

Employee Personality as a Moderator of the Relationships Between Work Stressors and Counterproductive Work Behavior

Nathan A. Bowling and Kevin J. Eschleman
Wright State University

The current study, which is framed within the context of the Transactional Theory of Stress and Coping, examined counterproductive work behaviors (CWBs) as a response to ineffective coping with work stressors. More specifically, we examined whether the relationship between work stressors and CWBs was moderated by employee personality. Analyses using data collected from 726 adults employed in a diverse set of occupations found that work stressors were more strongly related to CWBs among workers who were low in conscientiousness, or high in negative affectivity (NA) than among workers who were high in conscientiousness, or low in NA. We found less consistent support, however, for the moderating effects of agreeableness.

Keywords: personality, occupational stress, counterproductive work behavior

Counterproductive work behaviors (CWBs), which include any actions that employees engage in that harm their organization or organization members, have recently emerged as an important research topic in industrial and organizational psychology (Dalal, 2005; Vardi & Weitz, 2004). Examples of specific behaviors that have been referred to as CWBs include theft, sabotage, withdrawal behavior (e.g., absenteeism, lateness, etc.), harassment, and drug use at work (Gruys & Sackett, 2003; Robinson & Bennett, 1995; Spector et al., 2006). Given the serious nature of these behaviors, it should be no surprise that research has found that CWBs have important implications for the well-being of organizations and their members. Studies have shown, for example, that theft alone costs U.S. organizations several billion dollars annually (Camara & Schneider, 1994; Greenberg, 1990, 1997). Total losses caused by the other forms of CWBs are likely to be staggering (Murphy, 1993; Vardi & Weitz, 2004).

Because of the important practical implications of CWBs, much research attention has been devoted to identifying the potential causes of these behaviors. Some studies, for example, have examined the main effects of individual difference variables (e.g., personality traits; Berry, Ones, & Sackett, 2007; Dalal,

2005; Salgado, 2002), whereas other studies have examined the main effects of work stressors (Bruk-Lee & Spector, 2006; Chen & Spector, 1992; Diefendorff & Mehta, 2007). A few studies have also examined the interactive effects of individual differences and work stressors on CWBs (e.g., Fox, Spector, & Miles, 2001; Penney & Spector, 2002, 2005), which is the focus of the current research. Specifically, using a sample of participants recruited via StudyResponse ("The StudyResponse Project," n.d.), we examine whether employee personality (i.e., conscientiousness, agreeableness, and negative affectivity) moderates the relationships between work stressors (i.e., role stressors, organizational constraints, and interpersonal conflict) and CWBs. These moderator effects are framed within the context of the Transactional Theory of Stress and Coping (Folkman, Lazarus, Gruen, & DeLongis, 1986; Lazarus & Folkman, 1984; Lazarus & Folkman, 1987). As we discuss below, CWBs can be viewed as a response to ineffective coping (Cullen & Sackett, 2003). Furthermore, we expect personality traits to influence one's characteristic style of responding to stressors (see Connor-Smith & Flachsbart, 2007; McCrae & Costa, 1986; Watson & Hubbard, 1996).

Main Effects of Work Stressors on CWBs

Work stressors, which include any aspect of one's work environment that has the potential to cause ill health (Jex, Beehr, & Roberts, 1992), represent an important set of variables in occupational stress research. When employees detect the presence of a

Nathan A. Bowling and Kevin J. Eschleman, Department of Psychology, Wright State University.

Correspondence concerning this article should be addressed to Nathan A. Bowling, Department of Psychology, Wright State University, 3640 Colonel Glenn Highway, Dayton, OH 45435-0001. E-mail: nathan.bowling@wright.edu

work stressor, they respond by considering how they can cope with the stressor (see Folkman et al., 1986; Lazarus & Folkman, 1984; Lazarus & Folkman, 1987). CWBs represent a response to ineffective coping with work stressors (Cullen & Sackett, 2003) and in many ways they mirror the kinds of ineffective coping that occur in nonwork domains. For example, psychologically disengaging from one's environment, responding in a hostile manner, or using drugs are generally regarded as ineffective coping strategies (Carver, Scheier, & Weintraub, 1989), and they are referred to as types of CWBs when they occur at work (Bennett & Robinson, 2000).

As a response to ineffective coping with stressors, CWBs are likely to increase in response to increases in work stressors. Thus, a positive relationship is expected to exist between work stressors and CWBs. Indeed, prior research has supported such relationship. Studies have found, for example, that role stressors (i.e., role ambiguity, conflict, and overload; Chen & Spector, 1992; Miles, Borman, Spector, & Fox, 2002), organizational constraints (Spector et al., 2006), and interpersonal conflict (Bowling & Beehr, 2006) are each positively associated with CWBs.

Hypothesis 1: Work stressors (role stressors, organizational constraints, and interpersonal conflict) are positively associated with CWBs.

Main Effects of Personality Variables on CWBs

Work stressors are not the only potential predictors of CWBs. Indeed, several CWB studies have examined the role of employee personality traits, such as conscientiousness, agreeableness, and negative affectivity (NA; Berry, Ones, & Sackett, 2007; Dalal, 2005; Salgado, 2002). The current section reviews the relationships between each of these personality traits and CWBs. As detailed below, we focused on these three personality traits due to their prominent role in the CWB (Berry et al., 2007; Dalal, 2005; Salgado, 2002) and ineffective coping (Eaton & Bradley, 2008; Fickova, 2002; Watson & Hubbard, 1996) literatures and because we had a priori reasons to expect that they would moderate the relationships between work stressors and CWBs.

Main Effects of Conscientiousness

Conscientiousness, which is one of the traits in the Five Factor Model of Personality, is the extent to which an individual is generally ambitious, respon-

sible, abides by ethical principles, and considers the consequences of her behavior before acting (Costa & McCrae, 1992; Goldberg, 1990). Given these characteristics, conscientiousness is expected to be negatively associated with CWBs (Berry et al., 2007; Dalal, 2005; Dudley, Orvis, Lebiecki, & Cortina, 2006). The general tendency to follow ethical principles, for example, should make it unlikely that one will steal from her employer or harass a coworker, and the general tendency to be ambitious should make it unlikely that one will waste time at work or withhold effort when working on job tasks. Consistent with these predictions, a meta-analysis by Dalal (2005) found a corrected correlation of $-.26$ between conscientiousness and CWBs ($k = 13, N = 6,276$).

Hypothesis 2a: Conscientiousness is negatively associated with CWBs.

