

# The Differential Effects of Interpersonal Conflict From Customers and Coworkers: Trait Anger as a Moderator

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Interpersonal conflict (IC) at work is a frequently experienced type of workplace mistreatment that has been linked to a host of negative workplace outcomes. Previous research has shown that IC can have differential effects based on source, but this has not yet been investigated in terms of customer IC versus coworker IC. To remedy this oversight in the literature, we used a multimethod, multitime point design to compare IC from customers and coworkers experienced by 75 call center employees. Primarily, we investigated burnout, physical health symptoms, and task performance. Results indicated that customer IC was more strongly related to both personal and organizational outcomes. Additionally, trait anger was investigated as a moderator of these relationships, and the results indicated that people who are easy to anger may be more likely to experience negative effects as a result of customer IC. Implications of these findings, limitations, and areas for future research are discussed.

**Keywords:** interpersonal conflict, workplace mistreatment, burnout, performance, customer aggression

The social environment at work is increasingly emphasized in occupational health research because of its potential impact on employee health and well-being (Bruk-Lee & Spector, 2006). Interpersonal conflict, in particular, is recognized as an important antecedent of many negative employee outcomes, such as negative emotions (Fox, Spector, & Miles, 2001), reduced job satisfaction and organizational commitment (Frone, 2000), and reduced life satisfaction (Appelberg, Romanov, Heikkila, Honkasalo, & Koskenvuo, 1996). Recently, research has begun to

focus on differences in the outcomes of interpersonal conflict depending upon the source. For instance, effects of interpersonal conflict are known to differ based on whether that conflict originates from supervisors or coworkers (e.g., Bruk-Lee & Spector, 2006; Frone, 2000). However, this relationship has not been investigated in terms of possible differential outcomes between *customer* interpersonal conflict and *coworker* interpersonal conflict, relationships that can be of unique importance in customer-centric, service-oriented occupations.

The purpose of the current study was to address this oversight in the literature by examining the differential effects of customer versus coworker interpersonal conflict on the outcomes of employee burnout and physical symptoms. Additionally, we examined the differential effects of these sources of conflict on objectively measured employee task performance, something never before examined in relation to interpersonal conflict. The experiences of call center employees at a bank were examined using a two time point, multimethod design. Finally, we sought to determine whether the personality characteristic of trait anger moderated the relationship between interpersonal conflict and its outcomes. That is, we investigated whether people who are high in trait anger experience more negative outcomes as a

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This article was published Online First June 20, 2011.

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We thank the members of the Occupational Health Psychology Research Group at Bowling Green State University, as well as Pamela Perrewew, PhD and three anonymous reviewers for their comments and insight on earlier versions of this article. This research was generously funded by the National Institute for Occupational Safety and Health (NIOSH) Education and Research Center Pilot Project Grant Program.

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result of interpersonal conflict than people low in trait anger.

### Interpersonal Conflict From Multiple Sources

Interpersonal conflict (IC) is a frequently experienced (Spector & Jex, 1998) and widely studied workplace phenomenon (Fox, Spector, & Miles, 2001). Despite its popularity in research, we could not locate a formal definition of the construct in the literature. Therefore, based on the research surrounding IC and methods for measuring it, we propose that interpersonal conflict at work be defined as a broad range of interpersonal mistreatment behaviors in the workplace, such as rude behavior, yelling, or other interpersonally deviant acts. This definition is consistent with information on IC provided by Spector and Jex (1998), who posit that interpersonal conflict may range from minor disagreements all the way to physical assault, and can manifest itself in both overt and subtle forms.

Fundamentally, IC might be considered an “umbrella” or “catch-all” construct, intended to give an overall picture of interpersonal mistreatment and abuse in the workplace. As such, this construct subsumes many types of interpersonal mistreatment in the workplace, including workplace rudeness (Johnson & Indvik, 2001), verbal aggression (Grandey, Dickter, & Sin, 2004), and bullying (Nielsen, Matthiesen, & Einarsen, 2008). Most commonly, measurement of IC is accomplished using the Interpersonal Conflict of Work Scale (ICAWS; Spector & Jex, 1998), which was designed to assess the frequency of disagreements and abuse in the workplace. Given this conceptualization of the construct, research on a variety of workplace mistreatment phenomena can be used to inform research on the incidence and impact of IC in the workplace.

As noted above, the majority of IC research has been conducted to examine the direct impact of interpersonal conflict from supervisors or coworkers on employee outcomes. More recently, there has been a focus on the *differential effects* of IC from supervisors as compared to coworkers. It is clear from existing research that high levels of interpersonal conflict from both coworkers and supervisors can negatively impact employees. For instance, Frone (2000) found support for a model in which supervisor IC was predictive of organizational outcomes of job satisfaction, organizational commitment, and turnover intentions, while coworker IC was predictive of

depression, self-esteem, and employee health outcomes. Additionally, Bruk-Lee and Spector (2006) further explored the differential links for sources of IC on counterproductive workplace behaviors (CWBs). The results indicated that IC from supervisors was more predictive of organizational CWB, while coworker IC predicted interpersonal CWB. The results of these two studies support the assertion that the *source* of IC could have dramatically different effects on employees. Despite these advances, however, the impact of IC originating from outside the organization (i.e., customer/client IC) remains unexplored.

### Customer-Based Interpersonal Conflict

There is little debate that working in the service industry is stressful and results in situations in which IC is not only possible but likely. Customer service employees have been shown to be more susceptible to burnout as compared with other burnout-prone occupations, such as police and social workers (Singh, Goolsby, & Rhoads, 1994). This burnout is largely thought to be a result of working with difficult or demanding customers (Perry, Dubin, & Witt, 2010; Dormann & Zapf, 2004), as well as from frequent inability to fully meet the demands of these customers (Singh, Goolsby, & Rhoads, 1994). Increased burnout has, in turn, been linked to both personal and organizational outcomes such as increased stress and reduced job satisfaction (Prosser et al., 1996), increased withdrawal behaviors (Deery, Iverson, & Walsh, 2002), and decreased mental health (Ramirez et al., 1995). As a potential antecedent of burnout, customer interpersonal stressors—particularly conflict with customers—may well be directly linked to some of these important personal and organizational variables.

Customer IC has not been examined using the construct of “interpersonal conflict.” However, research on related constructs, such as customer verbal aggression (e.g., Grandey, Dickter, & Sin, 2004), customer incivility (Sliter, Jex, Wolford, & McInnerney, 2010), and customer sexual harassment (Yagil, 2008) can guide the understanding of customer IC. First, the construct can be defined similarly to coworker IC: a broad range of interpersonal mistreatment behaviors perpetrated by someone in a client/customer role, such as rude behavior, yelling, or other interpersonal deviant behaviors. Under different names, customer IC has been linked to a variety of individual and organizational outcomes. For instance, customer aggression has been linked to emotional

exhaustion and high appraisals of stress (e.g., Grandey, Dickter, & Sin, 2004), while customer incivility has been linked to emotional exhaustion and reduced customer service performance (Sliter et al., 2010), indicating the importance of examining customer interpersonal stressors.

