Linking Perceptions of Role Stress and Incivility to Workplace Aggression: The Moderating Role of Personality

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Although research on workplace aggression has long recognized job stressors as antecedents, little is known about the process through which employee responses to stressful workplace demands escalate from relatively mild interactions into more intense behaviors. This study investigates the influence that employees’ perceptions of role stress (ambiguity, conflict, overload) have on their aggressive behavior by affecting their perceptions of incivility, and whether these downstream effects depend on personality traits (neuroticism, agreeableness, conscientiousness). Results supported moderated mediation, such that the indirect effects of perceived role ambiguity and role conflict on enacted aggression through experienced incivility varied according to individual differences in personality.

Keywords: aggression, workplace incivility, role stress, personality

The connection between a stressful workplace and dysfunctional employee behavior is an important concern among organizations. The financial costs of workplace stress have been estimated to approach $300 billion annually (Leiter & Maslach, 2005); such costs reflect increases associated with employee turnover, absenteeism, lowered productivity, and health problems. Of particular relevance to the present study, stress can also lead to acts of aggression (Barclay & Aquino, 2011; Rodell & Judge, 2009). Workplace aggression is broadly defined as “any negative act, which may be committed toward an individual within the workplace, or the workplace itself, in ways the target is motivated to avoid” (Hershcovis & Barling, 2007, p. 271).1 Bennett and Robinson (2000, 2003) reported that annual costs associated with such behaviors can reach up to $200 billion. Moreover, workplace aggression is prevalent in many sectors of the economy and is believed to cause 30% of all business failures (Bolin & Heatherly, 2001). Thus it seems reasonable to conclude that the prevalence and costs of workplace stressors and employee aggression make them significant problems warranting continued scholarly attention.

Although research suggests that aggression follows an escalating pattern in which perceived stressors can give rise to increasingly intense behaviors (R. A. Baron, 2004; R. A. Baron & Neuman, 1996), little attention has been devoted to this escalatory process (Glomb, 2002) or the relative intensities of various forms of aggression (Hershcovis, 2011). Moreover, because this escalation process is based on notions of reciprocity (Miller, Pedersen, Earleywine, & Pollock, 2003), such that individuals who experience aggression may reciprocate with more intense aggressive actions, we argue that perceptions of workplace incivility—low-intensity behaviors characterized by an ambiguous intent to harm and a disregard for mutual respect (Andersson & Pearson, 1999)—more accurately convey the escalating and reciprocal aggression process prescribed by theory.

Toward this end, the present study investigates whether perceived workplace incivility is a viable mediator of the process by which employees’ perceptions of role stress (i.e., ambiguity, conflict, overload) influence their aggressive behavior. Because our interest is in predicting whether employees who experience role stress perceive workplace incivility and engage in more intense acts of aggression, we focus on employees’ experienced (i.e., perceived) incivility and their enacted aggression. Because theory also suggests that employees’ dispositional characteristics can affect reciprocal responses to aversive workplace events (Fox & Spector, 1999; Hershcovis & Barling, 2007), we further anticipate that salient personality traits (i.e., neuroticism, agreeableness, conscientiousness) will moderate these indirect effects. Our research extends the management and organizational psychology literatures by testing a model (see Figure 1) that investigates how and when employee perceptions of role stress affect their experienced incivility and enacted aggression.

1 Although various terms are used to describe dysfunctional employee behavior, we use aggression because it is purposefully broad, it corresponds with our theoretical framework, and it is in line with calls for integration across literatures (Hershcovis, 2011; Hershcovis & Barling, 2007). Moreover, several scholars (Barclay & Aquino, 2011; Bies & Tripp, 2005; Hershcovis & Barling, 2007; Tepper & Henle, 2011) have noted that such behaviors may not necessarily be deviant, counterproductive, or antisocial.
Theoretical Background and Hypotheses

The Dollard–Miller (D-M; Dollard, Doob, Miller, Mowrer, & Sears, 1939; Miller et al., 2003) model of aggression provides an overarching framework guiding our proposed conceptual scheme for several reasons. First, it acknowledges that enacted aggression is often precipitated by stress and frustration. In particular, frustration is brought on by events in the workplace that are perceived as constraints and that prevent individuals from attaining effective performance or achieving valued work goals (Fox & Spector, 1999; Hershcovis et al., 2007). In this connection, role stressors (i.e., ambiguity, conflict, overload) are thought to interfere with task completion (Tubre & Collins, 2000) and hinder pursuit of personal and organizational goals (Beehr & Glazer, 2005).

Second, the D-M model highlights the aggression-arousing potency of minor triggers. As Marcus-Newhall, Pedersen, Carlson, and Miller (2000) explained, “when exposed to even a minor annoyance or irritation, a previously provoked actor will emit a level of aggressive response that is disproportional to the annoyance” (p. 674). Thus, as workplace incivility is of relatively low intensity in comparison with other forms of employee behavior, it seems that incivility perceptions (as opposed to, say, perceptions of bullying, which encompasses behaviors that reflect a clear intent to harm and are of higher intensity; Lim, Cortina, & Magley, 2008) may “escalate into increasingly intense, aggressive workplace behaviors” (Andersson & Pearson, 1999, p. 454). In a related vein, the model recognizes that the escalation process is based on what researchers refer to as the matching principle (Axelrod, 1984) or the norm of reciprocity (Gouldner, 1960). Because uncivil and aggressive interactions have been separately conceptualized as being “tit-for-tat” (Andersson & Pearson, 1999; Miller et al., 2003), we test these ideas in the present study by examining whether employees reciprocate experienced incivility with enacted aggression.

Finally, the D-M model acknowledges that personal characteristics can influence (i.e., moderate) individuals’ behavioral reactions to aversive workplace events such as incivility (Fox & Spector, 1999). Indeed, much aggression research is based on the notion that person characteristics interact with situational features to predict enacted aggression (e.g., Hershcovis & Barling, 2007; Schat & Kelloway, 2005). Other research likewise suggests that although the basic principles of reciprocity are universal, reciprocal behavior can vary as a function of individual differences (Cropanzano & Mitchell, 2005; Shore, Coyle-Shapiro, Chen, & Tetrack, 2009). Although several personality traits might impact employee reactions to incivility, the D-M model identifies three traits within the Five-Factor Model as being particularly relevant in understanding variation in aggressive responses. Specifically, Miller et al. (2003) suggested that individuals “defined by low conscientiousness, low agreeableness, and high neuroticism” are especially likely to react to perceived aggression with enacted aggression (p. 78; see also Hershcovis & Barling, 2007). We therefore incorporate these traits in the present study to assess their impact on the relationship between experienced incivility and enacted aggression. Because related research suggests that neuroticism, in particular, affects individuals’ reactions to perceived workplace stressors (Bolger & Zuckerman, 1995), we also examine whether this trait moderates the relationship between perceptions of role stress and workplace incivility. Thus, guided by the D-M model of aggression and research on workplace stress, we investigate whether individual differences in personality moderate the indirect effects of perceived role stress on enacted aggression through employees’ perceptions of incivility. We begin, however,
by theorizing that perceived role stressors impact incivility perceptions and, in turn, enacted aggression.

