and personal). Both were significant ($r = .45$ and .30, respectively).

Hypothesis 3 predicted that negative emotion mediates the relations between job stressors and CWB. In each case mediation was tested following the procedure recommended by Baron and Kenny (1986) in which three regression models are investigated: the CWB on the stressor, the proposed mediator (negative emotion) on the stressor, and the CWB on the stressor and negative emotion together. If the beta of the stressor variable is significant in the first model but nonsignificant or substantially reduced in the combined model, we have a pattern consistent with mediation. Results of this analysis are presented in Table 2. Except for the nonsignificant personal CWB–distributive justice relation (for which a mediation test is meaningless because it fails Kenny's first test of a significant predictor–criterion relation), mediation of negative emotion in all CWB–justice relations was indicated, as the beta of the stressor became nonsignificant when emotion was

TABLE 1
Means, Standard Deviations, Reliabilities, and Correlations

Variable	Mean	*SD*	1	2	3	4	5	6	7	8	9	10	11
1. Conflict	6.0	2.8	(.76)										
2. Constraints	22.0	7.4	.34	(.84)									
3. Distributive Justice	19.7	6.3	−.23	−.42	(.93)								
4. Procedural Justice	56.7	15.9	−.35	−.40	.54	(.96)							
5. Positive Emotion	36.7	11.8	−.20	−.31	.51	.50	(.95)						
6. Negative Emotion	38.1	11.9	.49	.47	−.38	−.44	−.43	(.91)					
7. Trait Anxiety	17.3	5.3	.30	.21	−.14	−.28	−.26	.50	(.87)				
8. Trait Anger	17.9	5.7	.29	.34	−.13	−.18	−.18	.41	.43	(.87)			
9. Autonomy	28.8	8.5	−.20	−.22	.18	.21	.23	−.24	−.19	−.08	(.87)		
10. CWB Organization	32.2	7.6	.32	.32	−.17	−.26	−.16	.45	.28	.35	−.25	(.88)	
11. CWB Person	49.6	11.2	.40	.25	−.09	−.15	−.02	.30	.25	.37	−.05	.63	(.96)

Note. $N = 292$; Coefficient alphas are shown in parentheses on the diagonal. Correlations above |.13| are significant at the $p < .05$ level. Correlations above |.15| are significant at the $p < .01$ level. Correlations above |.19| are significant at the $p < .001$ level.

TABLE 2
Analysis of Mediating Role of Negative Emotion

	Organizational CWB		Personal CWB	
Independent variables	Step 1	Step 2	Step 1	Step 2
Constraints	.32***	.14*	.25***	.14*
negative emotion		.39***		.23***
R^2 at each step	.10***	.22***	.06***	.10***
R^2 △		.12		.04
F		40.5***		16.5***
Conflict	.32***	.13*	.40***	.33***
negative emotion		.39***		.13*
R^2 at each step	.11***	.22***	.16***	.17***
R^2 △		.11		.01
F		40.3***		29.81***
Procedural justice	−.26***	−.08 *ns*	−.15*	−.03 *ns*
negative emotion		.42***		.29***
R^2 at each step	.07***	.21***	.02*	.09***
R^2 △		.14		.07
F		38.44***		14.11***
Distributive justice	−.17**	−.01 *ns*	−.09 *ns*	.02 *ns*
negative emotion		.46***		.31***
R^2 at each step	.03**	.20***	.01 *ns*	.09***
R^2 △		.17		.08
F		37.17***		14.09***

Note. Standardized parameter estimates are shown. The Distributive Justice–Personal CWB mediation test is not meaningful, as the original relationship is nonsignificant. In all cases, the beta of negative emotion regressed on the stressor variable (constraints, conflict, procedural justice, and distributive justice) was significant at the $p < .0001$ level.

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

added to the regression model. A similar pattern of reduced but still significant stressor betas is shown for each of the remaining four CWB–stressor relations. Thus, a pattern emerged in all seven significant stressor/CWB relations, suggesting a mediating role of negative emotion.

Hypothesis 4 predicted that perceived control over work tasks (autonomy), trait anxiety, and trait anger moderate the relations between stressors (constraints, conflict, and justice) and CWB (personal and organizational). Tables 3, 4, and 5 present results of moderated regression analyses. Alphas for these hypothesis tests were corrected for multiple tests to $p < .01$.

