Psychological Contract Breach and Counterproductive Work Behavior: A Moderated Mediation Model

ABSTRACT

Our research explores the relationship between psychological contract breach and counterproductve work behavior. We suggest that individuals’ beliefs that their organization is to blame for intentionally breaching a psychological contract (internal attribution) mediates the relationship between psychological contract breach and counterproductive work behavior. We also propose that moral disengagement moderates this mediated relationship, such that individuals who blame their organization and are high in moral disengagement will be more likely to engage in counterproductive work behavior. Utilizing a sample of manufacturing employees from China, we found support for the conditional indirect effect, demonstrating that internal attribution for psychological contract breach and moral disengagement are important factors in the psychological contract breach and counterproductive work behavior relationship.

Keywords: Psychological contracts/employment relationships; aggression/anti-social behavior/counter-productive/deviance; perception/attribution
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Counterproductive work behavior (CWB) is a common and costly problem for many organizations (Berry, Carpenter, & Barratt, 2012). CWB has been defined as intentional, deviant behavior directed toward individuals or the organization that contradicts organizational norms and causes harm to the organization (Bennett & Robinson, 2000). Although there has been much focus on potential antecedents of workplace deviance (e.g., Gonzalez-Mulé, Mount, & Oh, 2014; O’Boyle, Forsyth, Banks, & McDaniel, 2012), limited research focuses on the explanatory mechanisms for why individuals choose to engage in negative behavior at work (Bordia, Restubog, & Tang, 2008; Griffin & Lopez, 2005). Psychological contract breach (PCB) has been studied as a potential precursor to employee engagement in deviant behavior. While some researchers have found a positive relationship between PCB and CWB (e.g., Chao, Cheung, & Wu, 2011; Jensen, Opland, & Ryan, 2010), others have had varying results (e.g., Bordia et al., 2008). With the exception of Bordia and colleagues (2008), the majority of research exploring PCB and CWB has been cross-sectional (Fox & Spector, 2005) and fails to explore why and when PCB relates to CWB. Utilizing a sensemaking perspective, we suggest that employee causal attributions are important in unraveling the relationship between PCB and CWB.

Though previous research has suggested that eliminating PCB in the workplace could decrease the prevalence of CWB, some breach is inevitable. Organizations may strive to fulfill agreements made with employees, but communication misunderstandings (e.g., Turnley, Bolino, Lester, & Bloodgood, 2003; Turnley & Feldman, 1999a) or external factors such as government regulations or a declining economy may prevent fulfillment of these promises. We expect that individual causal attributions contribute to how employees react to organizational PCB.
Specifically, when individuals experience a negative event (i.e., breach), they will likely engage in sensemaking processes to understand the cause of the event.

The purpose of our research is to answer the questions: “When do individuals react negatively to psychological contract breach?” and “How do employees’ internal attribution for psychological contract breach and moral disengagement affect the relationship between psychological contract breach and counterproductive work behavior?” This paper makes three major contributions. First, based on a sensemaking framework, we explore and connect the relationship between PCB and CWB, suggesting that attributions for PCB provide an important mediating mechanism. Second, we introduce moral disengagement as a boundary condition determining when individuals decide whether or not to engage in CWB following PCB. Finally, previous measures of attributions for PCB utilized one or two items to assess composite measures of PCB with little validation for these measures. In a pilot study, we develop and evaluate a new measure of attributions for PCB. Overall, we seek to explore why and when individuals engage in CWB after experiencing PCB.

**Psychological Contract Breach**

Rousseau (1995) defined a psychological contract as “individual beliefs, shaped by the organization, regarding terms of an exchange agreement between individuals and their organization” (9). Based on social exchange theory (Blau, 1964; Gouldner, 1960), perceived psychological contract breach (PCB) occurs when the terms of the contract are violated (either by the employee, organization, or organizational agent; Rousseau, 1995). Breach can occur in many forms, including an inaccurate job description, failure to receive a promotion, a change in compensation criteria, decreasing job security, and the elimination of promised training or other
organizational support (Rousseau, 1995). PCB has been described as a “dark, dysfunctional, and harmful workplace behavior” (Robinson & Brown, 2004: 331).

While perceived PCB is truly in the eye of the observer, breaking these promises often results in deleterious consequences (Rousseau, 1989). For example, in a diary study, Conway and Briner (2002) found that breach happens frequently, and often negatively affects individuals’ daily moods. Other outcomes of PCB include decreased: organizational trust (Deery, Iverson, & Walsh, 2006; Lo & Aryee, 2003; Montes & Irving, 2008; Robinson & Rousseau, 1994; Zhao, Wayne, Glibkowski, & Bravo, 2007), job satisfaction (Coyle-Shapiro & Kessler, 2000; Robinson & Rousseau, 1994; Turnley & Feldman, 2000), organizational commitment (Coyle-Shapiro & Kessler, 2000; Ng, Feldman, & Lam, 2010), organizational citizenship behavior (OCB; Turnley & Feldman, 2000), and in-role performance (Lester, Turnley, Bloodgood, & Bolino, 2002). Additionally, PCB results in increased feelings of violation (Bordia et al, 2008; Robinson & Morrison, 2000; Zhao et al., 2007), turnover intentions (Lo & Aryee, 2003; Robinson & Rousseau, 1994; Turnley & Feldman, 2000) and turnover (Robinson & Rousseau, 1994). While PCB often results in negative consequences, not all individuals who experience breach leave their organization (Zhao et al., 2007).

While previous research suggests that PCB typically elicits adverse reactions from the recipient of the breach, not all individuals who experience a breach will necessarily have a negative affective or behavioral response (Rousseau, 1995). After a negative or unexpected event, individuals are likely to engage in sensemaking or attributional processes to determine the cause of the event and understand the change in the environment (Kahneman, Knetsch, & Thaler, 1986; Maitlis & Christianson, 2014; Weick, 1995; Wong & Weiner, 1981). Similarly, Morrison and Robinson (1997) suggested that individuals undergo a sensemaking process upon
experiencing the unexpected and damaging consequences typically associated with PCB. Robinson and Morrison (2000) found that individuals had stronger negative emotional reactions (i.e., violation) to breach when the organization was aware of the breach and did not follow fair procedures. Using this sensemaking perspective, we explore attributions as the explanatory mechanisms linking PCB to and counterproductive work behaviors.

**Counterproductive Work Behavior**

In addition to decreased performance and more negative job attitudes, psychological contract breach (PCB) researchers have suggested that individuals who experience a breach may be likely to engage in behavior that is harmful to their organizations (e.g., Turnley & Feldman, 1999b; Robinson & Brown, 2004). Counterproductive work behavior (CWB) is defined as intentional, voluntary behavior directed at either the organization (e.g., coming in late to work, littering the work environment, or stealing from the organization) or individuals within the organization (e.g., making fun of coworkers, stealing from coworkers, or gossiping) that violates organizational norms and causes harm to the organization (Bennett & Robinson, 2000).