It is important that the effects of customer IC be studied given that so many people hold jobs in which customer IC might be prevalent. These positions include those in which employees interact with frustrated customers, exercise security functions, or work with money (LeBlanc & Kelloway, 2002). In fact, Totterdell and Holman (2003) suggest that conflict from customers might even be a more aversive source of conflict than that from coworkers. The researchers base their suggestion on their findings that employees reported more unpleasant events occurring as a result of customers (8.9% of the time) than coworkers (1.5% of the time).

However, despite this suggestion, we could only locate a single study (Sliter, Wolford, & Jex, 2009) that compared the differential effects of customer versus coworker conflict. Sliter and colleagues (2009) examined the cumulative effects of coworker and customer incivility on objective employee withdrawal and sales performance behavior. The researchers found that customer incivility was predictive of tardiness and sales performance, while both coworker and customer incivility predicted absenteeism, indicating that customer versus coworker conflict might have differential validity in predicting outcomes. However, to our knowledge, no other research examining these effects has been published.

### Why Customer and Coworker IC Should Differentially Predict Outcomes

The results from Sliter and colleagues (2009) combined with the assertions of Totterdell and Holman (2003) indicate that customer IC might be more damaging to service employees than coworker IC. We theorize that *control* plays a major role in these relationships. Job control has often been studied in the workplace (e.g., Landsbergis, 1988; van der Doef & Maes, 1999). Particularly, different variations of Karasek's (1979) job demands-control model have been applied to investigate and provide explanations for a variety of phenomena in the workplace. In this model, the stress experienced by employees is a function of the demands of their jobs, as well as the level of control that employees have over their jobs. Something often overlooked in this model is that

people might have more or less control over different aspects of their jobs. For instance, service employees cannot choose which and how many customers they serve, but they can choose, to a certain extent, with which coworkers they interact. This difference in level of job control might be one reason why customer IC could result in higher levels of negative employee outcomes than coworker IC, particularly in positions where this control is a constant (i.e., call center employees who never have control over which customers they serve).

Based upon previous research and the idea of differing levels of job control over different areas of work (e.g., customer vs. coworker interactions), we expected that there would be differential relationships between the two sources of IC and three primary outcomes: burnout, physical symptoms, and task performance. To begin, burnout can be defined as a state of physical, emotional, or mental exhaustion caused by long-term involvement in stressful or emotionally draining situations (Pines & Aronson, 1988). Coworker IC has been linked to the exhaustion facet of burnout in the past (Leiter & Maslach, 2006), as has customer IC, albeit under the label of customer aggression or incivility (Grandey, Dickter, & Sin, 2004; Sliter et al., 2010).

Conservation of Resources theory (COR; Hobfoll, 1989; Hobfoll & Freedy, 1993) provides a theoretical explanation for why customer and coworker IC might differentially affect burnout. COR theory posits that people strive to retain, protect, and build resources. Hobfoll (1989) defines resources as "objects, personality characteristics, conditions, or energies that are valued by the individual or that serve as a means for attainment of these objects, personal characteristics, or energies (p. 516)." Generally speaking, people have limited resources from which to draw, and environmental stressors will deplete these resources. When resources become too depleted, individuals are considered to have reached a state of burnout (Neveu, 2007).

As mentioned above, IC is a serious interpersonal stressor and can place heavy demands on a person. According to COR theory, the experience of IC would cause a person to lose cognitive, emotional, and physical resources. The amount of resources lost as a result of IC might be exacerbated by how a person responds, as well as by resource replenishing mechanisms available. With customer IC, employees should have fewer options in how they respond to and withdraw from the IC as compared to when they are exposed to coworker IC. Additionally, a service employee typically has

to respond to IC by managing their emotions and still providing “service with a smile.” This would further sap their resources, exacerbated by lack of control in the customer–employee interaction. This depletion of resources could be considered, overall, as burnout (Neveu, 2007). Given both this theoretical rationale and previous findings, we propose the following:

*Hypothesis 1.* Both customer and coworker interpersonal conflict will relate to burnout, with the relationship between customer interpersonal conflict and burnout being stronger.

Another set of outcomes which we theorize would relate to both sources of IC was physical symptoms and task performance. Workplace stressors have often been shown to negatively relate to physical health (e.g., Kittel & Leynen, 2003; Lim & Cortina, 2005). COR theory also provides support for a relationship between stressors and physical health. Hobfoll (2002) discusses states of high and low resource retention in length. Extensive evidence supports the proposition that people who have high levels of resources, whether through external resources (e.g., social support; Cohen, Doyle, Skoner, Rabin, & Gwaltney, 1997), or internal resources (e.g., self-esteem; Rini, Dunkel-Schetter, Wadhwa, & Sandman, 1999; hardiness; Kobasa & Puccetti, 1983), tend to be more generally healthy than those with fewer resources. These results are generally supported by findings in the literature on interpersonal stressors, where researchers have theorized that employees can fall ill with stress-related diseases attributable to workplace conflict (Lim & Cortina, 2005; Cortina, Magley, Williams, & Langhout, 2001), likely a result of decreased resources and increased, sustained physiological arousal. Cortina and colleagues (2001) call for more research on the psychosomatic health outcomes of workplace conflict, especially in the United States (where this relationship has been largely ignored).

We theorize findings similar to past research on the relationship between sources of IC and physical health. Specifically, we expect high levels of both customer and coworker IC to relate to increased reports of physical symptoms. However, as previously noted, we expect customer IC to be a stronger stressor in general, which should be related to a larger decrease in resources. As such, we expect it to have greater negative effects on employee health. Thus, we proposed the following:

*Hypothesis 2.* Both customer and coworker interpersonal conflict will positively relate to physical symptoms, though the relationship between customer interpersonal conflict and physical symptoms will be stronger.

With regard to task performance, workplace stressors have been previously shown to negatively predict different types of performance (e.g., Beehr, Jex, Stacy, & Murray, 2000). Performance, as defined by Campbell (1990), refers to any type of behavior that is relevant to an organization’s goal. These behaviors are organization-specific and can range from sales and interpersonal interactions to task performance. We are particularly interested in task performance, as engaging in nontask behavior could be a result of workplace conflict. Recently, performance has been linked to both customer incivility (customer service performance; Sliter et al., 2010) and coworker incivility (sales performance; Sliter et al., 2010); however, we could locate no research that has empirically linked task performance to workplace conflict.