Main Effects of Agreeableness

Agreeableness, which is also included in the Five Factor Model of Personality, reflects the degree to which a person is slow to become angry or aggressive, is altruistic, and is sensitive to the needs of other people (Costa & McCrae, 1992; Goldberg, 1990). Given this definition, agreeableness is expected to yield a negative relationship with CWBs (Berry et al., 2007; Salgado, 2002). The general tendency to be nonaggressive, for example, should make it unlikely that one will sabotage other employees' work or vandalize company property, and the general tendency to be sensitive toward others should make it unlikely that one will act rudely toward customers or make fun of a coworker. Consistent with these predictions, a meta-analysis by Berry et al. (2007) found that agreeableness yielded a corrected correlation of $-.46$ with CWBs directed at harming people in the organization ($k = 10, N = 3,336$) and $-.32$ with CWBs directed at harming the organization itself ($k = 8, N = 2,934$).

Hypothesis 2b: Agreeableness is negatively associated with CWBs.

Main Effects of NA

NA is the extent to which one generally experiences negative emotions, such as anxiety, depression, and hostility (Watson & Clark, 1984; Watson, Clark, & Tellegen, 1988) and is very similar to the neuroticism dimension from the Five Factor Model of Personality (Watson & Clark, 1984, 1992). High-NA

individuals become easily angry, are impulsive, and they often cope ineffectively (Eaton & Bradley, 2008; O'Brien, Terry, & Jimmieson, 2008). For these reasons, NA is expected to be positively related to CWBs (Herscovis et al., 2007; Spector & Fox, 2002). The tendency to be impulsive, for instance, should make it more likely that one will steal company property or harass a coworker, and the tendency to become angry should make it more likely that one will sabotage other's work tasks or say something rude to a coworker. Indeed, one recent meta-analysis (Dalal, 2005) found a corrected correlation of .41 between NA and CWBs ($k = 23, N = 4,101$).

Hypothesis 2c: NA is positively associated with CWBs.

Interactive Effects of Stressors and Personality on CWBs

As discussed above, the Transactional Theory of Stress and Coping (Folkman et al., 1986; Lazarus & Folkman, 1984, 1987) suggests that people continuously scan the environment for threats to their well-being. Once a threat is identified, they then consider specific strategies that may be used to cope with the threat. Within the workplace there are several different strategies that can potentially be used to respond to stressors. Employees who are exposed to stressors, for example, may respond by asking management to reduce or eliminate the stressor, they may ignore the stressor, or they may avoid the stressor via turnover. CWBs are an additional (albeit ineffective) response to work stressors (Cullen & Sackett, 2003).

The particular set of coping strategies that one considers viable for a given situation is likely to differ across individuals and is expected to be influenced by one's personality (Carver et al., 1989; Connor-Smith & Flachsbart, 2007; Watson & Hubbard, 1996). As presented in the above section on the main effects of personality, CWBs represent atypical behavior for employees who are high in conscientiousness, high in agreeableness, or low in NA. If these employees avoid engaging in CWBs in general, they may also avoid engaging in CWBs as a response to work stressors (for a similar argument involving individual differences in how workers respond to job attitudes see Colbert, Mount, Harter, Witt, & Barrick, 2004). Personality, in other words, may moderate the relationship between work stressors and CWBs. In the current section, we discuss conscientiousness, agreeableness and NA as moderators of the relationships between work stressors and CWBs.

We should first note, however, that previous CWB research has given some attention to the potential interactive effects of work stressors and personality. Penney and Spector (2005), for example, found that stressors (workplace incivility, interpersonal conflict, and organizational constraints) were more strongly related to CWBs among high-NA rather than low-NA individuals. Likewise, other studies have found that narcissism moderated the relationship between organizational constraints and CWBs (Penney & Spector, 2002), and that trait anxiety and trait anger moderated the effects of organizational constraints and interpersonal conflict on CWBs (Fox et al., 2001). Unfortunately, the existing research has considered only a few of the theoretically justifiable work stressor-personality trait combinations. Given that previous research has primarily focused on the moderating effects of NA (and personality traits that are similar to NA, such as trait anxiety and trait anger), the current study contributes to the literature by also examining conscientiousness and agreeableness as moderators.

Although others have suggested that engaging in CWBs is contrary to the natural tendencies of high-conscientiousness, high-agreeableness, and low-NA employees (see Colbert et al., 2004), the precise mechanisms by which personality may moderate stressor-CWB relationships has not been fully articulated. Although they are not directly examined in the current study, we consider those mechanisms here. First, one possibility is that when high-conscientiousness, high-agreeableness, and low-NA employees are exposed to work stressors, they may not even entertain the idea of engaging in CWBs as a response or they may engage in CWBs only after they have found potentially constructive coping strategies to be ineffective. A related explanation is that high-conscientiousness, high-agreeableness, and low-NA workers have a high threshold for using CWBs as a response. In other words, these workers may engage in CWBs in response to only the most extreme work stressors. Thus, the types of stressors that are routinely examined in occupational stress research (e.g., role stressors) may be too minor to elicit CWBs in these employees.

Together, the above mechanisms suggest that work stressors are more likely to result in CWBs among low-conscientiousness, low-agreeableness, and high-NA workers than among high-conscientiousness, high-agreeableness, and low-NA workers (see Figure 1). These predictions are consistent with research in nonwork domains suggesting that ineffective coping strategies are prototypical stress responses among low-conscientiousness (O'Brien & DeLongis,

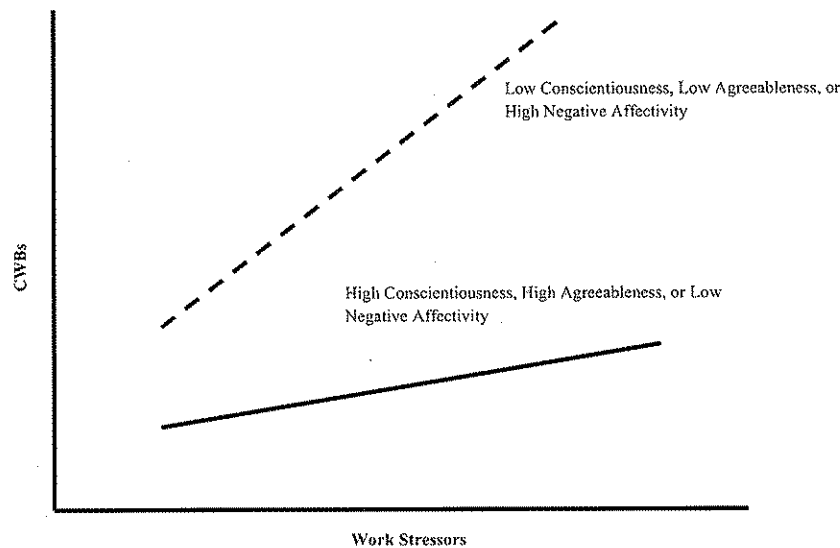


Figure 1. Hypothesized interactive effects of work stressors and personality on counterproductive work behavior (CWB).