Contrary to expectations, the only significant autonomy–stressor interaction was for personal CWB. Even more puzzling, the direction of the moderating effect of autonomy was contrary to prediction, in that a higher level of interpersonal conflict is associated with personal CWB when autonomy is high. In contrast, a significant and expected trait anxiety–stressor interaction was found for personal CWB. Trait

TABLE 3
Results of Moderated Regression Analysis for Autonomy as Moderator

		CWB organizational		CWB personal	
Step	Independent variable	Total R^2	▲R^2	Total R^2	▲R^2
1	Org. Constraints	.10***	.10***	.06***	.06***
2	Autonomy	.14	.03***	.06	.06
3	Org. Con. × Autonomy	.14	.00	.07	.01
1	Conflict	.11***	.11***	.16***	
2	Autonomy	.14	.03***	.16	.00
3	Conflict × Autonomy	.14	.00	.18	.02**
1	Procedural Justice	.07***	.07***	.02*	.02*
2	Autonomy	.11	.04***	.02	.00
3	P. Just. × Autonomy	.11	.00	.03	.01
1	Distributive justice	.03**	.03**	.01	.01
2	Autonomy	.08	.05***	.01	.00
3	D. Just. × Autonomy	.08	.00	.03	.02*

Note. $N = 292$.
* $p < .05$.
** $p < .01$.
*** $p < .001$.

TABLE 4
Results of Moderated Regression Analysis for Trait Anxiety as Moderator

		CWB organizational		CWB personal	
Step	Independent variable	Total R^2	▲R^2	Total R^2	▲R^2
1	Org. Constraints	.10***	.10***	.06***	.06***
2	Trait Anxiety	.15	.05***	.10	.04***
3	Org. Con. × T. Anxiety	.15	.00	.13	.03**
1	Conflict	.11***	.11***	.16***	.16***
2	Trait Anxiety	.15	.04***	.18	.02*
3	Conflict × T. Anxiety	.15	.00	.19	.01*
1	Procedural Justice	.07***	.07***	.02*	.02*
2	Trait Anxiety	.12	.05***	.07	.05***
3	P. Just. × T. Anxiety	.12	.00	.07	.00
1	Distributive justice	.03**	.03**	.01	.01
2	Trait anxiety	.10	.07***	.07	.05***
3	D. Just. × T. Anxiety	.10	.00	.07	.00

Note. $N = 292$.
* $p < .05$.
** $p < .01$.
*** $p < .001$.

TABLE 5
Results of Moderated Regression Analysis for Trait Anger as Moderator

		CWB organizational		CWB personal	
Step	Independent variable	Total R^2	▲R^2	Total R^2	▲R^2
1	Org. Constraints	.10***	.10***	.06***	.06***
2	Trait Anger	.17	.07***	.15	.09***
3	Org. Con. × T. Anger	.17	.00	.16	.01
1	Conflict	.11***	.11***	.16***	.16***
2	Trait Anger	.18	.07***	.23	.07***
3	Conflict × T. Anger	.18	.00	.26	.03***
1	Procedural Justice	.07***	.07***	.02*	.02*
2	Trait Anger	.16	.09***	.14	.12***
3	P. Just. × T. Anger	.17	.01	.14	.00
1	Distributive justice	.03**	.03**	.01	.01
2	Trait anger	.14	.11***	.14	.13***
3	D. Just. × T. Anger	.14	.00	.14	.00

Note. $N = 292$.
* $p < .05$.
** $p < .01$.
*** $p < .001$.

anxiety did not moderate relations between stressors and organizational CWB. Also, a significant trait anger–stressor interaction was found for personal CWB, but not organizational CWB. In each of these last two cases, the pattern of significant moderation revealed that when the trait was high, there was a steeper slope between stressor and CWB than when the trait was low. That is, for individuals high in trait anxiety, but not for individuals low in trait anxiety, higher levels of constraints were associated with higher levels of personal CWB. Similarly, for individuals high in trait anger, but not for those low in trait anger, higher levels of conflict were associated with higher levels of personal CWB. Thus, only very limited support was found for Hypothesis 4. Personality characteristics (trait anger and anxiety) interacted as expected with stressors for personal, but not organizational, CWB, and weak evidence suggested that autonomy moderated the conflict–personal CWB relation in the opposite direction as hypothesized.