Previous research on PCB and CWB has utilized equity theory (Adams, 1965) as a framework for explaining why individuals who experience breach may retaliate with negative workplace behaviors. Specifically, they suggested that individuals who experience PCB may seek to restore equity by lowering their effort, or taking additional benefits from the organization (e.g., stealing, cheating on expense reports; Chao et al., 2011). Bordia and colleagues (2008) demonstrated that individuals may engage in a higher frequency of CWB as a form of revenge when individuals are lower in self-control and experience PCB. Jensen and colleagues (2010) also found that while relational PCB is positively related to the abuse, production deviance, and withdrawal dimensions of CWB, transactional PCB is only positively related to abuse. Finally,
Chao and colleagues (2011) found PCB to be positively related to CWB. Overall, these studies suggest PCB may sometimes relate to CWB, but there is still a need to explore why and when individuals who experience PCB engage in CWB. In the next section, we utilize a sensemaking perspective to explain how sensemaking triggers (i.e., a breach) may lead to the exploration of causes for breach. These sensemaking processes help individuals decide what actually happened and how to respond (Maitlis & Christianson, 2014). We explore these differential sensemaking reactions to PCB through the study of attributions for PCB.

**Attributions for Psychological Contract Breach**

Individuals have a strong need to control their environment and often seek to do so by determining the causes of events and others’ behaviors (Heider, 1958). In general, attribution theory is a sensemaking theory that suggests that individuals “interpret behavior in terms of its causes” and that “these interpretations play an important role in determining reactions to the behavior” (Kelley & Michela, 1980: 458). Based on the information, motivation, and beliefs that an individual possesses, that individual will undergo a cognitive process to determine whether the cause of an event or other’s behavior is either internal (e.g., based on the other individual’s effort and/or ability) or external (e.g., based on the other individual’s task and/or luck). These attributions result in the individual’s behavioral and affective responses to the event. In the management literature, researchers have examined employees’ internal and external attributions for human resource practices (Nishii, Lepak, & Schneider, 2008) and organizational change (Chaudhry, Wayne, & Schalk, 2009), where employees ascribed attributions for these events to either the organization or organizational agent (internal) or environmental constraints (external).

Specifically related to the psychological contract literature, Morrison and Robinson (1997) introduced a theoretical model based on work by Rousseau (1995) providing different
explanations for PCB. Reneging suggests that the organization acknowledges the psychological contract, but still fails to follow through on promises. Organizational reneging can occur because the organization is either unable to fulfill the contract due to external factors or because the organization is unwilling. Incongruence occurs when there is a mismatch between the organization’s and employee’s definition of the psychological contract. Finally, nullification assumes that the employee did not uphold his or her end of the contract. Additionally, Turnley and Feldman (1999b) suggested that individuals would be less likely to perceive discrepancies as violations when they believe the breach occurred due to external forces rather than organizational unwillingness.

While several theoretical articles have introduced the idea that employees make attributions for PCB (e.g., Morrison & Robinson, 1997; Rousseau, 1995; Turnley & Feldman, 1999b), little empirical work has been conducted on the outcomes of these attributions. External justification has been shown to moderate the relationship between PCB and behaviors (e.g., Chao et al., 2011; Turnley & Feldman, 1999a) with low levels of external justification and high levels of PCB leading to negative behaviors (i.e., CWB and job search). Limited support has been found for the moderating effect of internal attributions. For example, Turnley, Bolino, Lester, and Bloodgood (2003) failed to find support for attributions as a moderator of the relationships between PCB and in-role performance and OCB, instead, they found a negative main effect between attribution of intentional PCB and in-role performance. Additionally, Chao and colleagues (2011) found support for a positive main effect between internal attributions for PCB and CWB, but did not find support for the moderating role of internal attributions on the relationship between PCB and CWB.
Other existing studies of the effect of attributions on outcomes focus on whether or not the breach was a function of the employee’s performance or intentional organizational reneging (e.g. Kim & Choi, 2010), or a misunderstanding of the agreement (e.g., Robinson & Morrison, 2000). Despite these results, research has indicated that individuals are likely to have negative responses to contract breach when they believe that the organization’s actions are intentional and unjustifiable (Turnley et al., 2003). As suggested by research on attribution theory and sensemaking (e.g., Maitlis & Christianson, 2014; Wong & Weiner, 1981; Weick, 1995), when individuals experience a negative event, they will want to explain and make sense of the event to keep the environment under control. Specifically, they will want to decide whether the organization or the environment should be held responsible for the negative event. We expect that sensemaking in the form of ascribing attributions for breach is more appropriate as a mediating mechanism between the negative event and the behavioral response, as individuals retrospectively make sense of the event (Weick, 1995).

Although previous research identified incongruence and nullification as additional explanations for PCB (e.g., Morrison & Robinson, 1995; Rousseau, 1995; Turnley & Feldman, 1999b), we focus specifically on breach when the organization was aware of the contract, but still neglected to fulfill promised obligations. When organizations knowingly fail to meet employee expectations, individuals are likely to have a stronger affective reaction (Robinson & Morrison, 2000). As such, they will be more likely to engage in sensemaking processes to make sense of these intentional violations. When organizational agents are unaware of the psychological contract or the employee fails to live up to expectations, individuals will be less likely to need to seek explanations for the breach. Similar to research by Nishii and colleagues (2008) and Chaudhry and colleagues (2009), we propose two dimensions of attributions for PCB:
internal and external. We define *internal attribution for PCB as the individual’s perception that actions within the control of the organization led to the organization not fulfilling promises.* We define *external attribution for PCB as the individual’s perception that circumstances outside of the organization’s control led to the organization not being able to fulfill promises.* Overall, we expect that when individuals experience a negative event in the form of a breach, they will make causal attributions for the breach. The attributions construct will consist of two dimensions.

*Hypothesis 1a: There will be two distinct dimensions of attributions for psychological contract breach: internal and external attributions.*

Although we expect that individuals will make both internal and external attributions for PCB, we expect that individuals will be more likely to blame the organization for PCB than external factors. Fundamental attribution error suggests that individuals weigh internal characteristics more than external factors when explaining others’ behaviors (Ross, 1977). Similarly, we expect that individuals will put more emphasis on organizations’ internal factors rather than external forces when assessing attributions for PCB. Therefore, we posit:

*Hypothesis 1b: Psychological contract breach will have a stronger positive relationship with internal attributions than with external attributions.*

The underlying concept of sensemaking perspectives is that “reality is an on-going accomplishment that emerges from efforts to create order and make retrospective sense of what occurs” (Weick, 1993: 635) or that sensemaking is a “process through which people work to understand issues or events that are novel, ambiguous, confusing, or in some other way violate expectations” (Maitlis & Christianson, 2014: 57). Sensemaking is a retrospective process, with the interpretation of organizational processes occurring *after* the event has transpired (Weick, 1995). For example, an attribution for PCB would not occur until after the breach has occurred.
As part of the sensemaking process, individuals attribute responsibility of the event as a way of managing their surroundings and guiding future behavior (Kelley, 1971; Weiner, 1985). Attributional theories suggest that when the agent’s action is justified by external events, individuals will be more tolerant and less likely to reciprocate the action, compared to when the individual considers the agent’s action to be intentional (Kelley & Michela, 1980). Additionally, Ortony and colleagues (1988) suggested that individuals who blame an organization for negative actions will be more likely to feel anger and other destructive emotions toward their organization. Consistent with this, Burton, Taylor, and Barber (2014) found that individuals who blamed their supervisors for abusive supervision were more likely to have low interactional justice and in response, more likely to engage in direct and indirect expressions of aggression.