1996; Vollrath, Torgersen, & Alnaes, 1995; Watson & Hubbard, 1996), low-agreeableness (Connor-Smith & Flachsbart, 2007; Watson & Hubbard, 1996), and high-NA individuals (Butt, Strauss, Smyth, & Rose-Rego, 2002; Eaton & Bradley, 2008; Fickova, 2002).

Hypothesis 3: Conscientiousness moderates the relationships between stressors and CWBs. Specifically, stressors are more strongly related to CWBs among employees who have low levels of conscientiousness than among employees who have high levels of conscientiousness.

Hypothesis 4: Agreeableness moderates the relationships between stressors and CWBs. Specifically, stressors are more strongly related to CWBs among employees who have low levels of agreeableness than among employees who have high levels of agreeableness.

Hypothesis 5: NA moderates the relationships between stressors and CWBs. Specifically, stressors are more strongly related to CWBs among employees who have high levels of NA than among employees who have low levels of NA.

It is of note that we hypothesized similar main effects and moderating effects for conscientiousness, agreeableness, and NA. Although these three person-

ality variables are almost always treated as separate personality traits (Costa & McCrae, 1992; Goldberg, 1990), there is some evidence that they are each manifestations of a single higher-order trait reflecting one's general level of social adjustment (Digman, 1997). This finding suggests that it is reasonable to expect that conscientiousness, agreeableness, and NA will yield similar effects.

Method

Access to participants was provided by the StudyResponse Project ("The StudyResponse Project," n.d.). StudyResponse, which maintains a database of over 80,000 individuals who have agreed to participate in online research, has been used to recruit participants for several published studies (e.g., Judge, Ilies, & Scott, 2006; Piccolo & Colquitt, 2006; Reynolds & Ceranic, 2007).

Participants

An electronic copy of the research questionnaire was e-mailed to a random subset of 4,000 employed individuals in the StudyResponse database. A total of 726 employees provided complete data and were thus included in our analyses. This represents a response

rate of 18% and is comparable with the response rates of other studies that have recruited participants using StudyResponse ("The StudyResponse Project," n.d.). The average participant was 38 years old. Approximately 55% of participants were female, 69% were White, and 80% of participants had attended college. Several different industries were represented among the participants, including administration support, education/training, health/safety, retail/wholesale, and technology.

Measures

Conscientiousness and agreeableness. Conscientiousness and agreeableness were each assessed with the average of 10 items from the Big Five Factor Markers of the International Personality Item Pool (IPIP; Goldberg et al., 2006; International Personality Item Pool, n.d.). Each item was on a 7-point scale from *strongly disagree* (1) to *strongly agree* (7). A sample conscientiousness item is "I am exacting in my work," and a sample agreeableness item is "I sympathize with others' feelings." The conscientiousness scale yielded an internal consistency reliability of .78, and the agreeableness scale yielded an internal consistency reliability of .81.

NA. NA was assessed with the average of 10 items from the Positive Affectivity Negative Affectivity Schedule (PANAS; Watson, Clark, & Tellegen, 1988). We used the trait version of this measure, which asks participants how often they *generally* experience negative emotions. Each item is an emotional adjective (e.g., "Nervous"), and participants made their responses on a 5-point scale from *very slightly or not at all* (1) to *extremely* (5). The NA scale had an internal consistency reliability of .91.

Role stressors. We assessed role stressors with the average of 15 items from Glazer and Beehr (2005). This scale included five items each for role ambiguity, role conflict, and role overload. The items were on a 7-point scale from *strongly disagree* (1) to *strongly agree* (7). Sample items include "I feel certain about how much authority I have" (reverse scored), "I receive incompatible requests from two or more people," and "It seems like I have too much work for one person to do." In order to simplify our model and because they are highly intercorrelated, we combined the three role stressors into a single measure (see Luszczynska & Cieslak, 2005; Frese & Zapf, 1985; Grebner, Semmer, & Elfering, 2005). This scale yielded an internal consistency reliability of .87.

Organizational constraints. Organizational constraints were assessed with the average of 11 items from Spector and Jex's (1998) Organizational Constraints Scale (OCS). This measure asks participants to report how often they experience a number of specific constraints at work. A sample item is "Poor equipment or supplies." Each item was on a 5-point scale from *less than once per month or never* (1) to *several times per day* (5). The OCS yielded an internal consistency reliability of .93.

Interpersonal conflict. We assessed interpersonal conflict with the average of the four items from Spector and Jex's (1998) Interpersonal Conflict at Work Scale (ICAWS). Each item was on a 5-point scale from *less than once per month or never* (1) to *several times per day* (5). A sample item is "How often are other people rude to you at work?" The ICAWS yielded an internal consistency reliability of .87.

Counterproductive work behaviors. We used Bennett and Robinson's (2000) scale to assess CWBs. This measure, which includes a subscale assessing CWBs directed at the organization (CWB-Os; average of 12 items) and a subscale assessing CWBs directed at individuals (CWB-Is; average of 7 items), asks participants how often they engage in CWBs. Each item was on a 7-point scale from *never* (1) to *daily* (7). A sample CWB-O item is "Put little effort into your work," and a sample CWB-I item is "Made fun of someone at work." The CWB-O and CWB-I subscales yielded internal consistency reliabilities of .92 and .90, respectively.

Results

Main Effects of Work Stressors and Personality

Descriptive statistics, internal consistency reliabilities, and correlations for the study variables are presented in Table 1. We predicted that work stressors would be positively associated with CWBs (Hypothesis 1), which was generally supported by both the correlations and the regression analyses (see Table 2). Specifically, regression analyses found that organizational constraints (for CWB-Is, $\beta = .15, p < .01$; for CWB-Os, $\beta = .22, p < .01$) and interpersonal conflict (for CWB-Is, $\beta = .48, p < .01$; for CWB-Os, $\beta = .33, p < .01$) were each positively related to CWBs. Unexpectedly, the regression analyses found negative relationships between role stressors and CWBs (for CWB-Is, $\beta = -.08, p < .05$; for CWB-Os, $\beta = -.08, p < .05$). These latter findings