Comparable to the expected relationship between stressors and burnout, we theorize that reduced resources are the reason that IC will affect task performance. Resources are quickly sapped in difficult interpersonal situations, and people react by, consciously or unconsciously, reducing performance (Hobfoll, 2001; Sliter et al., 2010). The more resources that are sapped, the more a person would reduce his or her performance to increase available resources. The reduction in performance might be considered a coping mechanism to deal with the loss in resources, as workplace withdrawal has been conceptualized as a method for replenishing lost resources (Leiter, 1991). Given this, we expect task performance to be reduced as a result of resource depletion. This resource depletion should depend on the specific stressor; in the case of the current study, we expected customer IC to reduce task performance more than coworker IC for the reasons discussed above (i.e., customer IC might be the more deleterious stressor). As such, based on previous findings and COR theory, we propose the following:

*Hypothesis 3.* Both customer and coworker interpersonal conflict will negatively relate to task performance, though the relationship between customer interpersonal conflict and performance will be stronger.

### Trait Anger as a Moderator

Personality traits, such as negative affectivity (e.g., Spector & O'Connell, 1994) and agreeableness (e.g., Milam, Spitzmueller, & Penney, 2009) have often been examined as moderators of the relationships between workplace stressors and employee outcomes. A particular individual difference of interest when examining IC is *trait anger*. Trait anger is the tendency for people to perceive a wide range of stimuli or situations as anger-inducing (Spielberger, Krasner, & Solomon, 1988). People who are high in trait anger are more likely to become angry from a variety of daily situations and are more likely to react to these situations with negative emotions and aggression. We theorize that trait anger will act as a moderator in the relationship between both sources of IC and its outcomes, such that people who are high in trait anger will experience higher levels of burnout and physical symptoms, and lowered task performance, when compared with people low in trait anger (Figure 1). We provide anger rumination theory and COR theory as explanatory mechanisms for this relationship.

One of the primary mechanisms through which anger is thought to affect a person's behavior and well-being is anger rumination. Rumination refers to persistent, repetitive thoughts revolving around a common theme when there is no environmental demand for those thoughts (Martin & Tesser, 1996). Rumination can be triggered when an emotional event occurs and a person continues to think about this event for some time after its occurrence. Thinking about an event maintains a high level of physiological arousal, preserving the original emotion that was initiated by the event (Brosschot, Gerin, & Thayer, 2006). Anger is a salient emotion, typically triggered by provocation or perceptions of mistreatment (Hogan & Linden, 2004), and it is common for people to ruminate over anger-inducing events (Bushman, Bonacci, Pederson, Vasquez, & Miller, 2005).

Anger rumination is not a healthy strategy for coping with stressful events. Research over the past 10 or so years has demonstrated that rumination over anger-provoking events can lead to negative health outcomes. For instance, Hogan and Linden (2004) found that people who are prone to anger rumination are more likely to have higher blood pressure as a result of this rumination. Lawler-Row, Karremans, Scott, Edlis-Matityahou, and Edwards (2008) found similar results, with people exhibiting higher blood pressure and heart rate as a result of anger rumination when compared to people who ruminated less. High

blood pressure and heart rate, in turn, have been linked with many negative physical symptoms, including sleeplessness (Suka, Yoshida, & Sugimori, 2003), chest pain (Viar & Harrison, 1952), and back pain (Arnoldi, 1976).

People who are high in trait anger have been shown to be more likely to ruminate as a result of anger-inducing events when compared to those low in trait anger (Sukhodolsky, Golub, & Cromwell, 2001). This tendency to ruminate could result in individuals who are high in trait anger experiencing more negative outcomes than people who are low in trait anger. Additionally, theories of rumination are compatible with COR theory, which might explain both physical and psychological symptoms of the experience of anger. From a COR perspective, increased levels of anger have been theorized to result in a loss of cognitive, physical, and emotional resources (Hobfoll, 2001; Wells, Hobfoll, & Lavin, 1999). If a person high in trait anger ruminates over an anger-provoking event, he or she will be drained of resources, resulting in possible physical (e.g., increased blood pressure) and psychological (e.g., burnout) outcomes. As a result of rumination, a person would also take longer to rebuild resources, potentially resulting in more burnout (Kahn, 1990). Based on previous findings on the potential of trait anger as a moderator, as well as on anger rumination and COR theory, we propose the following:

*Hypothesis 4.* Trait anger will moderate the relationship between both sources of interpersonal conflict and burnout, such that the relationships between IC and burnout will be stronger for those high in trait anger.

*Hypothesis 5.* Trait anger will moderate the relationship between both sources of interpersonal conflict and physical symptoms, such that the relationships between IC and physical symptoms will be stronger for those high in trait anger.

In addition to trait anger moderating the relationship between IC and physical and psychological outcomes, we also theorize that it will moderate the relationship between IC and task performance. This proposition is based in COR theory and Affective Events Theory (AET; Weiss & Cropanzano, 1996). In AET, events serve as proximal causes of affective reactions (e.g., IC might cause anger, depending on a person's level of trait anger). These affective reactions, in turn, can influence a person's formation of attitudes as well as their behavioral reactions (i.e., performance). Weiss and Cro-

panzano (1996) theorize that these emotional events can affect performance through emotions. Fox and Spector (1999) created a theoretical model of work frustration–aggression—with findings consistent with those expected by AET—in which trait anger was an important moderator in the relationship between frustrating work events and negative behavioral responses. In this study, people who were higher in trait anger were more likely to show reductions in task performance than people low in trait anger. That is, people who are high in trait anger might reduce their task performance as a result of frustrating events, or in the case of the current study, different sources of conflict at work.

COR theory provides an alternate explanation as to why trait anger might moderate the relationship between sources of IC and task performance. AET posits that people might reduce performance as a result of negative workplace events and negative emotions, but it is also possible that negative events lead to a drop in resources. From a theoretical perspective, after experiencing a negative event, a person high in trait anger is likely to ruminate and focus on their anger, which can result in both increased physiological arousal (Hogan & Linden, 2004) and reduced resources (Hobfoll, 2001; Wells, Hobfoll, & Lavin, 1999). A person experiencing such a reduction in resources could possibly reduce his or her task performance as a coping mechanism. That is, a general decrease in resources could cause a general decrease in task performance.

Based on explanations nested in both AET and COR theories, we propose the following:

*Hypothesis 6.* Trait anger will moderate the relationship between both sources of interpersonal conflict and task performance, such that the relationships between IC and task performance will be stronger for those high in trait anger.

## Method

### Participants and Procedure

A total of 100 call center employees from a mid-sized Midwestern bank were recruited to participate in the current study. Of the employees recruited, 75% responded to the first data collection period. During the second data collection period, all 75 (100%) call center employees who responded to the first survey completed the second survey. The majority of participants were female (65%) and identified themselves as Caucasian (51%) and African American (27%). Because management requested that we not gather

age data, participant age was estimated based on a previous study conducted at the same bank. Based on this previous data, average participant age was estimated to be 34.7 years ( $SD = 12.04$ ). The average number of years participants were employed by the call center was 3.96 ( $SD = 2.43$ ).