Role Stress, Workplace Incivility, and Enacted Aggression

When role demands create unclear, conflicting, or overly taxing expectations, individuals experience role stress (viz., role ambiguity, role conflict, and role overload, respectively). Previous empirical studies have identified role ambiguity (Einarsen, Raknes, & Matthiesen, 1994; Jennifer, Cowie, & Ananadiou, 2003), role conflict (Einarsen et al., 1994; Skogstad, Einarsen, Torsheim, Aasland, & Hetland, 2007), and role overload (Hoel & Salin, 2003; Salin, 2003) as being associated with greater levels of perceived workplace mistreatment. Although it has been suggested (Matthiesen & Einarsen, 2007) that experiencing mistreatment might affect one’s perceptions of role stress, reviews of the aggression literature more strongly assert that perceived role stressors create conditions that lead one to experience and perceive workplace mistreatment (Aquino & Thau, 2009; Barclay & Aquino, 2011; Bowling & Beehr, 2006; Schat & Kelloway, 2005).

Indeed, these reviews (and the research they reflect) advance many reasons as to why role stressors might be antecedents of perceived mistreatment. For instance, these factors are believed to increase employees’ perceptions of being mistreated because they hinder individuals’ understanding of guidelines for what constitutes appropriate workplace conduct (Aquino & Thau, 2009; Bowling & Beehr, 2006). In chaotic and disorganized workplaces, stressed employees may perceive mistreatment when their managers spurn them to ensure that work gets done (Roscigno, Lopez, & Hodson, 2009). Still other research suggests that mistreatment perceptions can arise from the experience of role stress because such demands encourage employees to engage in behaviors that protect their self-interests and achieve their personal goals (Matthiesen & Einarsen, 2007).

Although varied, these rationales are nonetheless in line with the D-M theory of aggression: They coalesce around the idea that perceptions of workplace incivility may result when employees are frustrated by stressful work demands (Dollard et al., 1939; Miller et al., 2003). For their part, incivility researchers have offered similar explanations for this link. Pearson, Andersson, and Porath (2005), for instance, observed that work settings characterized by ambiguity (e.g., due to downsizing, mergers, or technological change) can foster incivility among employees and deteriorate collegial relationships. When faced with conflicting demands, employees may behave in ways that encourage others to treat them rudely (e.g., asking for clarification or help). In addition, employees who complain of work overload are often targets of incivility (Pearson, Andersson, & Porath, 2000; Pearson & Porath, 2004). We therefore expect perceptions of role stress to influence experienced (i.e., perceived) workplace incivility.

Incivility research likewise suggests that when individuals experience uncivil incidents at work, they may reciprocate with harmful and destructive actions toward other organization members or the organization itself (e.g., Pearson et al., 2005; Penney & Spector, 2005). As Pearson et al. (2005) explained, “uncivil words and deeds may spiral or cascade, thus multiplying or intensifying” aggressive workplace interactions (p. 185). This cascading pattern of incivility is consistent with the D-M theory of aggression, in that it reflects the possibility that individuals might displace their aggression (Pearson et al., 2000). That is, rather than reciprocating directly against an instigator, a target may redirect incivility toward a new target. Employees may reciprocate experienced incivility with organization-directed aggression to the extent that they hold an organization responsible for condoning or allowing such behavior to occur (Taylor, Bedeian, & Kluempers, 2011). Indeed, numerous studies have demonstrated that individuals who experience mistreatment at work will reciprocate with enacted aggression toward an organization (e.g., Ambrose, Seabright, & Schminke, 2002; Burton, Mitchell, & Lee, 2005; Mitchell & Ambrose, 2007; Penney & Spector, 2005).

Thus, on the basis of the theory and research discussed above, we anticipate that individuals who experience high levels of role stress will perceive greater levels of incivility and, in turn, will engage in more intense acts of interpersonal and organizational aggression. In light of our overarching theoretical perspective, we expect that incivility perceptions will partially mediate the relationship between perceived role stress and enacted aggression. We believe partial mediation is probable, given that perceptions of role stress may also directly influence aggressive behaviors (Barclay & Aquino, 2011; Beehr & Glazer, 2005) and that one intervening mechanism (e.g., incivility perceptions) is likely incapable of fully accounting for a proposed relationship (Maxwell, Cole, & Mitchell, 2011; see also Bowling & Beehr, 2006).

Hypothesis 1: Experienced workplace incivility will partially mediate the relationships between perceived role ambiguity (Hypothesis 1a, or H1a), role conflict (H1b), and role overload (H1c) and enacted interpersonal and organizational aggression.

Moderating Effects of Personality

Although our preceding arguments suggest that role stress will lead to perceptions of workplace incivility and, in turn, enacted aggression, it is likely that not all stressed or mistreated employees will engage in aggression. Individual difference variables such as neuroticism, agreeableness, and conscientiousness can determine whether experiencing workplace incivility will affect employees’ aggressive behavioral reactions (i.e., moderate the relationship between incivility perceptions and enacted aggression; see Pearson, Andersson, & Wegner, 2001). Across various literatures, empirical work has drawn on the D-M theory of aggression and the norm of reciprocity to provide support for this idea (Aquino & Thau, 2009; Colbert, Mount, Harter, Witt, & Barrick, 2004). This sort of prediction corresponds to “second-stage moderation,” in which a mediated effect varies over levels of a moderator that operates at the second stage of the mediated relationship (Edwards & Lambert, 2007). Moreover, research in the stress literature (Bolger & Schilling, 1991; Bolger & Zuckerman, 1995) suggests that employees’ level of neuroticism affects their reactivity to workplace stress (i.e., moderates the relationship between perceived role stress and incivility). This notion reflects “first-stage moderation,” in which an indirect effect varies over levels of a moderator that operates at the first stage of the mediated relationship (Edwards & Lambert, 2007). Thus, guided by the D-M model of aggression and research on workplace stress, we offer predictions that reflect “first- and second-stage” moderation for neurot-
ticism and “second-stage” moderation for agreeableness and conscientiousness.