Table 1
Descriptive Statistics and Correlations for Study Variables

| Variable | <i>M</i> | <i>SD</i> | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|-------------------------------|----------|-----------|--------|--------|-------|-------|-------|-------|-------|-------|
| 1. Conscientiousness | 5.02 | 0.88 | (.78) | | | | | | | |
| 2. Agreeableness | 5.45 | 0.88 | .39** | (.81) | | | | | | |
| 3. Negative affectivity | 1.91 | 0.76 | -.35** | -.37** | (.91) | | | | | |
| 4. Role stressors | 3.40 | 0.99 | -.34** | -.31** | .33** | (.87) | | | | |
| 5. Organizational constraints | 1.91 | 0.89 | -.19** | -.26** | .37** | .60** | (.93) | | | |
| 6. Interpersonal conflict | 1.48 | 0.79 | -.27** | -.30** | .45** | .41** | .67** | (.87) | | |
| 7. CWB-I | 1.81 | 1.21 | -.33** | -.38** | .42** | .32** | .52** | .66** | (.90) | |
| 8. CWB-O | 1.83 | 1.09 | -.38** | -.35** | .41** | .32** | .50** | .58** | .78** | (.92) |

Note. $N = 726$. CWB-I = counterproductive work behaviors directed at individuals; CWB-O = counterproductive work behaviors directed at the organization. Internal consistency reliabilities (alphas) appear in parentheses on the diagonal.

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

are indicative of suppressor effects because role stressors yield positive zero-order correlations with both CWB-Is ($r = .32, p < .01$) and CWB-Os ($r = .32, p < .01$). We believe that these suppressor effects are likely statistical artifacts resulting from multicollinearity.

We also predicted that conscientiousness (Hypothesis 2a) and agreeableness (Hypothesis 2b) would be negatively related to CWBs and that NA (Hypothesis 2c) would be positively related to CWBs. Regression analyses presented in Table 2 support these hypotheses. Specifically, conscientiousness (for CWB-Is, $\beta = -.11, p < .01$; for CWB-Os, $\beta = -.20, p < .01$), agreeableness (for CWB-Is, $\beta = -.14, p < .01$; for CWB-Os, $\beta = -.09, p < .01$), and NA (for CWB-Is, $\beta = .07, p < .05$; for CWB-Os, $\beta = .09, p < .01$) were each related to both forms of CWBs in the predicted directions.

Moderator Effects of Conscientiousness

Hypothesis 3 predicted that conscientiousness would moderate the relationships between work stressors and CWBs. Specifically, we expected that stressors would yield stronger positive relationships with CWBs for individuals who were low rather than high in conscientiousness. A series of moderated regression analyses using mean centered data (see Aiken & West, 1991) was used to test this hypothesis (see Table 3). As shown in the table, all six of these interactions were statistically significant. Specifically, the analyses for CWB-Is found that conscientiousness moderated the effects of role stressors ($\beta = -.09, p < .05$), organizational constraints ($\beta = -.17, p < .01$), and interpersonal conflict ($\beta = -.13, p < .01$). Similarly, the analyses for CWB-Os found

that conscientiousness moderated the effects of role stressors ($\beta = -.09, p < .01$), organizational constraints ($\beta = -.18, p < .01$), and interpersonal conflict ($\beta = -.10, p < .05$).

We used Aiken and West's (1991) method to further examine the nature of these interactions. These follow-up analyses involve comparing stressor-CWB relationships among participants who scored one standard deviation or more above the mean conscientiousness score with stressor-CWB relationships among participants who scored one standard deviation or more below the mean conscientiousness score. For the purpose of conserving space, we chose not to include figures depicting each significant interaction.¹ Instead, we have included Figure 2, which depicts conscientiousness as a moderator of the role stressor-CWB-I relationship, as a representative example of the interactions that we found. For all other stressor-personality interactions, we simply describe whether the interaction matched the hypothesized moderator effect depicted in Figure 1. Similar to the pattern presented in Figure 1, all of the significant interactions were consistent with the prediction that the relationships between stressors and CWBs would be stronger for low-conscientiousness than for high-conscientiousness participants (see Table 4). These findings provide support for Hypothesis 3.

Moderator Effects of Agreeableness

We predicted that agreeableness would moderate the relationships between work stressors and CWBs (Hy-

¹ Copies of figures depicting the significant interactions are available upon request from Nathan Bowling.

Table 2
Hierarchical Regression Analyses Examining Personality and Work Stressors as Predictors of Counterproductive Work Behaviors

| Criterion variable | Ordered predictors | β | Total R^2 |
|--------------------|----------------------------|---------|-------------|
| CWB-I | Conscientiousness | -.11** | .50** |
| | Agreeableness | -.14** | |
| | NA | .07* | |
| | Role stressors | -.08* | |
| | Organizational constraints | .15** | |
| | Interpersonal conflict | .48** | |
| CWB-O | Conscientiousness | -.20** | .43** |
| | Agreeableness | -.09** | |
| | NA | .09** | |
| | Role stressors | -.08* | |
| | Organizational constraints | .22** | |
| | Interpersonal conflict | .33** | |

Note. $N = 726$. CWB-I = counterproductive work behaviors directed at individuals; CWB-O = counterproductive work behaviors directed at the organization; NA = negative affectivity.

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

pothesis 4). Specifically, the positive relationships between stressors and CWBs were expected to be stronger among individuals low in agreeableness than among individuals high in agreeableness. Moderated regression analyses presented in Table 3 indicated significant interactions between stressors and agreeableness in only one instance. Specifically, the analyses found that agreeableness moderated the relationship between organizational constraints and CWB-Os ($\beta = .08, p < .05$). We used Aiken and West's (1991) method to conduct follow-up analyses that examine the direction of this significant interaction. As shown in Table 4, this interaction was consistent with Figure 1. Thus, Hypothesis 4 was partially supported.

Moderator Effects of NA

We predicted that NA would moderate the relationships between work stressors and CWBs (Hypothesis 5). Specifically, work stressors were expected to yield stronger positive relationships with CWBs among high-NA than among low-NA individuals. The moderated regression analyses presented in Table 3 indicated significant interactions in all six instances. Specifically, the analyses for CWB-I's yielded significant interactions for role stressors ($\beta = .13, p < .01$), organizational constraints ($\beta = .19, p < .01$), and interpersonal conflict ($\beta = .09, p < .05$). The analyses for CWB-O's yielded significant interactions for role stressors ($\beta = .15, p < .01$), organizational constraints ($\beta = .23, p < .01$) and interpersonal conflict ($\beta = .21, p < .01$). Aiken

and West's (1991) method was used to examine the nature of these significant interactions. These analyses indicated that each interaction was consistent with the moderator effect depicted in Figure 1 (see Table 4). Hypothesis 5 was thus supported.