Accordingly, we expect that attributions for PCB will mediate the relationship between PCB and CWB. Experiencing a negative or unexpected event triggers a sensemaking process, where individuals retrospectively interpret and reflect on the lived experience of the event (Weick, 1995). In the same way, we expect that PCB will trigger the assignment of attributions for the breach, which will then lead to employee reactions or behaviors.

Hypothesis 2: Controlling for external attribution for psychological contract breach, internal attribution for psychological contract breach will mediate the positive relationship between psychological contract breach and counterproductive work behavior.

Moral Disengagement

Social cognitive theory (Bandura, 1986) suggests that individuals regulate their behavior and progress by self-monitoring, comparing their behavior with their own moral ideals and standards, and assessing their affective reactions to behaviors (Bandura, 1991). With these self-
regulatory processes, individuals strive to behave in ways that align with their moral standards and increase their satisfaction and self-worth (Bandura, 1999). As such, individuals will be unlikely to engage in immoral behavior without experiencing self-condemnation. In comparison, moral disengagement results from the process of turning off these regulatory processes by justifying otherwise reprehensible activities. These activities can be deemed acceptable by an individual through a number of rationalization processes, including: the reconceptualization of the activity so it is no longer viewed as immoral, a diffusion of responsibility, the minimization of consequences, dehumanization of the targets of the immoral behavior, or attribution of blame to the victim (Bandura, 1999; 2002). Moral disengagement is primarily measured as a proneness for moral disengagement, assessing the individual’s readiness to engage in rationalization tactics (Bandura, 1999). Moral disengagement has been studied in the context of the Holocaust (Bandura, 1999; Bandura, 2002), terrorism attacks (Bandura, 2002), and more recently in the organizational literature, unethical behavior and decision making at work (Detert, Treviño, & Sweitzer, 2008; Welsh, Ordóñez, Snyder, & Christian, 2014), propensity to lie (Naquin, Kurtzberg, & Belkin, 2010), and rationalization for aggression in sport teams (Frost, Ko, & James, 2007). Following Welsh and colleagues (2014), we define moral disengagement as “a form of moral self-deception that allows individuals to justify unethical behavior and avoid self-censure” (p. 3). In our study, we explore how proneness for moral disengagement affects an individual’s tendency to engage in CWB.

**Moderating Role of Moral Disengagement**

When employees blame their organization for a PCB and are high in moral disengagement, they may justify engaging in CWB through moral justification, advantageous comparison, and assigning blame to the organization. By utilizing these tactics, employees may
reframe CWB to make it socially and personally acceptable. For example, an employee considering dragging out work in order to get overtime may rationalize his behavior by telling himself that he is making up for his lack of bonus this year and using the money to feed his children. Thus, we posit that individuals who make internal attributions for their PCB and are also high in moral disengagement will be more likely to engage in CWB. We expect that the moderating effect takes place after the attribution of responsibility for PCB because at that stage, individuals have ascribed an attribution for the breach, but have not yet decided how to respond to the breach. Moral disengagement will determine whether or not an individual is more likely to reciprocate negative behavior back to the organization. Therefore, we expect:

_Hypothesis 3: Controlling for external attribution for psychological contract breach, moral disengagement will moderate the mediated relationship between psychological contract breach and counterproductive work behavior via internal attributions for psychological contract breach, such that the relationship between internal attributions for psychological contract breach and counterproductive work behavior is strengthened only for individuals who are high in moral disengagement._

Method

_Pilot Study_. The purpose of the pilot study is to assess convergent and discriminant validity of the new measure as well as test hypotheses 1a-b. Following guidelines from Hinkin (1998), we developed and evaluated a new measure of attributions for PCB. As previously mentioned, existing scales measuring attributions for PCB typically evaluated the
attribution for specific dimensions of breach, using one or two items to assess each type of attribution (e.g., Lester et al., 2002; Turnley et al., 2003; Turnley & Feldman, 1999a). As such, we sought to develop a valid scale focusing on global measures of PCB. We underwent a rigorous scale development process to create and validate a measure of attributions for PCB.

As part of the validation process, we compared our measure to organizational identification, need for organizational identification, and perceived supervisor support. These measures should be theoretically related to attributions for PCB, but not identical. First, when individuals have a strong identification with their organization, they see the organization’s accomplishments as their own (Ashforth & Mael, 1989), making them unlikely to blame the organization for PCB (Ortony, Clore, & Collins, 1988). Instead, they will be more likely to blame external factors beyond the organization’s control for PCB to preserve their positive perceptions of the organization and as a result, themselves. Second, individuals high in need for organizational identification feel that they must be in an organization that contributes to their self-efficacy and will have a strong desire to belong to an organization (Glynn, 1998). Thus, we expect that individuals who are high in need for organizational identification will be less likely to attribute PCB to their organization and instead will want to blame external forces outside of the organization for PCB. Third, perceived supervisor support (PSS) is the extent to which supervisors value and care about employee contributions and well-being (Maertz, Griffeth, Campbell, & Allen, 2007). As individuals high in PSS may give the employer more room for error when exploring whether or not the organization fulfilled its side of the employment contract (Aselage & Eisenberger, 2003), we expect that PSS will be negatively related to internal and positively related to external attributions for PCB.
**Sample and measures.** Individuals were recruited through two different methods. The first sample was recruited through word-of-mouth and internet advertisements (c.f. Meier & Spector, 2013). Recruitment emails with information on the study were sent to the administrative staff of a large Midwestern university’s business school as well as friends, colleagues, and family of the first and third authors through email, Facebook, and LinkedIn. All interested individuals were instructed to submit their email address at an online pre-survey website and 234 did so. From these 234 individuals who received the survey, 173 responded (74% response rate). Individuals were not compensated for their participation.

A second sample was gathered from employed individuals registered with Qualtrics Panels, an online survey response panel. Our respondents received electronic points equivalent to $5 in charity donations, gift cards, and other prizes. To ensure the quality of the responses, two attention filter questions were included and those not indicating the correct response to the filter questions were removed. Additionally, individuals who completed the survey in less than half of the average time for survey completion were eliminated. Finally, a visual check for random respondents was completed by the researchers prior to data analysis. Although we do not know how many individuals Qualtrics invited to complete our survey, 809 people started the survey but were either ineligible \((n = 291)\), did not finish the survey \((n = 102)\), or were removed as part of our quality checks \((n = 48)\). In the end, we had 368 people complete the survey (a response rate of 45% of those who started the survey).