Neuroticism. Neuroticism describes individuals who are nervous, anxious, fearful, and insecure. Conversely, individuals low in neuroticism (i.e., more emotionally stable) are calm, resilient, and optimistic (McCrae & John, 1992). Neurotic individuals tend to experience negative feelings more than do their emotionally stable counterparts and are more reactive to aversive work events and other negative stimuli (Bolger & Zuckerman, 1995; McCrae & Costa, 1996). This heightened sensitivity may explain why neurotic individuals are more likely than their counterparts to argue and quarrel with others when under stress (Bolger & Schilling, 1991). Such squabbles with coworkers may result in greater perceptions of workplace incivility. Supporting this possibility, Fox and Spector (1999) proposed that individuals with neurotic characteristics are more likely to respond to perceived stressors with negative thoughts and feelings. Thus, we suggest that the relationship between perceptions of role stress and incivility will be stronger for individuals high in neuroticism.

Along these lines, incivility research and the D-M model of aggression suggest that neurotic individuals’ heightened reactivity will likewise impact their negative behavioral responses. Consistent with this notion, Milam, Spitzmueller, and Penney (2009) argued that neurotic individuals are more likely to react to unpleasant and ambiguous events (i.e., workplace incivility) in a confrontational manner. Other work suggests that when targets of incivility are high in neuroticism, they may be more fearful of future mistreatment and thus engage in aggressive behaviors to prevent further harm (Penney & Spector, 2005; Schat & Kelloway, 2005). Thus, to the extent neurotic individuals are highly sensitive to insults and perceive threats in seemingly innocent interactions with others, we suggest that they are more likely to engage in aggressive actions in response to experienced incivility.

Together, these arguments imply that the mediated effects described in Hypothesis 1 vary according to an employee’s level of neuroticism. That is, we expected that perceptions of role stress are more likely to lead to incivility perceptions among individuals high in neuroticism, due to their heightened reactivity to work-related stressors. We further anticipated the incivility perceptions precipitated by role stress to more strongly affect their enacted aggression. In contrast, because emotionally stable individuals are more secure and confident in their ability to handle stress and incidents of incivility (Watson & Hubbard, 1996), we expected that the indirect effects of role stress on enacted aggression (through incivility perceptions) would be weaker for this group. Thus, we propose that both (a) the relationship between perceived role stress and incivility and (b) the relationship between experienced incivility and enacted aggression will be moderated by neuroticism, such that these relationships will be stronger when employees possess high (rather than low) levels of neuroticism.

Hypothesis 2a: Neuroticism moderates the indirect effects of role stress on enacted aggression through experienced workplace incivility; the (first and second stages of the) mediated effects will be stronger when a targeted employee is high in neuroticism.

Agreeableness. Individuals high in agreeableness demonstrate kindness and cooperation, whereas individuals low in agreeableness are considered uncaring and antagonistic (McCrae & Costa, 1987). Owing to their stubborn and uncooperative behavioral tendencies, hostile or disagreeable individuals are likely to react more strongly to negative interpersonal interactions or harassment than are more agreeable individuals (Peters, Godeart, Ballieux, & Heijnen, 2003). As such, we expected (as explained below) that the positive relationship between perceived workplace incivility (which perceptions of role stress evoke) and enacted aggression to be stronger when individuals are low in agreeableness.

Agreeableness is a relevant moderator for several reasons. Because agreeable individuals are forgiving and sympathetic, they may be more willing or better able to dismiss or “brush off” experienced incivility as commonplace or inconsequential. Research indicates that when the work situation is perceived as unfavorable, agreeable individuals are less likely to engage in aggression because their considerate and tolerant tendencies conflict with such behaviors (Colbert et al., 2004). Consistent with this notion, Milam et al. (2009) reasoned that individuals high in agreeableness “are in such need for harmony that they are more apt to give others the benefit of the doubt and attribute ambiguous, uncivil behavior to the situation, rather than to the individual” (p. 65). In contrast, disagreeable individuals are less apt to interpret ambiguous situations in a positive light (Graziano, Jensen-Campbell, & Hair, 1996) and, as such, may be more likely to respond aggressively to perceived incivility.

In line with the D-M model of aggression, individuals low in agreeableness may believe that aggressive actions are effective means for resolving conflict or that such acts will elicit respect from others that was previously denied to them during the event that prompted incivility perceptions (Jensen-Campbell & Graziano, 2001). Moreover, Graziano and Eisenberg (1997) maintained that agreeableness reflects a propensity for friendly compliance. In this connection, Andersson and Pearson (1999) asserted that individuals who resist group pressures, in relation to their more compliant colleagues, are more likely to react to perceived incivility with enacted aggression because they more frequently perceive workday interactions as irritating. Furthermore, drawing on the idea of reciprocity within the context of the D-M model, individuals low in agreeableness endorse the use of negative tactics in response to interpersonal conflicts more than do agreeable individuals (see, e.g., Perugini, Gallucci, Presaghi, & Ercolani, 2003).

Hypothesis 2b: Agreeableness moderates the indirect effects of role stress on enacted aggression through experienced workplace incivility; the (second stage of the) mediated effects will be stronger when a targeted employee is low in agreeableness.

Conscientiousness. Conscientiousness describes individuals who are disciplined, dutiful, and dependable. Disciplined individuals are less likely to respond to negative events than are those with less resolve (Douglas et al., 2008), and employees who persevere in the face of difficulties are less likely to behave aggressively when mistreated (Wang, Liao, Zhan, & Shi, 2011). These characteristics suggest that conscientious employees will be reluctant to counter experienced workplace incivility because doing so could interfere with task accomplishment or jeopardize their
careers (Pearson & Porath, 2005). Because conscientious individuals tend to follow rules and choose words with care (Goldberg, 1999), it is unlikely that they will, for instance, lose their temper or berate others when mistreated at work. In contrast, aggressive responses to perceived incivility are more likely among individuals low in conscientiousness because they are less concerned about the consequences of their actions (Tepper, Duffy, & Shaw, 2001) or with upholding standards of workplace conduct (Marcus & Schuler, 2004). As such, the second stage of the mediated effect (i.e., the relationship between experienced incivility and enacted aggression) is likely weaker for this group.

We further reasoned that the second stage of the indirect effect would be moderated by conscientiousness because of this trait’s association with negative reciprocity (Perugini et al., 2003). Negative reciprocators are expected to be particularly reactive to negative interpersonal behaviors and especially sensitive to unkind behavior. Within the D-M model of aggression, they “should be especially willing to perform negative behaviours, or to negatively sanction, when receiving negative behaviours from [others]” (Perugini et al., 2003, p. 255). Thus, in extending our logic, we reasoned that the process by which perceptions of incivility (evoked by role stress) lead to reciprocal (i.e., enacted) aggression would be transmitted more strongly among individuals low in conscientiousness.