Discussion

Overview and Key Findings

The current study examined the main and interactive effects of work stressors and employee personality on CWBs. Consistent with the Transactional Theory of Stress and Coping (Folkman et al., 1986; Lazarus & Folkman, 1984, 1987) and with the notion that CWBs represent a response to ineffective coping (Cullen & Sackett, 2003), we found that role stressors, organizational constraints, and interpersonal conflict were each positively associated with CWBs. In our analyses examining the main effects of personality on CWBs, we found negative relationships for conscientiousness and agreeableness and positive relationships for NA. These latter findings are consistent with previous CWB research (e.g., Berry et al., 2007; Dalal, 2005; Hershcovis et al., 2007) and with research examining individual differences in ineffective coping behavior (Connor-Smith & Flachsbart, 2007; Vollrath et al., 1995; Watson & Hubbard, 1996).

Table 3
Regression Analyses Examining the Moderating Effects of Personality on Stressors-Counterproductive Work Behavior Relationships

| Criterion variable | Ordered predictors | Step 1 β | Step 2 β | ΔR^2 | |
|--------------------|-----------------------------------|----------------|----------------|--------------|-------|
| CWB-I | 1. Role stressors (A) | .12** | .20** | .26** | |
| | Conscientiousness (B) | -.11** | -.11** | | |
| | Agreeableness (C) | -.20** | -.19** | | |
| | Negative affectivity (D) | .26** | .19** | | |
| | 2. A \times B | | -.09* | | .04** |
| | A \times C | | -.03 | | |
| A \times D | | .13** | | | |
| CWB-I | 1. Organizational constraints (A) | .39** | .33** | .38** | |
| | Conscientiousness (B) | -.12** | -.14** | | |
| | Agreeableness (C) | -.16** | -.14** | | |
| | Negative affectivity (D) | .16** | .10** | | |
| | 2. A \times B | | -.17** | | .07** |
| | A \times C | | .04 | | |
| A \times D | | .19** | | | |
| CWB-I | 1. Interpersonal conflict (A) | .56** | .45** | .49** | |
| | Conscientiousness (B) | -.09** | -.10** | | |
| | Agreeableness (C) | -.14** | -.12** | | |
| | Negative affectivity (D) | .08** | .06* | | |
| | 2. A \times B | | -.13** | | .02** |
| | A \times C | | -.01 | | |
| A \times D | | .09* | | | |
| CWB-O | 1. Role stressors (A) | .13** | .19** | .27** | |
| | Conscientiousness (B) | -.19** | -.20** | | |
| | Agreeableness (C) | -.14** | -.13** | | |
| | Negative affectivity (D) | .24** | .18** | | |
| | 2. A \times B | | -.09** | | .03** |
| | A \times C | | .00 | | |
| A \times D | | .15** | | | |
| CWB-O | 1. Organizational constraints (A) | .37** | .31** | .37** | |
| | Conscientiousness (B) | -.21** | -.23** | | |
| | Agreeableness (C) | -.11** | -.09** | | |
| | Negative affectivity (D) | .15** | .08* | | |
| | 2. A \times B | | -.18** | | .08** |
| | A \times C | | .08* | | |
| A \times D | | .23** | | | |
| CWB-O | 1. Interpersonal conflict (A) | .45** | .28** | .41** | |
| | Conscientiousness (B) | -.18** | -.20** | | |
| | Agreeableness (C) | -.10** | -.08* | | |
| | Negative affectivity (D) | .10** | .07* | | |
| | 2. A \times B | | -.10* | | .05** |
| | A \times C | | -.02 | | |
| A \times D | | .21** | | | |

Note. $N = 726$. CWB-I = counterproductive work behaviors directed at individuals; CWB-O = counterproductive work behaviors directed at the organization. The predictor and moderator variables used mean-centered data (see Aiken & West, 1991).

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

The most important contribution of the current research involves our examination of employee personality traits as moderators of the stressor-CWB relationship. These findings extend previous research by testing several specific stressor-personality interactions that had been left unexamined by earlier studies (e.g., Fox, Spector, & Miles, 2001; Penney &

Spector, 2002, 2005). Specifically, we found that work stressors consistently yielded stronger positive relationships with CWBs among workers who were low in conscientiousness or high in NA than among workers who were high in conscientiousness or low in NA. These moderator effects may occur for several reasons. First, CWBs may play a prominent role only

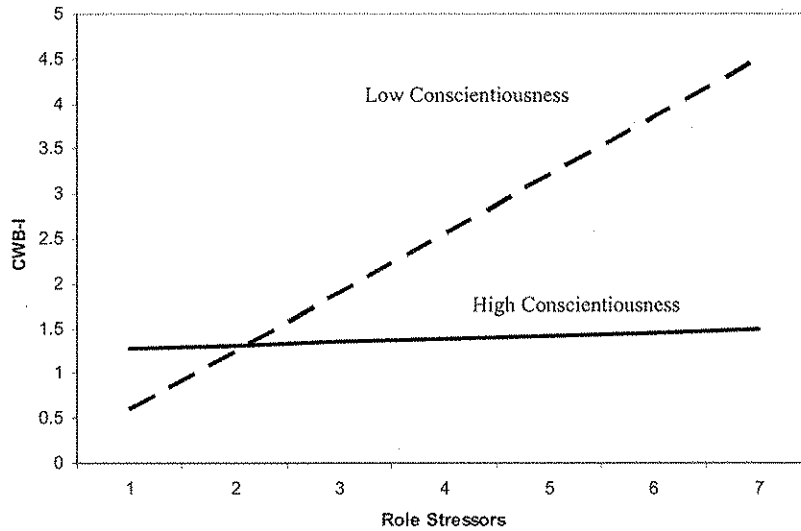


Figure 2. Follow-up analyses for conscientiousness as a moderator of the relationship between role stressors and counterproductive work behaviors directed at individuals (CWB-I).

in the response repertoires of low-conscientiousness or high-NA employees. When exposed to work stressors, these employees may immediately engage in CWBs before first using potentially more effective responses. High-conscientiousness or low-NA employees, on the other hand, may engage in CWBs only after other coping attempts have been unsuccessful. Another possibility is that employee personality traits influence one's threshold for engaging in CWBs. Specifically, low-conscientiousness or

high-NA workers may have a low threshold for engaging in CWBs because the natural tendency of these employees is to engage in CWBs in response to even minor work stressors. High-conscientiousness or low-NA employees, however, may have a high threshold and thus only engage in CWBs in response to very extreme work stressors.