Before data collection, the director of the call center sent out an endorsement email, affirming that the bank supported the study. After the endorsement email, a recruitment email with an explanation of the study's purpose and a link to the survey was sent from the first author's university email address. Data collection took place in two waves spaced three months apart. The consent form, which was included as part of the survey, indicated that by participating in the study, participants agreed to allow the bank to share their performance data. After the first wave of data collection, participants were sent \$25 gift cards by mail as incentive for their participation. After three months, the link to the second survey was emailed to those who responded to the first survey, and participants in this second wave received an additional \$40.

The independent measures were assessed at Time 1: coworker IC and customer IC. The dependent measures—burnout and physical symptoms—were each assessed at Time 2. The bank provided us with archival task performance data for participants, the third dependent variable, after the completion of both phases of data collection. The moderator and control variables—trait anger and negative affectivity—were assessed at Time 1. The time point at which moderator constructs were measured is not particularly important, as trait measures, by definition, are not likely to change over a time period of three months. For all self-report variables, the instructions were framed so that participants thought about experiences during the past month.

## Measures

**Interpersonal conflict.** IC from two sources was measured using an adapted version of the Spector and Jex (1998) Interpersonal Conflict at Work Scale (ICAWS). The ICAWS reflects the relative frequency with which a person experiences various types of interpersonal conflict. Participants completed two versions of the scale (four items per scale), each with instructions and items altered to reflect customer ( $\alpha = .88$ ) and coworker ( $\alpha = .92$ ) interpersonal conflict. Items were rated using a five-point frequency scale, with 1 = never, 2 = rarely, 3 = sometimes, 4 = quite often, and 5 = very often. The

four items were: "How often do you get into arguments with [customers or coworkers] at work?" "How often are [customers or coworkers] rude to you at work?" "How often do [customers or coworkers] yell at you at work?" and "How often do [customers or coworkers] do nasty things to you at work?"

**Trait anger.** Trait anger was measured using Spielberger, Jacobs, Russell, and Crane's (1983) Trait Anger Scale (TAS). The TAS (15 items;  $\alpha = .95$ ) measures latent trait anger, with higher scores on the TAS reflecting higher levels of trait anger. The statements were rated along a five-point Likert scale, ranging from 1 = strongly disagree to 5 = strongly agree. Example items include "I have a fiery temper," and "I am a hotheaded person."

**Burnout.** Burnout was measured using the Oldenburg Burnout Inventory (OLBI; Demerouti, Bakker, Vardakou, & Kantas, 2003). The statements were rated along a five-point Likert scale, ranging from 1 = strongly disagree to 5 = strongly agree. The scale consists of two facets: disengagement ("Over time, one can become disconnected from this type of work") and exhaustion ("There are days when I feel tired before I arrive at work"). As these dimensions were highly correlated ( $r = .77$ ), and a good-fit confirmatory factor analysis indicated a single factor solution, we computed a composite burnout score by summing all items across the two dimensions ( $\alpha = .84$ ). Composite burnout scores have been used with success in occupational health psychology research (e.g., Armon, Shirom, Berliner, Shapira, & Melamed, 2008; Best, Stapleton, & Downey, 2005), and given the intercorrelation and factor structure of the OLBI in the current study, a composite term was considered acceptable.

**Physical symptoms.** The physical health of employees was assessed using the Physical Symptom Inventory (PSI; Spector & Jex, 1998). The PSI (18 items) measures somatic health issues often related to stressors, such as backaches, heartburn, and trouble sleeping. Participants indicated whether they had experienced the 18 health issues in the last 30 days using one of three response options: 1 (No, I didn't), 2 (Yes, I did, but did not see a doctor), 3 (Yes, I did, and I saw a doctor). Higher scores on the PSI indicate worse physical well-being or health. Internal consistency is not appropriate for an indicator of discrete symptoms and is not reported here.

**Task performance.** Task performance was measured using a system already in place at the bank. The system assesses idle time (e.g., off-task performance) based on phone and computer usage, which is monitored using advanced tracking soft-

ware. Idle time is measured in minutes, rounded to the highest minute. Employees are expected to be active on their computer or phone at all times, and idle time is measured after the phone or computer is idle for five minutes. In the call center, employees are never short of work, whether dealing directly with customers, or researching transactions. Employees can sign out for lunches, sanctioned breaks, and bathroom breaks. These data were coded so that higher "scores" on task performance indicated lower levels of idle time. That is, people with less idle time are considered to be more productive. Task performance data were collected for the three months between the Time 1 and Time 2 administration of the survey. Because of the variability of performance measures expected in the service industry (McLaughlin & Coffey, 1990), the average for the three-month period was used as our final measure of task performance.

**Controls.** In all analyses, we controlled for sex and negative affectivity (NA). In terms of controlling for sex, this decision was made in the case that men might underreport incidences of interpersonal conflict, though research has shown that men and women tend to report similar amounts (Bowling & Beehr, 2006). However, research has shown that women are more likely to perceive actions as sexual harassment (Blumenthal, 1998), and incidences of sexual harassment might overlap with IC. As such, we wanted to ensure that sex was not a driving factor in the relationship between IC and its outcomes. Sex was coded as following: 1 = male, 2 = female.

The decision to control for NA was made because some researchers argue that people who are high in NA might report, rather than experience, high levels workplace stressors and negative outcomes (Burke, Brief, & George, 1993). To account for this possibility, we controlled for NA in all analyses. Trait NA was measured using the Positive and Negative Affectivity Scale (PANAS; Watson, Clark, & Tellegen, 1988). The 8 items ( $\alpha = .88$ ) were adjectives describing feelings or emotions (e.g., "distressed," "ashamed"), and participants indicated how often, on average, they tended to feel this way. These items were rated on a five-point scale, ranging from 1 = very slightly or not at all to 5 = very often. Two items, "hostile" and "irritable," were removed from the NA scale because of their heavy overlap with the measure of trait anger. Controlling for anger items while examining trait anger as a moderator might remove substantive variance (Spector, Zapf, Chen, & Freese, 2000), so we omitted these items.

## Analysis

Correlations and descriptive statistics for all study variables can be found in Table 1. All of the Pearson correlation coefficients were in the expected directions, providing initial support for the majority of the hypotheses. Time 1 measures were used as predictors, and Time 2 measures were used for the outcomes. The task performance measure had adequate variability (ranging from an average of 101 to 217 minutes of idle time across 3 months), a positive finding as restriction of range in performance data is often a concern when objective measures are used in organizational research (Hunter, Schmidt, & Le, 2006).