Hypothesis 2c: Conscientiousness moderates the indirect effects of role stress on enacted aggression through experienced workplace incivility; the (second stage of the) mediated effects will be stronger when a targeted employee is low in conscientiousness.

Method

Sample and Procedures

The study sample consisted of subordinate–supervisor pairs employed in a large urban area of the southeastern United States. In exchange for partial course credit, students of an introductory management course at a large public university were asked to recruit 1 full-time employee who was willing to participate in the study and to provide supervisor contact information. Students were then sent a link to a Web survey requesting the employee’s name and e-mail address. Our objective with this targeted sampling strategy (Watters & Biernacki, 1989) was to obtain a sufficient number of subordinate–supervisor pairs from a wide range of occupations while avoiding the nonindependence issues that occur when several subordinates share the same supervisor. This sampling strategy has been used frequently to obtain data from employees in a variety of firms and industries (e.g., Ashforth, Kreiner, Clark, & Fugate, 2007; Powell & Greenhaus, 2010), and in the present design, study participants held job titles such as barista, accounting clerk, choreographer, dental hygienist, clinical pharmacist, banker, facility manager, laboratory technician, project manager, and sales representative.

Separate online surveys were developed and administered to employees and their supervisors. Whereas employees assessed perceived role stressors, experienced workplace incivility, and their personality, their enacted aggression was reported by their supervisors. Two weeks after the employee survey administration, we e-mailed supervisors a link to an online rating form; the accompanying message contained the name of the employee to be rated. As an additional check, supervisors were instructed to enter the name of the employee whom they had been asked to rate. Reminder follow-up e-mails were sent 2 weeks later. To ensure that the employee and supervisor surveys were not completed by the students who recruited them, we compared e-mail and Internet protocol (IP) addresses for each Web survey.

Of the 684 eligible participants recruited, 507 (74%) supplied usable data. Our efforts to obtain supervisor assessments of subordinate aggression resulted in an 87% (n = 442) response rate. After matching responses between employees and their supervisors, the final study sample consisted of 404 subordinate–supervisor dyads. The employee sample was 62% women, with an average age of 38 (SD = 14.1) years, worked on average 37 hours per week, and had on average 19 (SD = 13.2) years of work experience. The supervisor sample was 47% women, averaged 45 (SD = 12.0) years of age, had 25 (SD = 11.2) years of work experience, and had worked with the employee respondent for 4.3 years (SD = 5.4).

Measures

Perceived role stressors. For each of the role stressor measures, respondents indicated the extent of agreement with each statement on a 5-point Likert scale (1 = strongly disagree; 5 = strongly agree). Measures from Rizzo, House, and Lirtzman (1970) were used to tap role ambiguity (six items) and role conflict (eight items). Role overload was assessed with a three-item measure from Beehr, Walsh, and Taber (1976). Sample items include “I know what my responsibilities are” (role ambiguity, reverse-scored), “I receive incompatible requests from two or more people” (role conflict), and “It often seems like I have too much work for one person to do” (role overload). Responses were averaged such that role stress is reflected in higher scores on the respective measures.

Experienced incivility. The Workplace Incivility Scale (WIS; Cortina, Magley, Williams, & Langhout, 2001) gauged the frequency of respondents’ experiences of rude behaviors from superiors or coworkers within the past year (0 = never; 4 = frequently). Sample items include “Put me down or was condescending to me” and “Made demeaning or derogatory remarks about me.” Responses to the seven items were averaged such that high scores reflect higher levels of workplace incivility.

Personality. Neuroticism, agreeableness, and conscientiousness were measured with 10 items each from the International Personality Item Pool (Goldberg et al., 2006). Respondents indicated the extent of agreement with each statement on a 5-point Likert scale (1 = strongly disagree; 5 = strongly agree). Sample items include “I am often down in the dumps” (neuroticism), “I have a good word for everyone” (agreeableness), and “I am always prepared” (conscientiousness). Scores were computed by averaging across items, with higher scores indicative of higher levels of a particular trait.

Enacted aggression. Supervisors rated employees’ enacted interpersonal and organizational aggression with the personal aggression and property deviance dimensions of Stewart, Bing, Davison, Woehr, and McIntyre’s (2009) measure of workplace...
deviance. A 5-point response format was used (1 = never; 5 = daily) to assess the frequency with which employees had engaged in each of the behaviors in the past year. Sample items include “Made fun of someone at work” (interpersonal) and “Took property from work without permission” (organizational). Ratings were coded so that high scores indicate higher aggression levels.

Control variables. We controlled for target gender and power because research suggests that male and powerful individuals are less likely to experience incivility than are their female and less powerful counterparts (Pearson et al., 2005; Pearson & Porath, 2005). Power was assessed with an eight-item measure from C. Anderson and Galinsky (2006). Respondents reported their generalized beliefs about the power they have in their relationships with others by indicating the extent to which they agreed with each statement on a 5-point Likert scale (1 = strongly disagree, 5 = strongly agree). Sample items include “I can get people to listen to what I say” and “My wishes do not carry much weight” (reverse-scored). Responses to the eight items were averaged such that high scores reflect high levels of power.

Because exposure to workplace incivility has been found to negatively affect employees beyond the impact of personal experiences of incivility (Lim et al., 2008), we controlled for perceptions of an uncivil organizational climate. We did so by modifying the seven items comprising Cortina et al.’s (2001) measure, such that individuals were asked to indicate how often they witnessed others in their organization exhibit uncivil behaviors within the past year (0 = never; 4 = frequently). For example, individuals were asked how often they had observed other employees “address someone in unprofessional terms” or “ignore or exclude someone from professional camaraderie.” Responses to the seven items were averaged such that high scores reflect high exposure to workplace incivility. Such an approach to measuring uncivil climate perceptions has been used in previous research (Miner-Rubino & Cortina, 2007).

Data Analyses

Because Hypothesis 1 proposes that role stressors exert indirect effects on employees’ enacted aggression, we examined a model in which the effects of role ambiguity, role conflict, and role overload on enacted aggression were transmitted through perceptions of workplace incivility. Because of limitations associated with R. M. Baron and Kenny’s (1986) multistep procedure for testing mediated (i.e., indirect) effects (MacKinnon, Lockwood, Hoffman, West, & Sheets, 2002; MacKinnon, Lockwood, & Williams, 2004), we bootstrapped the sampling distribution of each specific indirect effect [defined as the product of the $X \rightarrow M$ path (a) and the $M \rightarrow Y$ path (b), or $ab$, for each independent variable $X$] with an SPSS macro developed by Hayes and Preacher (2011). Because all three role stressor variables were included in the model simultaneously, the effects of each can be interpreted as independent of or controlling for the others.