Although we had predicted that agreeableness would also moderate the relationships between work stressors and CWBs, our analyses found relatively

Table 4

Follow-up Analyses Examining the Significant Moderated Regression Analyses for Conscientiousness, Agreeableness, and Negative Affectivity (NA)

| Criterion | Predictor | Conscientiousness | | Agreeableness | | NA | |
|-----------|----------------------------|-------------------|------|---------------|------|------|------|
| | | Low | High | Low | High | Low | High |
| CWB-Is | Role stressors | .65 | .03 | — | — | .09 | .80 |
| CWB-Is | Organizational constraints | 1.19 | .14 | — | — | .04 | 1.16 |
| CWB-Is | Interpersonal conflict | 1.22 | .15 | — | — | .24 | 1.12 |
| CWB-Os | Role stressors | .63 | .03 | — | — | .10 | .78 |
| CWB-Os | Organizational constraints | 1.07 | .08 | .86 | .19 | .06 | 1.08 |
| CWB-Os | Interpersonal conflict | 1.04 | -.01 | — | — | -.02 | 1.04 |

Note. All of the numbers are un-standardized regression coefficients (*bs*). Low = individuals who scored 1 standard deviation or more below the mean personality score; High = individuals who scored 1 standard deviation or more above the mean personality score; CWB-I = counterproductive work behaviors directed at individuals; CWB-O = counterproductive work behaviors directed at the organization. The cells marked "—" are empty because the corresponding moderated regression analysis was not statistically significant.

less consistent support for these interaction effects. This finding is inconsistent with previous research, which suggests that agreeableness, conscientiousness, and NA are each manifestations of a single higher-order social adjustment construct (Digman, 1997). One possibility is that agreeableness did not yield the expected moderator effects because the particular scale used to assess agreeableness primarily focused on the altruism and sympathy sub-facets of agreeableness (Donnellan, Oswald, Baird, & Lucas, 2006). Because it addresses one's tendency to follow the rules and behave ethically (Costa & McCrae, 1992), the morality subfacet of agreeableness may be a stronger moderator of stressor-CWB relationships.

Although the current research examined employee personality as a moderator of the relationship between work stressors and CWBs, it is also possible that mediator effects could also occur. Specifically, the effects of personality on CWBs may be mediated by work stressors (Mount, Ilies, & Johnson, 2006). Thus, we recommend that future research examine such mediator effects. Given the limitations of cross-section data (Maxwell & Cole, 2007), we suggest that this research employ longitudinal designs.

Practical Implications

The current study has several important practical implications. Specifically, the moderator effects suggest that managers should be particularly concerned about work stressors resulting in CWBs among particular subsets of employees. That is, our findings suggest that the presence of work stressors may be a considerable problem among low-conscientiousness or high-NA individuals. Thus, organizations could specifically target these individuals when implementing stress interventions. In instances when nothing can be done to reduce stressors, management should be encouraged to include personality tests (e.g., measures of conscientiousness and NA) in their selection batteries.

Limitations and Future Research

We should note a few limitations of the current research. First, all of the data were collected using a self-report questionnaire. Our results, therefore, may have been influenced by common-method variance. Some authors, however, have recently suggested that

the problem of common-method variance is generally overstated (Spector, 2006), so this may not have been a serious problem. The exclusive use of self-report measures, for example, may result in inflated correlations if the measures are contaminated with socially desirable responding. As we discuss below, the anonymous nature of the sample may have minimized this potential problem. Spector (2006) also suggested that NA may serve as a contaminant, which could inflate the relationships between variables. This is not a concern in the current study, however, because in addition to being a substantive variable, we also controlled for NA in our regression analyses.

Another concern with using self-report measures is that participants might underreport the extent to which they engage in CWBs. Much of the extant CWB research, however, has relied upon participant self-reports and the few studies that have used alternatives measures (e.g., supervisor ratings of subordinates' CWBs) generally yielded results that are similar to those of studies that use self-report measures (Berry et al., 2007; Fox, Spector, Goh, & Bruursema, 2007; Mount et al., 2006). In addition, self-reports of CWBs may actually be more valid than alternative CWB measures, since CWBs may often be performed outside the awareness of supervisors or co-workers (Baron, Neuman, & Geddes, 1999; Spector & Fox, 2005).

The use of cross-sectional data is a second limitation, since it prevents us from examining causal relationships. Thus, although we assumed that work stressors and personality influenced CWBs, we were in fact only able to show that these variables were related. Given that the CWB literature is dominated by cross-sectional designs, we encourage future research using longitudinal data.

Above we discussed several mechanisms that may explain why employee personality moderates the work stressor-CWB relationship. First, personality may influence whether or not CWBs are included in one's response repertoire. That is, only a subset of employees (e.g., those low in conscientiousness, or high in NA) may even consider engaging in CWBs in response to work stressors. Future research could ask participants to create a list of behaviors that they would consider using at work to deal with stressors. Personality measures may predict the extent to which CWBs appear on such lists. Similarly, personality could impact the extent to which employees engage in other responses prior to engaging in CWBs. That is, some employees may engage in CWBs only after more constructive behaviors have proved ineffective, whereas other employees may engage in CWBs as an

initial response. Future research examining the effects of personality on the work stressor-CWB relationship should thus examine more constructive coping behaviors, such as engaging in behaviors that alleviate or eliminate the stressor. Finally, personality could be related to one's threshold for engaging in CWBs. That is, some employees may engage in CWBs in response to only very extreme stressors, while others may engage in CWBs in response to even very minor stressors. If this explanation is correct, then future research may find that personality moderates the work stressor-CWB relationship when minor stressors but not major stressors are examined.

In sum, the current study found both main and interactive effects of work stressors and employee personality on CWBs. Given the important practical and theoretical implications of CWBs, we encourage additional research on this topic.