Hierarchical regression was used to initially test the main effect hypotheses. Both sources of IC were entered into the regression simultaneously to assess differential effects on each outcome, an approach similar to the procedure used by Bruk-Lee and Spector (2006). However, as examining standardized betas to determine their relative effects can be misinterpreted because of multicollinearity (LeBreton & Tonidandel, 2008), we also conducted a general dominance weight analysis. Dominance analysis provides an estimate of the relative importance of each predictor based on a subset of regression models (Azen & Budescu, 2003). It produces values that can be directly compared to determine which predictor has a larger impact on the criterion while controlling for multicollinearity, essentially rank-ordering the importance of the variables as predictors. For step-by-step instructions on conducting a dominance analysis, see Budescu (1993) or LeBreton and Tonidandel (2008).

To test interaction hypotheses, we used the three-step procedure described in Baron and Kenny (1986). In the first step, control variables were

entered. In the second step, the predictor and the moderator variable were entered in the equation. In the final step, an interaction term, computed by multiplying the centered scores (i.e., the mean subtracted from each score) for the predictor and moderator variables, was entered into the equation. The change in  $R^2$  from step 2 to step 3 was examined to determine whether there was a significant effect of the moderating variable. Sex and NA were controlled for in all analyses.

## Results

### Main Effect Hypotheses

Hypothesis 1 investigated the relationship between burnout and each source of IC. Both coworker IC ( $\beta = .28, p < .05$ ) and customer IC ( $\beta = .53, p < .001$ ) predicted burnout, though the relationship between customer IC and burnout was stronger. To examine this relationship further, a dominance analysis was conducted for each variable. Customer IC proved to be a stronger predictor (general dominance index = .16) than coworker IC (general dominance index = .03). As such, hypothesis 1 was fully supported.

Hypothesis 2 investigated the relationship between both sources of IC and physical symptoms. Neither customer IC nor coworker IC predicted physical symptoms at Time 2. Because the sources of IC were not significant predictors of physical symptoms, we did not continue to a dominance analysis. Hypothesis 2 was not supported.

Hypothesis 3 investigated whether customer and coworker IC were predictive of task performance. Customer IC ( $\beta = -.29, p < .05$ ) was found to significantly predict task performance in the expected

Table 1  
*Descriptive Statistics and Correlations Among All Study Variables*

| Variable                | <i>M</i> | <i>SD</i> | 1    | 2   | 3     | 4      | 5     | 6   | 7    |
|-------------------------|----------|-----------|------|-----|-------|--------|-------|-----|------|
| 1. Sex                  | 1.67     | 0.48      | —    | —   | —     | —      | —     | —   | —    |
| 2. Negative affectivity | 1.87     | 0.55      | .11  | —   | —     | —      | —     | —   | —    |
| 3. Coworker IC          | 1.44     | 0.75      | .12  | .16 | —     | —      | —     | —   | —    |
| 4. Customer IC          | 2.41     | 0.88      | -.14 | .08 | .56** | —      | —     | —   | —    |
| 5. Burnout              | 2.98     | 0.63      | -.01 | .05 | .20   | .37**  | —     | —   | —    |
| 6. Physical health      | 0.35     | 0.24      | -.10 | .25 | .06   | .20    | .36** | —   | —    |
| 7. Task performance     | 146.5    | 25.72     | .21  | .10 | -.24  | -.37** | -.17  | .01 | —    |
| 8. Trait anger          | 2.27     | 0.83      | -.04 | .20 | .54** | .44**  | .09   | .11 | .27* |

*Note.*  $n = 75$ . NA, Trait anger, coworker IC, and customer IC were assessed at time 1. Burnout and physical health were assessed at time 2. Productivity is the inverse of the average idle time per month for the three months between the waves of data collection.

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

direction, while coworker IC was not a significant predictor of task performance. These results were further supported with dominance analysis, with customer IC more important in predicting task performance (general dominance index = .09) than coworker IC (general dominance index = .04). As such, hypothesis 3 was partially supported. The regression results are summarized in Table 2.

## Moderation Hypotheses

Table 3 presents the results from the three-step hierarchical regression analysis, separated by dependent variable. The table includes standardized beta coefficients,  $R^2$  at each step, and incremental  $R^2$  at steps 2 and 3. In the following, the significant moderator effects are discussed in more detail with regard to the specific hypotheses.

Hypothesis 4—that trait anger would moderate the relationship between both sources of IC and burnout—was tested using the aforementioned hierarchical regression process. The significant interaction term ( $\beta = .42, p < .01$ ) of trait anger and customer

IC explained an additional 5% of the variance above and beyond the control, independent, and moderator variables. The form of this interaction was graphed and further examined (see Figure 2). A simple slope analysis (Aiken & West, 1991) indicated that, when trait anger is high, employees experience more burnout from increases in customer IC [ $\beta = .68, t(74) = 3.96, p < .01$ ] than when trait anger is low [ $\beta = .49, t(74) = 2.96, p < .01$ ]. To continue testing hypothesis 4, we examined whether trait anger was a significant moderator of the relationship between coworker IC and burnout. However, the interaction term did not significantly predict any additional variance. As such, hypothesis 4 was supported for customer IC but not for coworker IC.

Hypothesis 5—that trait anger would moderate the relationship between both sources of IC and physical symptoms—was tested next. First, we examined the relationship between customer IC and physical symptoms, with trait anger as a moderator. In the third step, the significant interaction term ( $\beta = .13, p < .05$ ) predicted an additional 7% of the variance in physical symptoms, indicating that trait anger is a significant moderator in the relationship between customer IC and physical symptoms. To further investigate the form of this interaction, the relationship was graphed and examined (see Figure 3). The graph demonstrates that people high in trait anger were more likely to experience negative physical health outcomes in relation to increases in customer IC [ $\beta = .62, t(74) = 3.01, p < .01$ ] than were people low in trait anger [ $\beta = .48, t(74) = 2.87, p < .01$ ]. Next, the relationship between coworker IC and physical symptoms was examined with trait anger as a moderator. However, the interaction term did not account for a significant portion of variance in physical symptoms. As such, hypothesis 5 was supported for customer IC but not for coworker IC.

Finally, we tested hypothesis 6—that trait anger would moderate the relationship between both sources of IC and task performance. We did not find statistical support for a moderating effect of trait anger in either the relationship between customer IC and task performance or the relationship between coworker IC and task performance. Given these results, we cannot conclude that trait anger moderated the relationship between coworker IC and task performance, meaning that hypothesis 6 was not supported.