To assess the proposed overall model and empirically test Hypotheses 2a–2c, we followed procedures outlined in Edwards and Lambert (2007) to compute the indirect effects (ab) with reduced-form equations (see the Appendix). In doing so, we used a constrained nonlinear regression (CNLR) module to estimate the associated coefficients from 1000 bootstrap samples, and we examined bias-corrected and accelerated (BCa) confidence intervals to determine whether the indirect effects differed at select values of the hypothesized moderator variables. To illustrate the results, we plotted the simple effects at values plus or minus 1 SD from the mean of the hypothesized moderator variables and conducted simple slope analyses based on procedures described by Edwards and Lambert (2007; see also Aiken & West, 1991).

Results

Means, standard deviations, alpha reliability coefficients, and zero-order correlations for all study variables appear in Table 1.

Preliminary Analyses

We first conducted construct-level confirmatory factor analyses (CFA) to evaluate the discriminant validity of the study variables. The results of a 13-variable model (incivility, three role stressors, three personality traits, three criterion subdimensions, uncivil climate, power, and a marker variable) demonstrated a good fit to the data, $\chi^2(3576) = 7409$, comparative fit index = .93, standardized root-mean-square residual = .060, root-mean-square error of approximation = .052, and a significantly better fit ($ps < .05$) than a single-factor model and alternative models in which the focal study constructs were variously combined. Results of nested model comparisons, which are available from the authors upon request, confirmed that all study variables were distinct. We also assessed discriminant validity by ensuring that the average variance shared between each construct and its indicators was greater than the shared variance between that construct and each other construct. Results from these analyses indicated there was adequate discriminant validity (Fornell & Larcker, 1981).

Although common method variance (CMV) is less likely to bias results involving interactions (Brockner, Siegel, Daly, Tyler, & Martin, 1997), we examined the possible biasing effects of CMV with Williams, Hartman, and Cavazotte’s (2010) CFA marker technique. Although it is not an infallible means of identifying CMV, the use of this technique with an a priori marker variable is the most accurate way among commonly used approaches to detect CMV (Richardson, Simmering, & Sturman, 2009). The a priori marker variable we used was a three-item measure ($\alpha = .95$) of symbolic patriotism (Huddy & Khatib, 2007) that is theoretically unrelated to the focal study constructs. A sample item includes “I feel good when I see my country flag flying.” The same 13-variable model used for the CFA above was used to generate unstandardized factor loadings and measurement error variance estimates for the marker variable indicators. A baseline model with fixed factor loadings and error variances for the three marker variable indicators was then analyzed and compared with an alternative model (Method-C; see Richardson et al., 2009) with additional factor loadings from the latent marker variable to each

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3 Although Stewart et al.'s (2009) measure also includes a production deviance dimension, this set of behaviors is neither theoretically (Robinson & Bennett, 1995) nor empirically (see Preliminary Analyses section) more intense than is workplace incivility, and thus does not fit our theorizing regarding the escalation of aggressive behavior. Nevertheless, though not reported, we collected data on this dimension for completeness. The pattern of results for all hypotheses was identical to those for the focal criteria. Results are available from the authors upon request.
of the remaining nonmarker variable indicators in the model. Chi-square differences between the baseline and Method-C models were then compared for statistical significance. There was no significant difference between the models, indicating no evidence of CMV in the data.

Finally, given that our expectations of escalation derived from the D-M model of aggression and Andersson and Pearson (1999) have not been empirically verified (Glomb, 2002; Hershcovis, 2011), we asked nine knowledgeable judges (each with a PhD in organizational behavior or a related field) to rate the items comprising our incivility and aggression measures in terms of their intensity (1 = low harm/intensity; 5 = high harm/intensity). Paired-samples t tests indicated that workplace incivility was rated as significantly less intense than the aggregate criterion measure and its property deviance and personal aggression subdimensions (p < .01). We found no significant difference, however, in the mean intensity ratings for incivility and the production deviance subdimension. These results are consistent with Robinson and Bennett’s (1995) typology and suggest that individuals’ experiences of incivility can be distinguished from more intense actions.

Testing Indirect Effects (Mediation)

Hypothesis 1 proposed that perceived role stressors would indirectly affect employees’ enacted aggression through their impact on incivility perceptions. As illustrated in Table 2, bootstrapped regression results (which included control variables) revealed that role ambiguity (B = .20, p < .01) and role conflict (B = .13, p < .01) were positively associated with perceived incivility, although role overload (B = −.06, p > .05) was not. Bootstrapping results also indicated that the relationship between perceived incivility and enacted aggression was significant when controlling for each of the role stressors (interpersonal aggression: B = .13, p < .01; organizational aggression: B = .05, p < .05). In assessing the indirect effects of each role stressor on interpersonal aggression, bootstrapping results demonstrated that the specific indirect effects of role ambiguity (ab = .03; BCa 95% confidence intervals [CIs] = .006, .053) and role conflict (ab = .02; BCa 95% CIs = .003, .037) were significant. The same was true of organizational aggression (see bottom of Table 2). Role overload, however, did not exert a significant indirect effect on either aggression outcome.