In both recruitment samples, measures of PCB, attributions for PCB, organizational identification, need for organizational identification, PSS, and various demographic variables were administered. Of the 541 respondents across the two samples, 356 individuals experienced a breach and therefore completed the questions related to attributions for PCB (66% of total
participants). Due to missing data, 9 individuals were eliminated for a final sample size of 349. Survey responses included 65 (19%) respondents from the friends and family and administrative staff sample (i.e., researchers’ network sample) and 284 (81%) from the Qualtrics sample. To determine whether or not the samples could be combined, we conducted a multivariate analysis of variance (MANOVA) to determine whether significant differences existed between the two samples with respect to PCB, attributions for PCB, organizational identification, need for organizational identification, and perceived supervisor support. The results of the MANOVA demonstrated that the Wilks lambda test was significant $F(7, 341) = 2.06, p < .05$. The univariate F tests indicated that the samples differed on need for organizational identification only ($F(1, 347) = 5.55, p < .05$). We ran all analyses first controlling for sample and then without the sample control. The results without the sample control variable did not differ from results with the sample control variable. Therefore, we did not control for sample in our analyses.

The final sample of 349 individuals retained for hypothesis testing was comprised of 53% females with an average age of 43. In terms of education, 16% had completed high school, 33% had attended some college or had an associate’s degree, 36% had a bachelor’s degree, and 15% had a master’s degree or higher. The average job tenure was just over 7 years. In terms of race, 80% of respondents were white, 10% black, 4% Asian, 4% Hispanic, and 2% other races.

Finally, as part of the larger data collection from Qualtrics Panels, we recruited a separate sample to use solely for confirmatory factor analysis purposes. Of the 177 individuals who responded to this data collection, 132 (75%) experienced a breach and thus responded to the attributions for breach questions. This sample consisted of 57% females with an average age of 46. The average job tenure was 9 years. Respondents had various educational backgrounds: 16% had a high school diploma, 42% had attended some college or had an associate’s degree, 28%
had a bachelor’s degree, and 14% held a master’s degree or higher. Finally, 82% of respondents were white, 7% black, 5% Hispanic, 4% Asian, and 2% other races.

All variables were measured on a scale of 1 “strongly disagree” to 5 “strongly agree” unless otherwise indicated.

**Psychological contract breach.** For all samples, individuals were first given the 5-item global PCB measure developed by Robinson and Morrison (2000). Participants were asked to indicate whether or not their organization had fulfilled promises and commitments made to them over the course of their employment. A sample item included, “I have not received everything promised to me in exchange for my contributions” (α = .84).

**Attributions for psychological contract breach.** After completion of the PCB measure, individuals were asked to complete items related to attributions of PCB if they had experienced a contract breach. Based on our previous definitions, we developed a pool of 14 items (7 items for each proposed dimension). Eighteen subject matter experts (SMEs), all of whom have extensively published research on psychological contracts or employee attributions, reviewed our initial items by indicating which dimension it best reflected (a categorical response option), the relevance of the item to that dimension (1-4 rating), and the clarity of the item (1-4 rating). We also allowed for open-ended comments on the scale and asked them to indicate where they thought our items were deficient in measuring the construct or dimension. The vast majority (90%) of the SMEs provided open-ended comments on the scale items. Based on the feedback, we dropped six items, made revisions to the remaining eight items, and added two items. We sent the resulting 10 items to a smaller group of SMEs for more targeted feedback. From the second round of SME feedback, we settled on 10 items (5 for each proposed dimension). All items are listed in Table 1. The scale ranged from 1 “strongly disagree” to 5 “strongly agree”.
Respondents could also select 6 “not applicable” if they had not experienced a breach. Based on the results of factor analyses (reported below), we retained 5 items to measure internal attributions and 4 items to measure external attribution ($\alpha_{\text{internal}} = .93; \alpha_{\text{external}} = .86$).

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**Organizational identification.** Organizational identification was measured by the 6-item measure by Mael and Ashforth (1992). A sample item included, “When I talk about my organization, I usually say ‘we’ rather than ‘they’” ($\alpha = .87$).

**Need for organizational identification.** Need for identification was measured using Kreiner and Ashforth’s (2004) 7-item scale. A sample item included, “Without an organization to work for, I would feel incomplete” ($\alpha = .76$).

**Perceived supervisor support.** Perceived supervisor support was measured using the four items with the highest factor loadings from the Rhoades and Eisenberger (2006) measure. An example item included, “My supervisor values my contributions to the organization” ($\alpha = .93$).

**Control variables.** Bal, De Lange, Jansen, and Van Der Velde (2008) found that PCB affects the job attitudes of older and younger workers differently, thus, we controlled for age in all analyses. We also controlled for the other attribution dimension in each equation. Additionally, we ran all analyses also controlling for gender and organizational tenure and found no differences, thus, we did not control for gender and organizational tenure in our analyses.

**Pilot study results.** Means, standard deviations, alpha reliabilities, and correlations for study variables are included in Table 2.

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Insert Table 1 about here.

Insert Table 2 about here.
Hypothesis testing. After the preliminary content validation portion of our scale development, we sought to confirm the psychometric quality and assess dimensionality of our new scale (H1a). We first conducted a principal axis factor analysis (oblique rotation) with the 10 items developed to assess attributions for PCB, using the sample of 349 used to test our hypotheses. Utilizing syntax from Hayton, Allen, and Scarpello, 2004 (201), we conducted a parallel analysis. Finding support for hypothesis 1a, the first two components had higher actual eigenvalues than simulated eigenvalues, so two factors were retained. Factor 1 contained the five internal attribution for PCB items and explained 54.77% of the variance (eigenvalue = 5.48). Factor 2 was comprised of the five external attribution for PCB and explained 17.45% of the variance (eigenvalue = 1.75). All factor loadings were greater than .40 for each dimension. Cross-loadings were less than .17, exhibiting evidence of discriminant validity between the two dimensions. All factor loadings are reported in Table 1. Both dimensions of attributions for PCB demonstrated acceptable reliability (α<sub>internal</sub> = .93; α<sub>external</sub> = .86).