## Discussion

The general purpose of the current study was to fill a gap in the literature by examining the differential

Table 2  
*Differential Relationships of Conflict Source With Employee Outcomes*

| Independent variable                  | Step 1 $\beta$ | Step 2 $\beta$ |
|---------------------------------------|----------------|----------------|
| Dependent variable: Burnout           |                |                |
| Sex                                   | -.02           | .09            |
| NA                                    | .05            | .04            |
| Coworker IC                           |                | .28*           |
| Customer IC                           |                | .53**          |
| $R^2$ at each step                    | 0              | .19**          |
| Dependent variable: Physical symptoms |                |                |
| Sex                                   | -.13           | -.09           |
| NA                                    | .26            | .25*           |
| Coworker IC                           |                | -.09           |
| Customer IC                           |                | .22            |
| $R^2$ at each step                    | 0.08           | 0.11           |
| Dependent variable: Task performance  |                |                |
| Sex                                   | .20            | .17            |
| NA                                    | .08            | .12            |
| Coworker IC                           |                | -.12           |
| Customer IC                           |                | -.29*          |
| $R^2$ at each step                    | .05            | .18            |

Note.  $n = 75$ .  $\beta$  refers to the standardized regression coefficient.

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

Table 3  
*Hierarchical Regression Tests for Trait Anger as a Moderator Between IC and Its Outcomes*

|                                      | Coworker IC |        |        | Customer IC |        |        |
|--------------------------------------|-------------|--------|--------|-------------|--------|--------|
|                                      | Step 1      | Step 2 | Step 3 | Step 1      | Step 2 | Step 3 |
| Dependent variable: Burnout          |             |        |        |             |        |        |
| Sex                                  | -.02        | -.02   | -.02   | -.02        | .02    | .03    |
| Negative affectivity                 | .05         | .02    | .04    | .05         | .03    | .02    |
| Coworker IC                          |             | .21    | .21    |             |        |        |
| Customer IC                          |             |        |        |             | .52**  | .62**  |
| Trait anger                          |             | .11    | .10    |             | .19    | .49    |
| Coworker IC × TA                     |             |        | .02    |             |        |        |
| Customer IC × TA                     |             |        |        |             |        | .42**  |
| R <sup>2</sup>                       | .00         | .14    | .15    | .00         | .14    | .19    |
| ΔR <sup>2</sup>                      |             | .14**  | .01    |             | .14**  | .05**  |
| Dependent variable: Physical health  |             |        |        |             |        |        |
| Sex                                  | -.13        | -.13   | -.15   | -.13        | -.11   | -.06   |
| Negative affectivity                 | .26*        | .25*   | .26*   | .26*        | .25*   | .10*   |
| Coworker IC                          |             | .02    | .16    |             |        |        |
| Customer IC                          |             |        |        |             | .18    | .39**  |
| Trait anger                          |             | .04    | .06    |             | -.03   | .29*   |
| Coworker IC × TA                     |             |        | -.10   |             |        |        |
| Customer IC × TA                     |             |        |        |             |        | .13*   |
| R <sup>2</sup>                       | .08         | .09    | .11    | .08         | .11    | .18    |
| ΔR <sup>2</sup>                      |             | .01    | .02    |             | .03    | .07*   |
| Dependent variable: Task Performance |             |        |        |             |        |        |
| Sex                                  | -.20        | -.21   | -.19   | -.20        | -.15   | -.15   |
| Negative Affectivity                 | -.08        | -.14   | -.15   | -.08        | -.14   | -.14   |
| Coworker IC                          |             | -.19   | -.08   |             |        |        |
| Customer IC                          |             |        |        |             | -.28*  | -.24   |
| Trait Anger                          |             | -.19   | -.18   |             | -.17   | -.15   |
| Coworker IC × TA                     |             |        | .08    |             |        |        |
| Customer IC × TA                     |             |        |        |             |        | .09    |
| R <sup>2</sup>                       | .05         | .16    | .17    | .05         | .20    | .22    |
| ΔR <sup>2</sup>                      |             | .11**  | .01    |             | .15**  | .02    |

Note. *n* = 75. β refers to the standardized regression coefficient.

\* *p* < .05. \*\* *p* < .01.

effects of coworker IC and customer IC on employee burnout, health, and task performance. Research has generally shown that different sources of conflict might affect employees in varying ways, but this research has only investigated the effects of coworker IC in comparison to supervisor IC (e.g., Bruk-Lee & Spector, 2006; Frone, 2000). The lack of research on customer IC is a clear oversight, given that so many individuals work in the service industry and spend much of their time working with customers (Hecker, 2005). Additionally, mere exposure to customers can make employees the target of interpersonal conflict and higher levels of aggression (LeBlanc & Kelloway, 2002; Grandey, Dickter, & Sin, 2004). As such, to fill this oversight, we conducted the current study to assess these possible differential effects.

The results generally supported the assertion that customer IC is a stronger predictor of negative em-

ployee outcomes than coworker IC. Though both customer and coworker IC positively related to burnout, customer IC was the stronger predictor. Additionally, customer IC predicted a significant decrease in task performance, whereas coworker IC did not. These findings were mostly consistent with our hypotheses that customer IC would relate more strongly to negative employee outcomes than coworker IC. Theoretically, this is attributable to the lack of control employees have in employee–customer interactions (van der Doef & Maes, 1999), as well as the power differential created by social norms, such as “the customer is always right” (Grandey, Dickter, & Sin, 2004). Employees may generally feel powerless in the face of customer IC, and this affects their mental health and task performance.

Though this concept of control does provide a parsimonious explanation for why these effects might differ, it was not tested empirically. As such, the

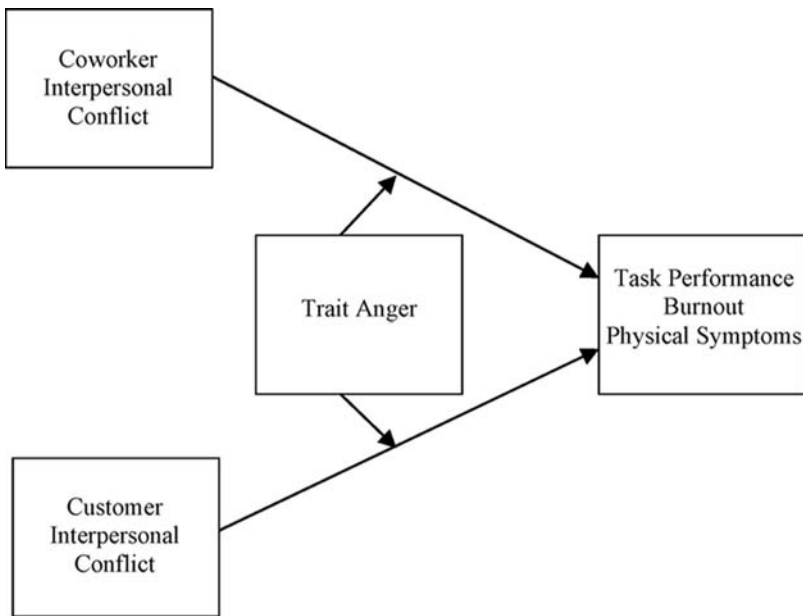


Figure 1. Proposed model of the moderating effect of trait anger on the relationship between two sources of IC and their outcomes.