References


- Aiken, L. S., & West, S. G. (1991). *Multiple regression: Testing and interpreting interactions*. New York: Sage.
- Baron, R. A., Neuman, J. H., & Geddes, D. (1999). Social and personal determinants of workplace aggression: Evidence for the impact of perceived injustice and the type A behavior pattern. *Aggressive Behavior, 25*, 281-296.
- Bennett, R. J., & Robinson, S. L. (2000). Development of a measure of workplace deviance. *Journal of Applied Psychology, 85*, 349-360.
- Berry, C. M., Ones, D. S., & Sackett, P. R. (2007). Interpersonal deviance, organizational deviance, and their common correlates: A review and meta-analysis. *Journal of Applied Psychology, 92*, 410-424.
- Bowling, N. A., & Beehr, T. A. (2006). Workplace harassment from the victim's perspective: A theoretical model and meta-analysis. *Journal of Applied Psychology, 91*, 998-1012.
- Bruck-Lee, V., & Spector, P. E. (2006). The social stressors-counterproductive work behaviors link: Are conflicts with supervisors and co-workers the same? *Journal of Occupational Health Psychology, 11*, 145-156.
- Butt, Z. A., Stauss, M. E., Smyth, K. A., & Rose-Rego, S. K. (2002). Negative affectivity and emotion focused coping in spouse caregivers of persons with Alzheimer's disease. *Journal of Applied Gerontology, 21*, 471-483.
- Camara, W. J., & Schneider, D. L. (1994). Integrity tests: Facts and unresolved issues. *American Psychologist, 49*, 112-119.
- Carver, C. S., Scheier, M. F., & Weintraub, J. K. (1989). Assessing coping strategies: A theoretical based approach. *Journal of Personality and Social Psychology, 56*, 267-283.
- Chen, P. Y., & Spector, P. E. (1992). Relationship of work stressors with aggression, withdrawal, theft and substance use: An exploratory study. *Journal of Occupational and Organizational Psychology, 65*, 177-184.
- Colbert, A. E., Mount, M. K., Harter, J. K., Witt, L. A., & Barrick, M. R. (2004). Interactive effects of personality and perceptions of the work situation on workplace deviance. *Journal of Applied Psychology, 89*, 599-609.
- Connor-Smith, J. K., & Flachsbart, C. (2007). Relations between personality and coping: A meta-analysis. *Journal of Personality and Social Psychology, 93*, 1080-1107.
- Costa, P. T., Jr., & McCrae, R. M. (1992). *Revised NEO Personality Inventory (NEO PI R) and NEO Five Factor Inventory (NEO-FFI) Professional Manual*. Odessa, Florida: Psychological Assessment Resources, Inc.
- Cullen, M. J., & Sackett, P. R. (2003). Personality and counterproductive work behavior. In M. Barrick and A. M. Ryan (Eds.), *Personality and work*. San Francisco: Jossey-Bass, pp. 150-182.
- Dalal, R. S. (2005). A meta-analysis of the relationship between organizational citizenship behavior and counterproductive work behavior. *Journal of Applied Psychology, 90*, 1241-1255.
- Diefendorff, J. M., & Mehta, K. (2007). The relations of motivational traits with workplace deviance. *Journal of Applied Psychology, 92*, 967-977.
- Digman, J. M. (1997). Higher-order factors of the Big Five. *Journal of Personality and Social Psychology, 73*, 1246-1256.
- Donnellan, M. B., Oswald, F. L., Baird, B. M., & Lucas, R. E. (2006). The Mini-IPIP Scales: Tiny-yet effective measures of the Big Five Factors of Personality. *Psychological Assessment, 18*, 192-203.
- Dudley, N. M., Orvis, K. A., Lebecki, J. E., & Cortina, J. M. (2006). A meta-analytic investigation of conscientiousness in the prediction of job performance: Examining the intercorrelations and the incremental validity of narrow traits. *Journal of Applied Psychology, 91*, 40-57.
- Eaton, R. J., & Bradley, G. (2008). The role of gender and negative affectivity in stressor appraisal and coping selection. *International Journal of Stress Management, 15*, 94-115.
- Fickova, E. (2002). Impact of negative emotionality on coping with stress in adolescents. *Study Psychologica, 44*, 219-226.
- Folkman, S., Lazarus, R. S., Gruen, R. J., & DeLongis, A. (1986). Appraisal, coping, health status, and psychological symptoms. *Journal of Personality and Social Psychology, 50*, 571-579.
- Fox, S., Spector, P. E., Goh, A., & Bruursema, K. (2007). Does your coworker know what you're doing? Convergence of self- and peer-reports of counterproductive work behavior. *International Journal of Stress Management, 14*, 41-60.
- Fox, S., Spector, P. E., & Miles, D. (2001). Counterproductive work behavior (CWB) in response to job stressors and organizational justice: Some mediator and moderator tests for autonomy and justice. *Journal of Vocational Behavior, 59*, 291-309.
- Frese, M., & Zapf, D. (1988). Methodological issues in the study of work stress: Objective vs. subjective measurement and the question of longitudinal studies. In C. L. Cooper & R. Payne (Eds.), *Causes, coping and consequences of stress at work* (pp. 375-411). Chichester, UK: Wiley.
- Glazer, S., & Beehr, T. A. (2005). Consistency of implications of three role stressors across four countries. *Journal of Organizational Behavior, 26*, 467-487.
- Goldberg, L. R. (1990). An alternative "description of per-