Table 1
Descriptive Statistics and Intercorrelations Among Study Variables

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<td></td>
<td></td>
</tr>
<tr>
<td>2. Organizational aggression</td>
<td>1.03</td>
<td>.20</td>
<td>.56</td>
<td>.88</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Incivility</td>
<td>1.56</td>
<td>.64</td>
<td>.23</td>
<td>.16</td>
<td>.89</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Role ambiguity</td>
<td>1.83</td>
<td>.50</td>
<td>.13</td>
<td>.13</td>
<td>.29</td>
<td>.78</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>5. Role conflict</td>
<td>2.47</td>
<td>.71</td>
<td>.18</td>
<td>.15</td>
<td>.32</td>
<td>.26</td>
<td>.83</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Role overload</td>
<td>2.38</td>
<td>.78</td>
<td>.11</td>
<td>.11</td>
<td>.15</td>
<td>.22</td>
<td>.54</td>
<td>.63</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Neuroticism</td>
<td>2.09</td>
<td>.56</td>
<td>.11</td>
<td>.05</td>
<td>.23</td>
<td>.26</td>
<td>.19</td>
<td>.21</td>
<td>.83</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Agreeableness</td>
<td>3.88</td>
<td>.51</td>
<td>−.27</td>
<td>−.15</td>
<td>−.17</td>
<td>−.28</td>
<td>−.30</td>
<td>−.19</td>
<td>−.42</td>
<td>.83</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. Conscientiousness</td>
<td>3.90</td>
<td>.59</td>
<td>−.12</td>
<td>−.17</td>
<td>−.17</td>
<td>−.42</td>
<td>−.25</td>
<td>−.11</td>
<td>−.40</td>
<td>.36</td>
<td>.87</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. Power</td>
<td>3.66</td>
<td>.66</td>
<td>−.01</td>
<td>−.00</td>
<td>−.23</td>
<td>−.24</td>
<td>−.03</td>
<td>.03</td>
<td>−.22</td>
<td>.19</td>
<td>.23</td>
<td>.87</td>
<td></td>
</tr>
<tr>
<td>12. Gender</td>
<td>1.62</td>
<td>.49</td>
<td>−.01</td>
<td>−.07</td>
<td>−.01</td>
<td>−.09</td>
<td>−.27</td>
<td>−.12</td>
<td>.20</td>
<td>.09</td>
<td>.08</td>
<td>−.07</td>
<td>.01</td>
</tr>
</tbody>
</table>

Note. n = 404. Correlations ≥ .10 are significant at p < .05; correlations ≥ .13 are significant at p < .01 (two-tailed). Numbers in parentheses are alpha reliability coefficients. Gender was coded 1 = male; 2 = female.

Table 2
Direct and Indirect Effects of Perceived Role Stress on Enacted Aggression

<table>
<thead>
<tr>
<th>Predictor</th>
<th>Decomposed effects</th>
<th>Partial effects of controls on Y</th>
<th>Indirect effects</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>a</td>
<td>b</td>
<td>c</td>
</tr>
<tr>
<td>Interpersonal aggression</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Role ambiguity</td>
<td>.20***</td>
<td>.13**</td>
<td>.09*</td>
</tr>
<tr>
<td>Role conflict</td>
<td>.13*</td>
<td>.13**</td>
<td>.09**</td>
</tr>
<tr>
<td>Role overload</td>
<td>−.06</td>
<td>.13**</td>
<td>.04</td>
</tr>
<tr>
<td>Organizational aggression</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Role ambiguity</td>
<td>.20**</td>
<td>.05**</td>
<td>.05*</td>
</tr>
<tr>
<td>Role conflict</td>
<td>.13*</td>
<td>.05*</td>
<td>.04*</td>
</tr>
<tr>
<td>Role overload</td>
<td>−.06</td>
<td>.05</td>
<td>.02</td>
</tr>
</tbody>
</table>

Note. n = 404. a = first-stage effect of role stressor on experienced incivility; b = second-stage effect of incivility on enacted aggression; c = total effect of role stressor on aggression; c’ = direct effect of role stressor on aggression. Boot = bootstrapped indirect effect. Lower and upper values are bias-corrected and accelerated 95% confidence intervals. Bootstrap sample size = 5000.

*p < .05. **p < .01.
as the bias-corrected and accelerated 95% confidence intervals included zero. Taken together, these results support Hypotheses 1a and 1b, but not Hypothesis 1c.

Testing Conditional Indirect Effects (Moderated Mediation)

To assess the conditional indirect effects of role stress on employees’ enacted interpersonal and organizational aggression (through incivility perceptions) with the approach prescribed by Edwards and Lambert (2007), we tested 18 models altogether (3 role stressors × 3 personality traits × 2 criteria; see Appendix for details). In the mediator equations predicting experienced incivility, power and climate perceptions had significant effects (p < .01); none of the control variables had any impact in the prediction of either enacted aggression dimension. Thus when accounting for control variables, bootstrapping results revealed that the indirect effects for role ambiguity and role conflict on interpersonal aggression were significantly different from zero (p < .01) at high levels of neuroticism (ab = .046 and .024, respectively) and low levels of agreeableness (ab = .036, .020) and conscientiousness (ab = .039, .022), but not at low levels of neuroticism or high levels of agreeableness and conscientiousness (see top half of Table 3). None of the results concerning role overload, however, demonstrated conditional indirect effects, thus failing to support our expectation of moderated mediation. The same pattern of results was found for organizational aggression (see bottom half of Table 3).

Further inspection of Table 3 reveals that neuroticism functioned as a first- and second-stage moderator. Specifically, both the first- and second-stage effects of role ambiguity and role conflict on enacted aggression were significant for individuals high in neuroticism, but neither simple effect was significant for individuals low in neuroticism. Further supporting our predictions, the second-stage effects of role ambiguity and role conflict on enacted aggression (through incivility perceptions) likewise varied according to individuals’ levels of agreeableness and conscientiousness. In particular, the second-stage effects were significant at low (but not at high) levels of both traits. Because 12 of 18 conditional indirect effects were significant, to conserve space, we chose not to include figures depicting each significant interaction. Instead we included Figure 2 to depict representative examples of the interactions we found. Our findings provide support for H2a–H2c, in that the indirect and positive effects of role stress on enacted aggression (through incivility perceptions) were observed when neuroticism was high and when agreeableness and conscientiousness were low, but not when employees possessed lower levels of neuroticism or higher levels of agreeableness or conscientiousness. In other words, the results fully support H2a–H2c with respect to role ambiguity and role conflict, but they support none of the predictions concerning the conditional indirect effects of role overload.

Discussion

Whereas employee aggression has long been recognized as a reaction to frustrating workplace stressors (Dollard et al., 1939), little is known about the process by which employee responses to stressful workplace demands progress from relatively mild interactions to intense aggressive behaviors. Indeed, as Andersson and

Table 3
Simple Effects on Workplace Aggression at High and Low Levels of the Moderator Variables

<table>
<thead>
<tr>
<th>Moderator</th>
<th>Role ambiguity</th>
<th>Role conflict</th>
<th>Role overload</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>First</td>
<td>Second</td>
<td>Indirect</td>
</tr>
<tr>
<td>Neuroticism</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>High</td>
<td>.303**</td>
<td>.152**</td>
<td>.046**</td>
</tr>
<tr>
<td>Low</td>
<td>.060</td>
<td>.090</td>
<td>.005</td>
</tr>
<tr>
<td>Agreeableness</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>High</td>
<td>.221**</td>
<td>.057</td>
<td>.013</td>
</tr>
<tr>
<td>Low</td>
<td>.221**</td>
<td>.163**</td>
<td>.036**</td>
</tr>
<tr>
<td>Conscientiousness</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>High</td>
<td>.221**</td>
<td>.086</td>
<td>.019</td>
</tr>
<tr>
<td>Low</td>
<td>.221**</td>
<td>.176**</td>
<td>.039**</td>
</tr>
</tbody>
</table>

Note. n = 404. Results are based on bias-corrected and accelerated confidence intervals derived from 1000 bootstrap estimates. Results reflect inclusion of gender, power, and uncivil climate as control variables. First-stage effects are identical for agreeableness and conscientiousness because neither trait is included as a predictor of incivility perceptions in the hypothesized second-stage moderation models (see the Appendix).