Next, to demonstrate discriminant validity of our new attribution measure from PCB, we utilized the separate sample of Qualtrics respondents (n = 132) to conduct a confirmatory factor analysis with the items from PCB and both internal and external attributions for PCB. We used robust full-information maximum likelihood estimation (MLR) to deal with nonnormality and missing data (Muthén & Muthén, 1998-2012). We also allowed the error terms for the reverse-scored PCB items to correlate to account for potential method effects. The model reached moderately acceptable fit (Satorra-Bentler $\chi^2$ (84) = 146.02, $p < .001$; $CFI = .91$; RMSEA = .08; $SRMR = .07$) for a three-factor structure representing PCB, internal attribution for PCB, and external attribution for PCB. Upon examination of the factor loadings, we found that the item, “My organization did not deliver on promises made to me because of external requirements such
as union contracts, client demands, or government regulations” had a much lower factor loading than the other items (.36). Note that this item also had a lower factor loading in the results of the principal axis factor analysis reported in Table 1. Furthermore, this item could be potentially confusing due to its reference to multiple constituencies. Therefore, we removed this item from the analysis. After removing the item, the model demonstrated acceptable fit (Satorra-Bentler $\chi^2(71) = 114.77, p < .001; CFI = .94; RMSEA = .07; SRMR = .06$). We then compared the three-factor model to three 2-factor models: Model 2A set the correlation between PCB and internal attribution for PCB to 1.00; Model 2B allowed the correlation between PCB and external attribution for PCB to be 1.00; and Model 2C set the correlation between internal and external attributions for PCB to 1.00. Following recommendations from Satorra (2000), we computed the chi-square difference test using the scaled chi-square guidelines from Satorra and Bentler (1999). The three-factor model fit the data better than Model 2A ($\Delta \chi^2(3) = 17.83, p < .001; CFI = .88; RMSEA = .09; SRMR = .11$), Model 2B ($\Delta \chi^2(3) = 86.84, p < .001; CFI = .79; RMSEA = .12; SRMR = .21$), and Model 2C ($\Delta \chi^2(3) = 30.40, p < .001; CFI = .79; RMSEA = .12; SRMR = .12$). The three latent factors had statistically significant path estimates to all scale items ($p < .01$). These results together demonstrate evidence of discriminant validity.

To test our hypothesis regarding our new measures’ relationship with PCB (H1b), we calculated the correlations between PCB and each of the two dimensions. PCB had a significant, positive relation with both internal and external attributions for PCB ($r = .68, p < .001; r = .22, p < .001$). Next, to examine whether or not PCB had a significantly stronger positive relation with internal attribution for PCB than external attribution for PCB, we first calculated correlations between PCB, internal attribution for PCB, and external attribution for PCB. We then used Hoerger’s (2013) web-based calculator to test the statistical significance between the dependent
correlations while taking into account the correlations between the two dependent variables (Steiger, 1980). We found support for Hypothesis 1b, demonstrating that the difference in the partial correlation between PCB and internal attribution for PCB \((r = .68)\) was significantly larger than the partial correlation between PCB and external attribution for PCB \((r = .22)\).

Scale validity. To explore our predictions concerning convergent and discriminant validity, the two dimensions of the new 9-item attributions for PCB measure were compared with other theoretically relevant variables as described earlier. Results of the regression analyses are reported in Table 3. Since the relationships between attributions for PCB, organizational identification, need for identification, and perceived supervisor support are in the expected directions, we have strong evidence for convergent and discriminant validity. Overall, we found sufficient evidence to justify the use of the new measure in our primary study.

Primary Study

The purpose of the primary study is to test the hypothesized moderated-mediation model exploring how moral disengagement affects the relationship between PCB and CWB through internal attributions for PCB.

Procedures and sample. Participants in this study were employees working in a manufacturing company in northeastern China. Hard copies of the questionnaires were sent to employees. To assure the confidentiality of participants’ personal information and data, participants placed their completed questionnaires in blank sealed envelopes attached with the questionnaires and returned the sealed envelopes to a secure box at their workplace. One of the researchers collected this box at the end of the day.
The data were collected at two time points. At time 1, we sent surveys to employees that included measures of control variables, PCB, attributions for PCB, and moral disengagement. A week later, we sent out surveys to employees that had measures of CWB. In total, 1,824 surveys were sent out at Time 1 and 1,284 were returned, which yielded a response rate of 70.3%. At Time 2, 1,824 surveys were sent out and 1,093 surveys were returned, yielding a response rate of 59.9%. After a list-wise deletion of the study variables, the final sample was reduced to 799 participants. Of these 799 participants, 25% were females, and 75% were males. The average age was 25.06 years (SD = 5.61), and the average tenure in the company was 1.81 years (SD = 2.07).

**Survey translation procedure.** Scales were translated from English into Chinese and back-translated into English following the procedure recommended by Brislin (1980). Three doctoral students who were fluent in both English and Chinese were asked to translate the English items into Chinese to ensure the validity and appropriateness of the items in Chinese context. Two other organizational scholars examined the translated Chinese items to identify any concerns, and these concerns were discussed with the researchers of this study. Once all parties agreed on the translation, another doctoral student back-translated the items into English.

**Measures.**

*Psychological contract breach.* PCB was measured using the same scale as the pilot study (Robinson and Morrison, 2000). Due to issues translating reverse-scored items to Chinese, we deleted one item (“I have not received everything promised to me in exchange for my contributions”) from the original five-item scale ($\alpha = .62$).

*Attributions for psychological contract breach.* Internal attribution for PCB was measured by the 5-item scale developed in the pilot study ($\alpha = .93$). Additionally, external attribution for PCB was measured by the 4-item scale developed in the pilot study ($\alpha = .80$).
**Counterproductive work behavior.** CWB was measured by a 10-item short version of Counterproductive Work Behavior Checklist (Spector et al., 2006). A sample item included, “Purposely wasted your employer’s materials/supplies”. Employees reported how often they did the described behaviors on a 5-point Likert scale, ranging from 1 “never” to 5 “everyday” ($\alpha = .90$).

**Moral disengagement.** Moral disengagement was measured by a 24-item scale developed by Detert and colleagues (2008). A sample item included, “Stealing some money is not too serious compared to those who steal a lot of money” on a 5-point Likert scale, ranging from 1 “strongly disagree” to 5 “strongly agree” ($\alpha = .91$).

**Control variables.** Research by previous scholars has suggested that demographic and human capital variables may play important roles in organizational behavior context (Hoobler, Wayne, & Lemmon, 2009; Ng & Feldman, 2010). As such, we controlled for age, gender, and organizational tenure. In particular, gender was coded “1” for males, and “0” for females.

**Analyses and results.** The hypotheses were tested using a moderated-mediation regression analysis of conditional indirect effects. We used the SPSS macro “PROCESS” developed by Hayes (2012) to test the theoretical model (H2 and 3). This test of moderated-mediation is more direct and allows researchers to conduct it in the context of the full statistical model, including moderators. Continuous variables were centered prior to their inclusion in the analysis model.

**Preliminary analyses.** The descriptive analysis for the current study is shown in Table 4, which includes means, standard deviation and zero-order correlations.

---

Insert Table 4 about here.

---
Before testing our hypotheses, a confirmatory factor analysis was conducted in order to establish the convergence yet independence of primary constructs. Results are presented in Table 5. To ensure each factor related to the latent factor while minimizing wording and method effects, we created parcels for moral disengagement (Marsh, Hau, Balla, & Grayson, 1998). Moral disengagement has eight dimensions, therefore, we calculated eight parcels to represent these eight dimensions and used these parcels in the confirmatory factor analysis. Five different statistical models were tested, each with an increasing number of unique factors. The fifth model in which all five variables were modeled as unique, yet related constructs demonstrated the best fit of all the models ($\chi^2 = 1758.36$, $df = 424$, $p < .01$; $RMSEA = .06$; $CFI = .91$; $SRMR = .07$).