DISCUSSION

Results of the current study provide some support for predictions derived from the stress/emotion/CWB model (Spector et al., 1998). Specifically, it was found that job stressors, including perceived injustice related to both negative emotions and CWB (Hypothesis 1); that negative emotions related to CWB (Hypothesis 2); and that in most cases there was at least partial mediation of emotions in the relations between job stressors and CWB (Hypothesis 3). This last test is critical to the model and suggests emotions play a central role in the process from stressor to strain in general and CWB in particular.

Indeed, inspection of the mediator analyses in Table 2 shows patterns of relations that are generally supportive. In seven of the eight cases, the stressor variable was correlated significantly with CWB. Negative emotion was correlated significantly with all stressor and CWB variables. The regression results for all seven cases in which the stressor was related significantly to CWB showed a reduction in the regression coefficient when emotion was added to the equation containing only the stressor as a predictor. In three cases the coefficient for the stressor lost significance, and in five of seven cases, the magnitude of the coefficient was reduced by more than half.

In general, organizational stressors (such as constraints and injustice) were more closely associated with organizational than personal types of CWB, and interpersonal conflict was more closely associated with personal than organizational CWB. Yet, the results of post hoc *z* tests showed these differences to be significant only in the cases of autonomy and procedural justice being more strongly associated with organizational CWB and conflict being more strongly associated with personal CWB. Similarly, support for mediation was somewhat stronger for organization-targeted than person-targeted CWB. Altogether, the tighter linkage between constraints inhibiting job performance and CWB directed at the organization rather than other people, suggests the two types of CWB may follow somewhat separate paths.

The failure to find more evidence for complete mediation is also not unexpected. Spector and Fox (in press) discussed how causality is likely multidirectional, with background mood or emotional state predisposing people to perceive or not perceive job stressors. Thus, people experiencing high levels of negative mood may be hyperreactive to job stressors. This can result in a cycle in which background mood predisposes a person to perceive the work situation as a job stressor, which further induces negative mood and heightened strain.

In general, our results for Hypotheses 1 and 2 were consistent with prior research in showing a relation of justice with negative emotions (Skarlicki & Folger, 1997; Zohar, 1995), and with CWB (Skarlicki & Folger, 1997). Justice also was correlated significantly with both of the other job stressors (interpersonal conflict and organizational constraints). These findings lend further support to the idea that perceptions of injustice can be conceptualized as a form of perceived job stress. Situations seen by people as unfair are stressors that may lead to negative emotions and presumably to subsequent strains beyond CWB. For example, justice has been shown to relate significantly with job (dis-)satisfaction (e.g., Moorman, 1991). Subsequent work should expand this area of inquiry to look at other types of strains (e.g., physical symptoms and ill health) that have been linked to stressors at work (Jex & Beehr, 1991).

Our proposed model suggested a moderating role for trait anger and anxiety. In general, the data were nonsupportive of moderation. Using a conservative (.01) α (corrected for multiple significance tests), only the interactive effects of autonomy and conflict, trait anxiety and constraints, and trait anger and conflict for personal CWB remained significant. Using a more liberal α of .05, however, patterns

emerged which suggest the usefulness of further investigation of moderating roles for trait anger and anxiety in stressor-personal CWB relations. In these cases, as expected, individuals higher in the affective trait reported being more sensitive to stressors in their personal CWB reactions. There was no evidence of moderation for organizational CWB or with the justice variables. Perhaps organizational CWB is more affected by environmental variables than personality, whereas personal CWB is affected by both. Indirect support for this idea comes from work with organizational citizenship behavior (OCB), which in some ways is the opposite of CWB. McNeely and Meglino (1994) found that the personality trait of empathy predicted OCB directed toward other people at work but not toward the organization. Of course, it should be kept in mind that we looked at only two personality variables and four stressors, and it is conceivable that results would differ for other variables. Furthermore, moderated regression is known to suffer from low statistical power, so future tests should have larger samples.

One of the most surprising findings was the failure of the data to support the predicted moderating role of job control (autonomy), particularly in the relations between task-related stressors (constraints and injustice) and task-related (organizational) CWB. It may be that the category of organizational CWBs is too broad, and contains many behaviors that are not task-specific, such as destroying company property. To explore this possibility, the moderator analysis was performed using a subset of the organizational CWB items, which appear to directly involve work sabotage. This post hoc test revealed a significant interaction effect of distributive justice by autonomy on work sabotage behaviors, in the expected direction. That is, for individuals who perceived low autonomy, but not those who perceived high autonomy, low distributive justice was associated with high levels of work sabotage behaviors. Future studies might systematically divide the CWB items into subscales according to their relevance to task performance, interpersonal relations, withdrawal, and so forth in order to determine more specific, differential patterns of relations to organizational antecedents such as job characteristics.