*p < .05.  **p < .01.
Pearson (1999) observed, “despite strong evidence of the existence of [interpersonal conflict] spirals . . . scholars have devoted relatively little theoretical and empirical attention to . . . the escalation of coercive behavior” (p. 458). To this end, the current investigation identified perceived workplace incivility as a potential mediating mechanism for two key reasons: (a) its low intensity can give rise to an escalating process whereby minor events may lead to more intense actions (Andersson & Pearson, 1999; Miller et al., 2003), and (b) its “tit-for-tat” nature corresponds with the reciprocation believed to underlie some aggressive interactions (Axelrod, 1984; Perugini et al., 2003). Moreover, theory and research also suggest that dispositional characteristics can affect employees’ reactivity to perceived role stress (viz., neuroticism; Bolger & Zuckerman, 1995) and incivility (e.g., Pearson et al., 2001) to impact their aggressive work behaviors. Thus, we tested and found support for a conceptual framework in which employee experiences of role stress lead to perceived incivility and enacted aggression, and, at the same time, personality traits (i.e., neuroticism, agreeableness, conscientiousness) moderate these indirect effects. By examining these relationships with respect to interpersonal and organizational aggression, our research addresses Folger and Baron’s (1996) observation that “the best route” to further scholarly progress on workplace aggression “. . . can come from extending the dependent variable” to investigate aggressive behaviors with individual and organization referents (p. 67).

With respect to Hypothesis 1, we found that experienced incivility is a mediating mechanism in explaining the link between perceived role stress and enacted aggression, because it is a low-level form of behavior that can initiate an escalating “tit-for-tat” exchange of increasingly intense acts. The finding that role stressors (viz., role ambiguity and role conflict) influence incivility perceptions corroborates reviews of the aggression literature and related research demonstrating that a stressful and chaotic environment can lead to various types of perceived mistreatment in the workplace (e.g., Einarsen et al., 1994; Roscigno et al., 2009), and our finding that experienced incivility is positively associated with enacted aggression provides evidence of the “tit-for-tat” employee interactions theorized by Andersson and Pearson (1999).

Given low mean scores for experienced incivility and enacted aggression, however, our results counter common assumptions about incivility spirals being typical or occurring frequently. Although participation rates indicate that a substantial proportion of study participants experienced some form of incivility (75.1%) and engaged in some type of aggressive behavior (50.5%, as reported
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by their supervisors) during the past year, our findings suggest that people rarely engage in aggression, implying that escalation is the exception rather than the norm. As such, they reinforce Andersson and Pearson’s (1999) idea of “departure points” from an incivility spiral and suggest that notions of “tit-for-tat” invoked in subsequent mistreatment research are perhaps overly emphasized.4

Moreover, contrary to our expectations, the proposed mediated relationships concerning role overload were not supported. Although theories of victim precipitation and previous incivility research suggest that work and information overload are substantial factors influencing such mistreatment (Pearson et al., 2000; Pearson & Porath, 2005), our findings are in line with other studies that have found that overload produces weaker effects than do other forms of role stress (see Rosen, Chang, Djudjievic, & Eatough, 2010). Aquino and Thai’s (2009) review of studies examining workplace attributes as predictors of victimization revealed that the most consistent findings were for the effects of role conflict and ambiguity. Their conclusions are supported by Bowling and Beehr’s (2006) meta-analysis, which found that these two variables showed the strongest effect sizes among potential antecedents of various forms of victimizing behaviors, with $p = 0.44$ and $p = 0.30$ (corrected for unreliability in both the predictor and criterion) for role conflict and role ambiguity, respectively. In this respect, Bolino and Turnley (2005) provided one possible explanation for why role overload produces weaker effects. Specifically, they noted that because voluntary actions such as citizenship (or aggression) typically go beyond an employee’s formally prescribed job duties, engaging in such acts is likely to require additional employee resources (viz., time, energy). As such, employees may find it overwhelming to do so when they already struggle to find the time and resources needed to satisfactorily complete their in-role responsibilities (cf. Bolino & Turnley, 2005, p. 741). Whatever the reason, our results suggest that when workplace demands create expectations that are unclear or conflict with other expectations—but not necessarily when they are too taxing—employees perceive higher levels of incivility and more frequently engage in workplace aggression.

Our results for Hypothesis 2 revealed that the indirect effects of role stress (viz., ambiguity, conflict) are contingent on an employee’s personality. As such, our findings concerning the moderating role of personality inform aggression research in important ways. Consistent with prior research (see, e.g., George & Brief, 2004), our results indicate that individuals may be differentially reactive to perceived role stress and incivility depending on their personality. Whereas neuroticism was found to moderate both the first and second stages of the mediated effects, agreeableness and conscientiousness moderated the second stage. Moreover, in finding that the indirect effects of perceived role stress on enacted aggression (as transmitted through perceptions of incivility) depend on one’s personality, our results extend Andersson and Pearson’s (1999) social interactionist perspective on workplace incivility and its escalation by demonstrating that the “tit-for-tat” process operates differently among individuals with various personality profiles.

**Practical Implications**

At first glance, these results may appear to provide somewhat conflicting implications to managers. On one hand, that perceived role stress contributes to incivility perceptions suggests that employers follow prior recommendations (Pearson & Porath, 2005) to establish clear guidelines for workplace conduct and interpersonal interaction. On the other hand, because employee responses to role stress and incivility were found to depend on one’s personality, our results also imply that developing organization-wide policies prescribing appropriate workplace conduct may not suffice. Given this complexity in dealing with workplace incivility, individual differences in personality may partly explain why Pearson and Porath (2005) found that only 25% of targets were satisfied with the way that their organizations responded when they reported being mistreated.