Most importantly, the fifth model fits better than the fourth model ($\Delta\chi^2 = -102.65$, $df = 4$, $p < .01$) in which the items for internal and external attributions loaded on the same latent construct.

Insert Table 5 about here.

**Hypothesis testing.** Hypothesis 2 predicted that internal attribution for PCB mediates the positive relationship between PCB and CWB. The results for this hypothesis are reported in Table 6. After controlling for gender, age, tenure, and external attribution for PCB in our regression analysis, PCB was found to have a significant and positive relationship ($\beta = .36$, $p < .01$) with internal attribution for PCB. In addition, our results confirmed that internal attribution for PCB had a positive and significant relationship with CWB ($\beta = .13$, $p < .01$). The indirect effect of PCB on CWB ($\beta = .06$) was also significant, demonstrating that internal attribution for PCB mediates the relationship between PCB and CWB. Therefore, Hypothesis 2 was supported.

Insert Table 6 about here.
Hypothesis 3 predicted that moral disengagement moderates the mediated relationship between PCB and CWB via internal attributions for PCB, so that when moral disengagement is high, the mediated relationship between PCB and CWB is significant, and when moral disengagement is low, the relationship is non-significant. The results for this hypothesis are also shown in Table 6. The interaction between moral disengagement and internal attribution of PCB was significant ($\beta = .15, p < .01$). In order to further probe the nature of the interactional effect, the graph of the interaction is depicted in Figure 2. Consistent with Hypothesis 3, this graph indicates that the relationship between internal attributions of PCB and CWB is positive and significant when moral disengagement level is high (simple slope $= .20, p < .01$), yet not significant when employee’s moral disengagement level is low (simple slope $= .07, \text{ n.s }$). In addition, we also tested the conditional indirect relationship, and consistent with our prediction, we found that the mediated relationship between PCB and CWB is significant and positive when moral disengagement level is high or average ($\beta = .08, 95\% \text{ CI} = .05, .12$, when moral disengagement is high; $\beta = .05, 95\% \text{ CI} = .03, .07$, when moral disengagement level is average), and not significant when moral disengagement level is low ($\beta = .01, 95\% \text{ CI} = -.01, .03$). Therefore, Hypothesis 3 was supported.

Insert Figure 2 about here.

Discussion

We sought to unravel the black box between psychological contract breach and counterproductive work behavior in determining when and why individuals react negatively to organizational PCB. We found that the relationship between PCB and CWB is mediated by
internal attribution for PCB when employees’ are higher in moral disengagement. In addition, we found support for a measure of the two-dimensional PCB attributions measure.

**Theoretical Implications**

Our research contributes to management literature in three ways. First, using a sensemaking perspective, we developed research on the relationship between CWB and PCB. When individuals experience the negative event of PCB, they seek to make sense of the event by determining the cause of the breach. We found that individuals’ beliefs that the organization was to blame for PCB mediated the relationship between PCB and CWB. Future research should explore potential moderators for the PCB and internal attribution for PCB relationship to determine additional factors that may influence whether or not individuals blame their organization for breach.

Second, we demonstrate that individuals who experience breach and blame the organization do not necessarily retaliate against the organization in the form of CWB. An individual’s proneness to moral disengagement determines whether or not the individual actually engages in deviant behavior. We found that when individuals were high in moral disengagement, they were more likely to partake in CWB. Additional research should be conducted on potential antecedents for employee proneness to moral disengagement. Finally, we underwent a rigorous scale development process to create and evaluate a new measure of attributions for PCB. We found support for our new scale, demonstrating that attributions for PCB is a two-dimensional construct that is distinct from other theoretically relevant variables.

**Practical Implications**

Unfortunately, psychological contract breach maybe an inevitable experience for many employees – it simply may not be possible for organizations to fulfill every promise made to
employees (Robinson & Rousseau, 1994). Our results suggest that one way organizations can help minimize the negative consequences of a PCB is by communicating external factors that may have contributed to their inability to fulfill promises. If the organization does not clearly communicate industry struggles or other external issues affecting the organization’s ability to follow through on promises, employees will seek to make sense of the breach on their own. Our results indicate that employees are more likely to blame the organization, rather than external factors, when left to make sense of the situation on their own. One way to communicate external factors is through supervisors. In our pilot study, we found that employees who had supportive supervisors, who presumably may provide more information to the breached employees about potential external causes, were less likely to blame the organization. A second way that organizations could minimize negative consequences of a PCB is by treating employees well so that they are more likely to identify with the organization; employees who highly identified with the organization were also less likely to make internal attributions and more likely to make external attributions for any experienced breaches.

Limitations and Future Research

While this study has a number of strengths, it is important to recognize its limitations as well. One limitation is that we focused on global breach perceptions rather than content forms such as relational and transactional (Jenson et al., 2010). Transactional contract promises are economically oriented exchanges with a specific time frame whereas relational psychological contracts are long term and based on noneconomic terms such as training and development. It may be that employee attributions of breach vary based on psychological contract type. Due to the well-specified terms of a transactional contract, breach of this type of psychological contract may have a stronger association with internal attributions compared to breach of a relational
contract. Future research should explore employee attributions based on the type of psychological contract such as relational and transactional.

A second limitation of this study is that we did not investigate potential moderators of the relation between PCB and internal attributions for breach. Quality of the exchange relationship with the focal organization as well as organization explanations and accounts should be considered as moderators in future research. For example, while an employee may perceive PCB, he/she may be less likely to attribute the breach to the organization if he/she has been well supported by the organization in the past, as captured through perceptions of organizational support (POS). Also, based on research on leader explanations and accounts, the way in which the organization explains or justifies the breach may deflect attention away from the organization and focus employee attention on external causes of the breach. In fact, the low correlation between PCB and external attributions for breach found in our study may indicate that employees do not perceive breach when there are external reasons for lack of fulfillment of contract promises.

Similar to other studies on CWB, we relied on self-report measures of CWB. Berry and colleagues (2012) found that self-reports of CWB have strong relationships with other reports and have similar relationships with common correlates, suggesting that self-reported CWB is an acceptable measure of CWB. However, this does not eliminate concerns that our results may have been affected by common source bias, as employees also reported their perceptions of breach and attributions. We attempted to reduce this concern by measuring CWB in a separate survey.

A final limitation is that our measure of psychological contract breach was developed with the organization as the exchange partner with the employee. It would be interesting to
examine whether the relations supported in this study are replicated and perhaps stronger when
the dyadic relationship involves the employee and his/her direct supervisor. We believe our
attribution measure can be easily adapted for the employee-supervisor relationship by replacing
“organization” with “supervisor.” For example, the item “My organization did not deliver on
promises made to me because they do not treat employees fairly” would be modified to read “My
supervisor did not deliver on promises made to me because he/she does not treat employees
fairly.”