possibility exists that alternative explanations could provide further insight as to why customer IC has stronger negative effects than coworker IC. For instance, the principle of compatibility (Ajzen & Fishbien, 1972) could be applied in this situation, when

considering task performance as the outcome variable. This principle states that measurement of attitudes and behaviors should involve highly related actions, targets, contexts, and time elements, whether these elements are defined at a specific or general

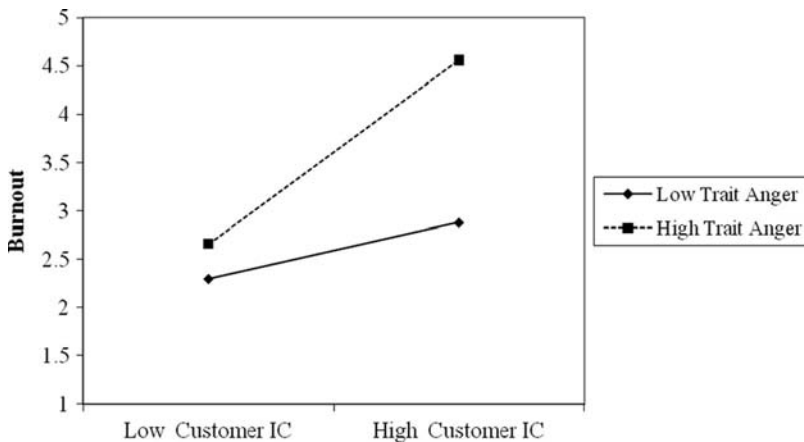


Figure 2. The moderating effect of trait anger on the relationship between customer interpersonal conflict and burnout.

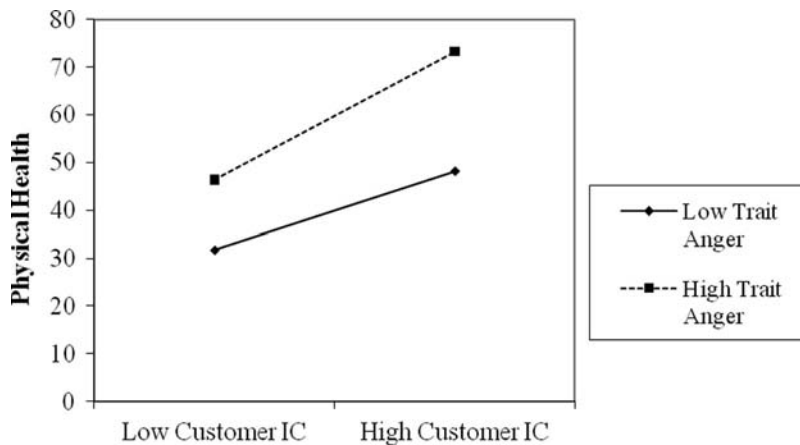


Figure 3. The moderating effect of trait anger on the relationship between customer interpersonal conflict and physical symptoms.

level. Interactions with customers and task performance are highly related in a call center occupation, more so than coworker interactions and task performance, and conflict with customers tends to match in terms of their specificity of their target. This supports our finding that customer IC was more strongly related to task performance than coworker IC.

Additionally, other alternative explanations could explain the differential effects of the source of IC on outcomes. This finding could simply be the result of the frequency of interactions—service employees are likely to more frequently interact with customers rather than coworkers. This frequency may make instances of IC from customers more salient, and, in turn, lead to more negative effects. It is also possible that a service employee's individual identity is at least partially tied to his or her interactions with customers. If a person identifies strongly with a particular job, but then has unsuccessful interactions (i.e., conflict in a major component of that job), that person might experience more negative effects as a result (Thoits, 1991). Although the current study can be considered a first step in empirically determining that there are differential effects on employee outcomes based on source of IC, it should be noted that these findings could be nested in a variety of theoretical models.

Finally, the finding that customer IC was related to decreased task performance is a unique finding within the literature explicitly examining IC, though not unexpected after examining literature on related constructs (e.g., customer incivility; Sliter et al., 2010). Task performance, as conceptualized and used in the current

study, has the advantage of being an objective measure, and has the further advantage of being used as a measure by the organization. As such, we can conclude the customer IC has a real impact on an organizationally important measure of task performance. However, with task performance being measured in this objective manner, we cannot be certain of a person's motivation for reducing their task performance. It might be, as mentioned earlier, a coping mechanism for replenishing resources after difficult transactions. Alternately, this reduction might be considered production deviance, a form of CWB in which an employee intentionally reduces performance to harm the organization (Pulich & Tourigny, 2004). Based on the current results we cannot be certain, but this could be an avenue for future research.

### Trait Anger as a Moderator

The current study also examined trait anger as a moderator between customer and coworker IC and its outcomes. The hypotheses on the moderating effects of trait anger were partially supported, primarily for the relationship between customer IC and its outcomes. It seems that people high in trait anger are more likely to experience negative effects as a result of customer IC than people low in trait anger. This is a logical finding, given that employees have little power in customer–employee interactions (e.g., Grandey, Dickter, & Sin, 2004). It is also worth noting that, regardless of a person's trait anger, exposure to conflict with cus-

tomers led to increased burnout and physical symptoms. That is, even people who are generally calm and level-headed still experience negative outcomes in the face of customer IC.

Continuing with the discussion of moderation, the hypotheses suggesting that trait anger moderated the relationships between coworker IC and its outcomes were not supported. From a post hoc perspective, this could be for two reasons. First, this could simply be attributable to lack of power for detecting moderation effects, as our sample size was relatively low. Second, it might be that trait anger simply does not have as much of an effect in moderating the relationship between coworker IC and its outcomes as it does between customer IC and its outcomes. We theorized that anger rumination is one of the main mechanisms through which trait anger affected employee outcomes. However, perhaps when conflict occurs from a source known by the employee (a coworker) as opposed to an unknown source (a customer), this anger rumination (regardless of level of trait anger) is less likely to occur. As such, people high in trait anger would not experience exacerbated negative outcomes as a result of coworker IC.

### Strengths of the Present Study

The current study has several strengths that lend confidence to the conclusions drawn from the data. The first major strength was that the variables were measured at two points in time. By predicting outcome measures at a later point in time, we can be more confident of the possibility of causal relationships between the variables, as well as reducing the effects of common method bias (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). A three-month time interval might strike the best balance between maximizing variance in measures and still having adequate internal validity (Cook & Campbell, 1979). Most studies in the literature on IC have been cross-sectional in nature (e.g., Bruk-Lee & Spector, 2006; Penney & Spector, 2002; Grandey, Dickter, & Sin, 2004), which suggests that the results of the current study may be more indicative of the true relationship between IC and its outcomes.