Despite these challenges, managers’ responses to uncivil incidents, as well as targets’ reactions to them, might be improved by implementing organization-wide programs to facilitate civil and respectful employee interactions. One such promising program is the CREW initiative (Civility, Respect, Engagement in the Workplace; see, e.g., Leiter, Laschinger, Day, & Gilin-Oore, 2011). Designed by the Veterans Health Administration (VHA) as a group-level intervention, specific CREW processes include encouraging mutual respect and valuing differences among employees, promoting cooperation and teamwork, and identifying and modifying problematic workplace behaviors. CREW has been shown to effectively reinforce norms for civil workplace conduct (Osatuke, Moore, Ward, Dyrenforth, & Belton, 2009). Promoting and maintaining such norms for civility are important because they have been found to buffer the negative effect of poor organizational support on employees’ experiences of incivility (Bauerle & Magley, 2010). Thus, as workplace incivility “is one of today’s most substantial economic drains” (Porath & Pearson, 2010, p. 64), successfully curtailing such mistreatment can have both social and financial benefits.

To this end, it would behoove managers not only to create predictable and rational work procedures (thereby reducing role demands placed on employees and thus preventing the circumstances in which incivility is likely to occur), but also to customize interventions when employees report incidents of incivility. In doing so, managers must be mindful of the stressful demands that employees experience in the work environment while, at the same time, they consider the individual characteristics of potential instigators and targets. With respect to the present study, our findings suggest that managers who deal with instances of workplace incivility when targeted employees are high in neuroticism, low in agreeableness, or low in conscientiousness will have the largest impact on the reduction of workplace aggression. Simply put, appropriate interventions are those that reduce role stress; however, we offer a caveat to this approach: Given that we found the indirect effects of role ambiguity and role conflict to be conditional on one’s personality, previous observations that unclear or conflicting work demands preclude respectful treatment may only be as damaging as some researchers contend (Pearson et al., 2000; Pearson & Porath, 2005) for employees high in neuroticism or low in agreeableness or conscientiousness.

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4 We thank an anonymous reviewer for this observation.
Study Limitations and Future Research Directions

In light of the present study’s contributions and implications, we are mindful of certain limitations that may have affected our results. First, because the data used to test the research hypotheses were collected from multiple referents and were temporally separated rather than grounded in a carefully controlled experiment, causal inferences cannot be made with certainty. Although reviews of the literature (e.g., Barclay & Aquino, 2011; Bowling & Beehr, 2006; Schat & Kelloway, 2005) suggest that relationships between role stress and perceived mistreatment occur in the temporal order proposed in the present study, there are many conditions that can lead to data consistent with a finding of partial mediation (see, e.g., Maxwell et al., 2011). We therefore reiterate Glomb’s (2002, p. 33) acknowledgment of possible “feedback loops” among our focal constructs and her sentiment that “data such as these . . . as well as longitudinal data would be useful in efforts to delineate such relations.”

A further limitation is that our data do not investigate aggression between particular pairs of individuals (see C. A. Anderson, Buc- kley, & Carnagey, 2008). Although the D-M model and extant incivility research suggest that neither escalation nor reciprocity need to occur exclusively between individuals, “more emphasis on the nature of this relationship is important because the enactment of aggression as well as the victim’s experience of aggression is likely to depend on the perpetrator/victim relationship” (Hershco- vis & Barling, 2007, p. 268). In a similar vein, Taylor et al. (2011) suggested that it may be of value to consider workplace incivility from a social network perspective, because this would allow for the study of mistreatment between particular dyads of individuals and, thus, “clarify how the links described in social networks influence workplace incivility within the context of a unique relationship.” Unfortunately, as Hershcovich and Barling (2007) pointed out, traditional methods prevent researchers from testing these ideas. Because our data similarly limit our ability to predict escalation between particular individuals, we offer this as a fruitful direction for future research.

Finally, it may also be informative to consider alternative outcomes. To the extent that aggression is an unlikely option (e.g., due to potential consequences), targeted individuals may deal with incivility in a number of ways, including psychological or physical withdrawal. Because the present results suggest that other responses may be more typical, they raise an important question: What happens in most situations when employees are targeted with incivility? Aquino and Thau’s (2009) review suggests avoiding a perpetrator or finding ways to leave the situation are the most effective coping strategies (in terms of reducing the frequency of and potential for future mistreatment), whereas conflict escalation often makes the situation significantly worse. Supporting this argument, Zapf and Gross (2001) found that defending oneself (through reciprocal aggressive actions) was identified by only 9% of their sample as a recommended strategy for handling mistreatment. Thus, future studies examining alternative responses would aid in understanding the widespread consequences that result from experienced incivility.

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## Appendix

### Estimation of Regression Equations for Hypothesis Tests

For clarity, we show the regression equations we estimated to test Hypotheses 2a–2c. For H2a, we estimated a first- and second-stage moderation model from the following equations:

\[ M = \alpha_0 + \alpha_1X + \alpha_2Z + \alpha_3XZ + e_M \]  \hspace{1cm} (1)

\[ Y = \beta_0 + \beta_1X + \beta_2M + \beta_3Z + \beta_4MZ + e_Y \]  \hspace{1cm} (2)

where \( X \) is a particular role stressor (e.g., role ambiguity), \( M \) = incivility perceptions, \( Z \) = neuroticism, and \( Y \) = enacted (interpersonal or organizational) aggression. Substituting Equation 1 for \( M \) in Equation 2 and rearranging the terms produces the following reduced-form equation:

\[ Y = [b_0 + b_1Z + (a_0 + a_2Z)(b_2 + b_4Z)] + [b_1 + (a_1 + a_3Z)(b_2 + b_4Z)]X + e_Y + b_3e_M + b_4Ze_M. \]  \hspace{1cm} (3)

For H2b and H2c, we estimated second-stage moderation models with Equation 4 and Equation 2:

\[ M = \alpha_0 + \alpha_1X + e_M. \]  \hspace{1cm} (4)

Substituting Equation 4 for \( M \) in Equation 2 and rearranging the terms produces the following reduced-form equation:

\[ Y = [b_0 + b_1Z + a_0(b_2 + b_4Z)] + [b_1 + a_1(b_2 + b_4Z)]X + e_Y + b_4Ze_M. \]  \hspace{1cm} (5)

Note that Equation 2 is used to derive both types of moderated mediation models. However, the indirect effect in a second-stage moderation model is depicted as \( a_1(b_2 + b_4Z) \), whereas the indirect effect in a first- and second-stage moderation model is represented by the compound term \( (a_1 + a_3Z)(b_2 + b_4Z) \), where \( a_1 \) in the former is obtained from Equation 4 and \( a_1 \) in the latter is obtained from Equation 1.

Received September 23, 2011
Revision received March 16, 2012
Accepted March 19, 2012