Conclusion

Based on a sensemaking perspective, we hypothesized that internal attribution mediated
the relationship between PCB and CWB, and that relationship was moderated by moral
disengagement. Utilizing a sample of Chinese manufacturing employees, we found support for
our proposition that PCB only leads to CWB when individuals blame the organization for breach
and are high in moral disengagement. Our research demonstrates that both internal attribution for
PCB and moral disengagement are important mechanisms in the PCB and CWB relationship.
REFERENCES


### TABLE 1

*Exploratory Factor Analysis of Attributions for Psychological Contract Breach*

<table>
<thead>
<tr>
<th>Item</th>
<th>Factor 1</th>
<th>Factor 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>My organization did not deliver on promises made to me because they do not treat employees fairly.</td>
<td>.99</td>
<td></td>
</tr>
<tr>
<td>My organization did not deliver on promises made to me because they do not treat employees honestly.</td>
<td>.94</td>
<td></td>
</tr>
<tr>
<td>My organization did not deliver on promises made to me because they do not value employees.</td>
<td>.83</td>
<td></td>
</tr>
<tr>
<td>My organization did not deliver on promises made to me because they intentionally overpromised.</td>
<td>.74</td>
<td></td>
</tr>
<tr>
<td>My organization did not deliver on promises made to me because internal politics among organizational managers interfered.</td>
<td>.70</td>
<td></td>
</tr>
<tr>
<td>My organization did not deliver on promises made to me because of the economy.</td>
<td>.97</td>
<td></td>
</tr>
<tr>
<td>My organization did not deliver on promises made to me because my organization's industry is struggling right now.</td>
<td>.78</td>
<td></td>
</tr>
<tr>
<td>My organization did not deliver on promises made to me because my organization is struggling financially through no fault of its own.</td>
<td>.74</td>
<td></td>
</tr>
<tr>
<td>My organization did not deliver on promises made to me because of the poor economic conditions.</td>
<td>.74</td>
<td></td>
</tr>
<tr>
<td>My organization did not deliver on promises made to me because of external requirements such as union contracts, client demands, or government regulations.*</td>
<td>.45</td>
<td></td>
</tr>
</tbody>
</table>

*Note. n = 349. Cross loadings less than .17 are not reported. Items were measured on a 5-point Likert-based scale with 1 = strongly disagree and 5 = strongly agree, 6 = not applicable. * This item was dropped after conducting the confirmatory factor analysis due to insufficiently low factor loadings.*
### TABLE 2

**Observed Intercorrelations Between Pilot Study Variables**

<table>
<thead>
<tr>
<th>Variable</th>
<th>M</th>
<th>SD</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Psychological Contract Breach (PCB)</td>
<td>2.59</td>
<td>.86</td>
<td>(.84)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Internal Attribution for PCB</td>
<td>2.68</td>
<td>1.16</td>
<td>.68**</td>
<td>(.93)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. External Attribution for PCB</td>
<td>2.67</td>
<td>1.07</td>
<td>.22**</td>
<td>.48**</td>
<td>(.86)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Organizational Identification</td>
<td>3.71</td>
<td>.80</td>
<td>-.37**</td>
<td>-.27**</td>
<td>-.03</td>
<td>(.87)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Need for Organizational Identification</td>
<td>3.65</td>
<td>.64</td>
<td>-.26**</td>
<td>-.20**</td>
<td>-.17**</td>
<td>.50**</td>
<td>(.76)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Perceived Supervisor Support</td>
<td>3.71</td>
<td>1.01</td>
<td>-.50**</td>
<td>-.42**</td>
<td>-.08</td>
<td>.40**</td>
<td>.36**</td>
<td>(.93)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Age</td>
<td>42.94</td>
<td>12.58</td>
<td>-.03</td>
<td>-.22**</td>
<td>-.02</td>
<td>-.04</td>
<td>-.11*</td>
<td>-.07</td>
<td>-</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Gender&lt;sup&gt;a&lt;/sup&gt;</td>
<td>.61</td>
<td>.49</td>
<td>.10</td>
<td>.03</td>
<td>-.09</td>
<td>-.02</td>
<td>-.03</td>
<td>-.10</td>
<td>.03</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>9. Organizational Tenure</td>
<td>7.65</td>
<td>7.27</td>
<td>-.11*</td>
<td>-.12*</td>
<td>.01</td>
<td>.08</td>
<td>.03</td>
<td>.11*</td>
<td>.38**</td>
<td>-.14**</td>
<td>-</td>
</tr>
</tbody>
</table>

*Note. n = 347. PCB = Psychological Contract Breach. Gender: <sup>a</sup> 1 = female, 0 = male; Organizational tenure is measured in years; Alphas for measures are listed along the diagonal.

* p < .05. ** p < .01
TABLE 3

Pilot Study Regression Results Predicting Attributions for Psychological Contract Breach (PCB)

<table>
<thead>
<tr>
<th>Independent Variable</th>
<th>Internal Attribution for PCB</th>
<th>External Attribution for PCB</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Step 1</td>
<td>Step 2</td>
</tr>
<tr>
<td>Age</td>
<td>-.21**</td>
<td>-.19**</td>
</tr>
<tr>
<td>External Attribution for PCB</td>
<td>.47**</td>
<td>.34**</td>
</tr>
<tr>
<td>Internal Attribution for PCB</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PCB</td>
<td></td>
<td></td>
</tr>
<tr>
<td>R²</td>
<td>.27</td>
<td>.62</td>
</tr>
<tr>
<td>ΔR²</td>
<td>.27**</td>
<td>.35**</td>
</tr>
<tr>
<td>Model F</td>
<td>63.92**</td>
<td>185.95**</td>
</tr>
<tr>
<td>Age</td>
<td>-.21**</td>
<td>-.22**</td>
</tr>
<tr>
<td>External Attribution for PCB</td>
<td>.47**</td>
<td>.47**</td>
</tr>
<tr>
<td>Internal Attribution for PCB</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Organizational Identification</td>
<td></td>
<td></td>
</tr>
<tr>
<td>R²</td>
<td>.27</td>
<td>.34</td>
</tr>
<tr>
<td>ΔR²</td>
<td>.27**</td>
<td>.07**</td>
</tr>
<tr>
<td>Model F</td>
<td>63.92**</td>
<td>58.93**</td>
</tr>
<tr>
<td>Age</td>
<td>-.21**</td>
<td>-.22**</td>
</tr>
<tr>
<td>External Attribution for PCB</td>
<td>.47**</td>
<td>.45**</td>
</tr>
<tr>
<td>Internal Attribution for PCB</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Need for Organizational Identification</td>
<td></td>
<td></td>
</tr>
<tr>
<td>R²</td>
<td>.27</td>
<td>.29</td>
</tr>
<tr>
<td>ΔR²</td>
<td>.27**</td>
<td>.02**</td>
</tr>
<tr>
<td>Model F</td>
<td>63.92**</td>
<td>47.01**</td>
</tr>
<tr>
<td>Age</td>
<td>-.21**</td>
<td>-.24**</td>
</tr>
<tr>
<td>External Attribution for PCB</td>
<td>.47**</td>
<td>.44**</td>
</tr>
<tr>
<td>Internal Attribution for PCB</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Perceived Supervisor Support</td>
<td></td>
<td></td>
</tr>
<tr>
<td>R²</td>
<td>.27</td>
<td>.43</td>
</tr>
<tr>
<td>ΔR²</td>
<td>.27**</td>
<td>.16**</td>
</tr>
<tr>
<td>Model F</td>
<td>63.92**</td>
<td>85.02**</td>
</tr>
</tbody>
</table>