Additionally, the current study used multiple methods for assessing variables. Namely, we combined self-report methodology (interpersonal IC and employee outcomes) with an objective measure of task performance. The use of multiple methods further reduces the effects of common method bias (Podsakoff et al., 2003) and provides a more diversified view of the relationship among variables. Ad-

ditionally, by using task performance data, the costs of IC become clearer—not only does it affect employees' personal outcomes, but it also affects the bottom line of organizations through reduced employee task performance.

A final strength of the current study is that we used an applied sample in which the likelihood for IC was high. Call center work is a job that is notorious for involving conflict from customers. This was especially true in the current study as the call center used was associated with a financial institution. Whenever people are working with or speaking about money, they are more likely to become aggressive and heated in their interactions with others (Furnham & Okamura, 1999). Additionally, call center employees have been shown to be at greater risk for a particular type of conflict, bullying, from coworkers and supervisors (e.g., Dawn, Cowie, & Ananiadou, 2003; Bain & Taylor, 2000). As such, this sample was considered highly appropriate for studying the phenomenon of IC from multiple sources.

### Limitations and Considerations

The results of the current study, however, must also be viewed in terms of the study's limitations. First, we were unable to include supervisor IC as a variable in the study. Management at the bank had concerns about making salient any negative issues between management and frontline employees. As such, the bank requested that we did not include supervisor IC in the study. This limits the assertions we can make in the current study, as supervisor IC might be an important component of the overall model of workplace IC. It could potentially strongly predict outcomes at different levels than either customer or coworker IC, and might also have a different relationship with trait anger. As such, we consider this a limitation that could easily be addressed in future research, as we note below.

A second consideration in interpreting the results of the current study is the possibility of suppression effects. A suppression effect refers to when a variable (or set of variables) increases the predictive validity of another variable (or set of variables) by its inclusion in the regression equation (Tzelgov & Henik, 1991). In the case of the current study, coworker IC was not significantly correlated with burnout. However, once the controls (sex and NA) were entered into the regression equation along with customer IC, coworker IC became a significant predictor of burnout, indicating the possibility of suppression. This is especially evident when examining the results of the dominance analysis, where customer IC was much more important in predicting

burnout than coworker IC, results that were partially attributable to coworker IC explaining little unique variance on burnout on its own. This indicates that perhaps coworker IC has little effect on a service employee unless also in the presence of customer IC. This would be consistent with research by Sliter, Wolford, & Jex (2009), who found that coworker incivility can moderate the relationship between customer incivility and its outcomes, such that high levels of coworker IC can exacerbate these negative outcomes. It is worth noting that finding suppression effects in real-life situations is rare, and these effects could simply be an artifact of the sample used in the current study (p. 205; Allen & Yen, 2001), which emphasizes the importance of replication.

Finally, despite the fact that our design was not cross-sectional, we cannot say with certainty that our assertions are causal. Alternate explanations might exist to explain some of our findings. For instance, employees who are more burnt out from work might respond to customers and coworkers in such a way that they become provocative targets for IC (e.g., Milam, Spitzmueller, & Penney, 2009). Alternately, employees with low performance might habitually spark conflict with customers. However, unlike previous studies in the area of workplace IC, the current study did seek to mitigate these alternate explanations with a strong design.

### Practical Implications and Future Research

The findings in the current study have implications for both service employees and organizations. Organizations have a measure of control over reducing IC among coworkers but can have limited impact on reducing IC perpetrated by customers (Sliter et al., 2010). However, the current results suggest that customers are the more aversive source of conflict, affecting both the mental well-being and the task performance of employees, which can have a real, palpable cost to organizations. As such, service organizations might consider taking steps to prevent conflict from customers, shifting some of the power and control back to the employee.

There are few empirical recommendations in the literature on customer IC regarding how to lower the incidence of this interpersonal stressor. The existing recommendations focus on reducing customer anger and frustration and providing recovery incidences for employees after a difficult interaction. For instance, Nguyen and McColl-Kennedy (2003) suggest that diffusing customer anger is the best medicine for reducing conflict. To do this, service employees can 1) listen closely to the customer, 2) displace the blame (i.e.,

blame a computer program/the post office/the “nameless” organization), or 3) provide an apology to customers (even if it isn’t the fault of the service provider). However, these recommendations may not always diffuse the situation, and some employees may not be comfortable apologizing for something that they did not do or with shifting the blame.

Another secondary intervention recommended by Sliter and colleagues (2010) is to allow employees to take short, discretionary breaks after customer conflict. Allowing breaks at the discretion of the employee might allow employees to feel more in control of the situation and provide brief recovery experiences. As suggested by the current results, employees might be decreasing their task performance as a coping mechanism after high levels of customer IC. Because this task performance is already lost as a result of customer IC, employers could allow breaks, which would benefit the employees by giving them an opportunity to recover, and also help the organization to appear supportive. Additionally, having brief breaks might help reduce anger that is associated with these interactions. Because this particular intervention has not yet been empirically tested, it is a viable direction for future research.

Our knowledge of the effects of multiple sources of IC has recently been growing but is not yet complete. Most research has focused on IC from coworkers and supervisors (e.g., Frone, 2000; Bruk-Lee & Spector, 2006), and the current study focused on the differential effects of customer and coworker IC. Now that differential relationships have been established between coworker-supervisor IC and coworker-customer IC and their outcomes, future research might endeavor to test a holistic model of IC in the workplace that includes all three possible sources of IC in the model (e.g., supervisor, coworker, and customer). These relationships may differ from sample to sample, so future research might also consider replicating the current results with different samples of service employees.

Additionally, we found that trait anger moderated the relationship between customer IC and its outcomes but not coworker IC and its outcomes. This could either be a result of the sample used in the current study, or evidence of the strength of customer IC in affecting people with high trait anger. As such, future research might examine the moderating effect of trait anger on different sources of IC to see whether these effects can be replicated or whether they are unique to call center employees. Also, to further explain the mechanisms through which trait anger affects employees, more explanatory models could be examined. For instance, a potential logical model to examine would be to see

whether trait anger leads to anger behaviors or anger rumination, which, in turn, may lead to outcomes. Inclusion of anger behaviors (e.g., shouting, venting) in the model would help clarify the mechanisms through which anger affects outcomes.

Although we proposed an explanatory mechanism for the differential effects of sources of IC on outcomes (i.e., control), we were unable to test this empirically. As such, future research should begin to empirically determine why sources of IC might cause differential impacts on employees. For example, future research might consider examining different service jobs within the same study to determine whether or not differences in control moderate the relationship between customer IC and its outcomes. Alternately, future research might consider examining one of the alternative explanations that we provided above.

Finally, the current study was the first to compare different sources of IC to objective work outcomes. Future research might consider extending these relationships to examine other objective outcomes of IC—such as other types of performance, absenteeism, and turnover—to convert the effects of IC into dollar values, emphasizing the deleterious effects of IC on organizations.

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Received October 20, 2010

Revision received April 4, 2011

Accepted April 5, 2011 ■