Autonomy was found to moderate the relation between interpersonal conflict and personal CWB, but closer examination revealed the direction of interaction to be opposite the hypothesized relation. For individuals who perceived high but not low autonomy, higher conflict was associated with higher personal CWB. A possible explanation is that autonomy gave individuals latitude to respond to conflict with personal retaliatory behaviors. That is, those individuals who had high autonomy were in powerful enough positions that they had the latitude to engage in personal CWB without having to fear retribution. This may explain the lack of overall moderation by autonomy. In a previous study, Fox and Spector (1999) found the belief that one has the ability to harm the organization without being punished to be one of the strongest predictors of CWB. This may confound the theorized relationship, that individuals with greater job autonomy are less likely to experience stress and thereby less likely to respond counterproductively.

Limitations of the Study

Reliance on cross-sectional, self-report methodology is always problematic. It is an ongoing concern in organizational behavior research that the use of a single source of data, such as self-report questionnaires, may result in an overstatement of relationships among the variables. However, given our focus on affective and behavioral responses to the *perceived* rather than "objective" environment, the difficulty of obtaining uncontaminated measures of counterproductive behavior, and ethical concerns with the possibility of putting research participants at risk in the accumulation of evidence of CWB, we believe that anonymous self-reports provide the closest available approximation of these relations (for a more extensive discussion of these issues, see Fox & Spector, 1999).

At the same time, we recognize the need for creative research designs using nonincumbent or more objective sources of data. Good examples of such studies include Perlow and Latham's (1993) longitudinal study using recorded instances of abusive behavior as the dependent variable; and Robinson and O'Leary-Kelly's (1998) use of peer ratings of workgroup climate as the measure of environmental factors. Yet, each of these designs is able to measure only a subset of the model we are considering. Future research might incorporate peer, subordinate, and supervisor reports of the incumbent's counterproductive work behavior (see Heacox, 1996), such as survey dyads consisting of an employee's self-report of perceptions of stressors and a co-worker's reports of behaviors by that employee. An alternative might be self-reports of being the *target* of CWB, as in the mobbing research of Knorz and Zapf (1996). As the models become more complex, tests of the data certainly will require more rigorous analytic tools, such as Structural Equation Modeling. Finally, insights might be gained from a policy-capturing investigation of the circumstances under which employees would find various forms of CWB to be justified or acceptable.

A further limitation to the generalizability of the results of the study was the use of a convenience sample of nonstudent employees and the combination of that sample with a sample of employed students. Yet, there was little evidence that the student sample responded differently than did the nonstudent sample. Furthermore, generalizability was enhanced in that the populations from which the participants were drawn were highly heterogeneous, covering quite a few organizations and a wide range of organizational conditions.

Finally, at the current time the model underlying this research is rather general. We chose specific job stressors and other variables that prior research suggested might be important. We recognize that this was a piecemeal test of parts of the model. As evidence for linkages among specific variables is uncovered, it might prove useful to conduct a more complete test rather than investigating individual linkages. Structural equation modeling could accomplish this objective.

Nevertheless, the current study provides evidence to support some of the linkages suggested by our job stress/emotion/CWB model. Perhaps most importantly, results for all significant stressor/CWB relations supported the hypothesized mediator role for emotions, either fully or partially. The results, however, do suggest

the need to refine the model; for example, personality seemed more important as a moderator of personal CWB than organizational CWB, and did not seem relevant for justice. The Spector and Fox (in press) model may provide a general framework, but additional work is needed to uncover specific linkages among variables. Above all, this cross-sectional study cannot provide a causal test.

Still, our findings suggest that organizations may be able to reduce the levels of work behaviors that undermine their effectiveness by developing human resource policies and practices that take into consideration their possible emotional effects on employees. This is not to say that all negative situations can or should be avoided, but rather that attempts to manage actively the emotional effects of human resources, operations and resource allocation systems are likely to result in lower CWB. The implications of this study suggest an alternative to the predominant "selection" solution to CWB, in which individuals with certain personality tendencies that may predict CWBs are screened out of the organization during the selection process. Consideration of justice, autonomy, and employees' feelings needs to be included in the design of jobs and human resource systems—not because it is "the nice thing to do," but because of its ramifications in the kinds of behaviors that, even in covert or subtle ways, may do serious harm to the organization and its members.

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