Note. n = 349. PCB = Psychological Contract Breach. Standardized beta coefficients are reported. * p < .05. ** p < .01.
### TABLE 4

*Means, Standard Deviations, and Intercorrelations between Primary Study Variables*

<table>
<thead>
<tr>
<th>Variable</th>
<th>M</th>
<th>SD</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Psychological Contract Breach (PCB)</td>
<td>2.30</td>
<td>0.65</td>
<td>(0.62)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Internal Attribution for PCB</td>
<td>2.85</td>
<td>1.08</td>
<td>.38**</td>
<td>.93</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. External Attribution for PCB</td>
<td>2.94</td>
<td>0.93</td>
<td>.21**</td>
<td>.81**</td>
<td>.80</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Moral Disengagement</td>
<td>2.07</td>
<td>0.65</td>
<td>.15**</td>
<td>.35**</td>
<td>.32**</td>
<td>.91</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Counterproductive Work Behavior</td>
<td>1.35</td>
<td>0.53</td>
<td>.04</td>
<td>.30**</td>
<td>.25**</td>
<td>.45**</td>
<td>.90</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Age</td>
<td>25.06</td>
<td>5.61</td>
<td>-.13**</td>
<td>-.07*</td>
<td>-.03</td>
<td>-.03</td>
<td>-.10**</td>
<td>-</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Gender *</td>
<td>0.75</td>
<td>0.43</td>
<td>.01</td>
<td>.08*</td>
<td>.04</td>
<td>.20*</td>
<td>.11**</td>
<td>-.03</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>8. Organizational Tenure</td>
<td>1.81</td>
<td>2.07</td>
<td>-.09*</td>
<td>0.03</td>
<td>.09*</td>
<td>-.01</td>
<td>-.03</td>
<td>.31**</td>
<td>-.05</td>
<td>-</td>
</tr>
</tbody>
</table>

*Note. n = 799. PCB = Psychological Contract Breach. Gender: *1 = male, 0 = female; Organizational tenure is measured in years; Alphas for measures are listed along the diagonal.*

* *p < .05. ** p < .01.*
### TABLE 5

**Comparison of Measurement Models in the Primary Study**

<table>
<thead>
<tr>
<th>Models</th>
<th>Factors</th>
<th>$\chi^2$</th>
<th>d.f.</th>
<th>$\Delta \chi^2$</th>
<th>RMSEA</th>
<th>CFI</th>
<th>TLI</th>
<th>SRMR</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td><strong>One Factor:</strong> All Items loaded on one Factor</td>
<td>8953.38</td>
<td>434</td>
<td>4263.59</td>
<td>.16</td>
<td>.44</td>
<td>.40</td>
<td>.18</td>
</tr>
<tr>
<td>2</td>
<td><strong>Two Factors:</strong> PCB and Internal and External Attributions for PCB, Moral Disengagement and CWB</td>
<td>4689.80</td>
<td>433</td>
<td>1823.14</td>
<td>.11</td>
<td>.72</td>
<td>.70</td>
<td>.11</td>
</tr>
<tr>
<td>3</td>
<td><strong>Three Factors:</strong> PCB and Internal and External Attributions for PCB, Moral Disengagement, and CWB</td>
<td>2866.66</td>
<td>431</td>
<td>1005.65</td>
<td>.08</td>
<td>.84</td>
<td>.83</td>
<td>.07</td>
</tr>
<tr>
<td>4</td>
<td><strong>Four Factors:</strong> PCB, Internal and External Attributions for PCB, Moral Disengagement, and CWB</td>
<td>1861.01</td>
<td>428</td>
<td>102.65</td>
<td>.07</td>
<td>.91</td>
<td>.90</td>
<td>.07</td>
</tr>
<tr>
<td>5</td>
<td><strong>Five Factors:</strong> PCB, Internal Attribution for PCB, External Attribution for PCB, Moral Disengagement, and CWB</td>
<td>1758.36</td>
<td>424</td>
<td></td>
<td>.06</td>
<td>.91</td>
<td>.90</td>
<td>.07</td>
</tr>
</tbody>
</table>

*Note. PCB = psychological contract breach; CWB = counterproductive work behavior; df = degrees of freedom; RMSEA = root mean-square error of approximation; CFI = comparative fit index; TLI = Tucker Lewis index or non-normed fit index; SRMR = standardized root mean-square residual.

*p < .05. **p < .01.
### TABLE 6

**Results of Moderated-Mediation Analysis**

<table>
<thead>
<tr>
<th>Predictor</th>
<th>PCBAI as the DV (Mediator Model)</th>
<th>CWB as the DV (Dependent Variable Model)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$B^a$</td>
<td>$SE$</td>
</tr>
<tr>
<td>Psychological contract breach (PCB)</td>
<td>0.36</td>
<td>0.03</td>
</tr>
<tr>
<td>Age</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Gender</td>
<td>0.12</td>
<td>0.05</td>
</tr>
<tr>
<td>Organizational Tenure</td>
<td>-0.01</td>
<td>0.01</td>
</tr>
<tr>
<td>External Attribution for PCB</td>
<td>0.89</td>
<td>0.02</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Indirect Effect</th>
<th>Indirect Effect at MD = mean and +/- 1 SD</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$SE$</td>
<td>$LL95%CI$</td>
</tr>
<tr>
<td>Indirect Effect</td>
<td>0.06</td>
<td>0.04</td>
</tr>
<tr>
<td>Moral Disengagement (MD)</td>
<td>1.43 (low)</td>
<td>0.01</td>
</tr>
<tr>
<td></td>
<td>2.09 (mean)</td>
<td>0.05</td>
</tr>
<tr>
<td></td>
<td>2.75 (high)</td>
<td>0.08</td>
</tr>
</tbody>
</table>

*Note. n = 799. PCB = Psychological Contract Breach; MD = Moral Disengagement; $^a$ = Parameters are unstandardized. * $p < .05$. ** $p < .01$.**
FIGURE 1

Hypothesized Second-Stage Moderation Model.
FIGURE 2

The Moderating Effect of Moral Disengagement on the Relation between Internal Attribution for Psychological Contract Breach and Counterproductive Work Behavior

Note. PCBAI = internal attribution for psychological contract breach; CWB = counterproductive work behavior.