- personality": The Big-Five factorstructure. *Journal of Personality and Social Psychology*, 59, 1216-1229.
- Goldberg, L. R., Johnson, J. A., Eber, H. W., Hogan, R., Ashton, M. C., Cloninger, C. R., et al. (2006). The International Personality Item Pool and the future of public-domain personality measures. *Journal of Research in Personality*, 40, 84-96.
- Grebner, S., Semmer, N. K., & Elfering, A. (2005). Working conditions and three types of well-being: A longitudinal study with self-report rating data. *Journal of Occupational Health Psychology*, 10, 31-43.
- Greenberg, J. (1990). Employee theft as a reaction to underpayment inequity: The hidden cost of pay cuts. *Journal of Applied Psychology*, 75, 561-568.
- Greenberg, J. (1997). The STEAL motive: Managing the social determinants of employee theft. In R. Giacalone & J. Greenberg (Eds.), *Antisocial behavior in organizations* (pp. 85-108). Thousand Oaks, CA: Sage.
- Gruys, M. L., & Sackett, P. R. (2003). The dimensionality of counterproductive work behavior. *International Journal of Selection and Assessment*, 11, 30-42.
- Hershcovis, M. S., Turner, N., Barling, J., Arnold, K. A., Dupré, K. E., Inness, M., et al. (2007). Predicting workplace aggression: A meta-analysis. *Journal of Applied Psychology*, 92, 228-238.
- International Personality Item Pool: A scientific laboratory for the development of advanced measures of personality traits and other individual differences. (n.d.). Retrieved March 2, 2008, from <http://ipip.ori.org/>
- Jex, S. M., Beehr, T. A., & Roberts, C. K. (1992). The meaning of occupational stress items to survey respondents. *Journal of Applied Psychology*, 77, 623-628.
- Judge, T. A., Ilies, R., & Scott, B. A. (2006). Work-family conflict and emotions: Effects at work and at home. *Personnel Psychology*, 59, 779-814.
- Lazarus, R. S., & Folkman, S. (1984). *Stress, appraisal, and coping*. New York: Springer.
- Lazarus, R. S., & Folkman, S. (1987). Transactional theory and research on emotions and coping. *European Journal of Personality*, 1, 141-169.
- Luszczynska, A., & Cieslak, R. (2005). Protective, promotive, and buffering effects of perceived social support in managerial stress: The moderating role of personality. *Anxiety, Stress, and Coping*, 18, 227-244.
- Maxwell, S. E., & Cole, D. A. (2007). Bias in cross-sectional analyses of longitudinal mediation. *Psychological Methods*, 12, 23-44.
- McCrae, R. R., & Costa, P. T. (1986). Personality, coping, and coping effectiveness in an adult sample. *Journal of Personality*, 54, 385-405.
- Miles, D. E., Borman, W. E., Spector, P. E., & Fox, S. (2002). Building an integrative model of extra role work behaviors: A comparison of counterproductive work behavior with organizational citizenship behavior. *International Journal of Selection and Assessment*, 10, 51-57.
- Mount, R., Ilies, R., & Johnson, E. (2006). Relationship of personality traits and counterproductive work behaviors: The mediating effects of job satisfaction. *Personnel Psychology*, 59, 591-622.
- Murphy, K. R. (1993). *Honesty in the workplace*. Belmont, CA: Brooks/Cole.
- O'Brien, T. B., & DeLongis, A. (1996). The interactional context of problem-, emotion-, and relationship-focused coping: The role of the Big Five Personality Factors. *Journal of Personality*, 64, 775-813.
- O'Brien, T. B., Terry, D. J., & Jimmieson, N. L. (2008). Negative affectivity and responses to work stressors: An experimental study. *Anxiety, Stress and Coping: An International Journal*, 21, 55-83.
- Penney, L. M., & Spector, P. E. (2002). Narcissism and counterproductive work behavior: Do bigger egos mean bigger problems? *International Journal of Selection and Assessment*, 10, 126-134.
- Penney, L. M., & Spector, P. E. (2005). Job stress, incivility, and counterproductive work behavior (CWB): The moderating role of negative affectivity. *Journal of Organizational Behavior*, 26, 777-796.
- Piccolo, R. F., & Colquitt, J. A. (2006). Transformational leadership and job behaviors: The mediating role of job characteristics. *Academy of Management Journal*, 49, 327-340.
- Reynolds, S. J., & Ceranic, T. L. (2007). The effects of moral judgment and moral identity on moral behavior: An empirical examination of the moral individual. *Journal of Applied Psychology*, 92, 1610-1624.
- Robinson, S. L., & Bennett, R. J. (1995). A typology of deviant workplace behaviors: A multidimensional scaling study. *Academy of Management Journal*, 38, 555-572.
- Salgado, J. (2002). The Big Five personality dimensions and counterproductive behavior. *International Journal of Selection and Assessment*, 10, 117-125.
- Spector, P. E. (2006). Method variance in organizational research: Truth or urban legend? *Organizational Research Methods*, 9, 221-232.
- Spector, P. E., & Fox, S. (2002). An emotion-centered model of voluntary work behavior: Some parallels between counterproductive work behavior and organizational citizenship behavior. *Human Resources Management Review*, 12, 269-292.
- Spector, P. E., & Fox, S. (2005). The stressor-emotion model of counterproductive work behavior. In S. Fox, & P. E. Spector (Eds.), *Counterproductive behavior. Investigations of actors and targets*. Washington, DC: American Psychological Association.
- Spector, P. E., Fox, S., Penney, L. M., Bruursema, K., Goh, A., & Kessler, S. (2006). The dimensionality of counterproductivity: Are all counterproductive behaviors created equal? *Journal of Vocational Behavior*, 68, 446-460.
- Spector, P. E., & Jex, S. M. (1998). Development of four self-report measures of job stressors and strain: Interpersonal Conflict at Work Scale, Organizational Constraints Scale, Qualitative Workload Inventory, and Physical Symptoms Inventory. *Journal of Occupational Health Psychology*, 3, 356-367.
- The StudyResponse Project. (n.d.). Retrieved March 2, 2008, from <http://studyresponse.syr.edu/studyresponse/index.htm>
- Vardi, Y., & Weitz, E. (2004). *Misbehavior in organizations*. Mahwah, NJ: Erlbaum.
- Vollrath, M., Torgersen, S., & Alnaes, R. (1995). Personality as long-term predictor of coping. *Personality and Individual Differences*, 18, 117-125.
- Watson, D., & Clark, L. A. (1984). Negative affectivity: The disposition to experience aversive emotional states. *Psychological Bulletin*, 96, 465-490.
- Watson, D., & Clark, L. A. (1992). On traits and temperament: General and specific factors of emotional experi-

ence and the relation to the five-factor model. *Journal of Personality*, 60, 441-476.
 Watson, D., Clark, L. A., & Tellegen, A. (1988). Development and validation of brief measures of positive and negative affectivity: The PANAS scales. *Journal of Personality and Social Psychology*, 54, 1063-1070.
 Watson, D., & Hubbard, B. (1996). Adaptational style and

dispositional structure: Coping in the context of the Five-Factor Model. *Journal of Personality*, 64, 737-776.

Received May 19, 2008
 Revision received June 28, 2009
 Accepted June 28, 2009 ■



AMERICAN PSYCHOLOGICAL ASSOCIATION

SUBSCRIPTION CLAIMS INFORMATION

Today's Date: _____

We provide this form to assist members, institutions, and nonmember individuals with any subscription problems. With the appropriate information we can begin a resolution. If you use the services of an agent, please do **NOT** duplicate claims through them and direct to us. **PLEASE PRINT CLEARLY AND IN INK IF POSSIBLE.**

| | |
|--|---|
| PRINT FULL NAME OR KEY NAME OF INSTITUTION | MEMBER OR CUSTOMER NUMBER (MAY BE FOUND ON ANY PAST ISSUE LABEL) |
| ADDRESS | DATE YOUR ORDER WAS MAILED (OR PHONED) |
| CITY STATE/COUNTRY ZIP | _____ PREPAID _____ CHECK _____ CHARGE CHECK/CARD CLEARED DATE: _____ |
| YOUR NAME AND PHONE NUMBER | (If possible, send a copy, front and back, of your cancelled check to help us in our research of your claim.) ISSUES: _____ MISSING _____ DAMAGED |

| TITLE | VOLUME OR YEAR | NUMBER OR MONTH |
|-------|----------------|-----------------|
| | | |
| | | |
| | | |

Thank you. Once a claim is received and resolved, delivery of replacement issues routinely takes 4-6 weeks.

(TO BE FILLED OUT BY APA STAFF)

| | |
|----------------------|-------------------------|
| DATE RECEIVED: _____ | DATE OF ACTION: _____ |
| ACTION TAKEN: _____ | INV. NO. & DATE: _____ |
| STAFF NAME: _____ | LABEL NO. & DATE: _____ |

Send this form to APA Subscription Claims, 750 First Street, NE, Washington, DC 20002-4242

PLEASE DO NOT REMOVE. A PHOTOCOPY MAY BE USED.