Self-Gain or Self-Regulation Impairment? Tests of Competing Explanations of the Supervisor Abuse and Employee Deviance Relationship Through Perceptions of Distributive Justice

Stefan Thau
London Business School

Marie S. Mitchell
University of Georgia

Two competing explanations for deviant employee responses to supervisor abuse are tested. A self-gain view is compared with a self-regulation impairment view. The self-gain view suggests that distributive justice (DJ) will weaken the abusive supervision–employee deviance relationship, as perceptions of fair rewards offset costs of abuse. Conversely, the self-regulation impairment view suggests that DJ will strengthen the relationship, as experiencing abuse drains self-resources needed to maintain appropriate behavior, and this effect intensifies when employees receive inconsistent information about their organizational membership (fair outcomes). Three field studies using different samples, measures, and designs support the self-regulation impairment view. Two studies found that the Abusive Supervision × DJ interaction was mediated by self-regulation impairment variables (ego depletion and intrusive thoughts). Implications for theory and research are discussed.

Keywords: abusive supervision, deviance, retaliation, self-regulation impairment

An often replicated finding is that employees who are victims of supervisor abuse are more likely to engage in behaviors that are harmful to organizations and their members. For example, employees who are belittled, put down, or screamed at by authorities are more likely to come in late without consent or lash out against members of the organization. This phenomenon seems to be robust across samples, measures, and contexts (for reviews, see Aquino & Thau, 2009; Tepper, 2007) and has been parsimoniously explained by various exchange theories (e.g., social exchange theory, Homans, 1961; reciprocity principles, Gouldner, 1960; equity theory, Adams, 1965). Accordingly, employees view their relationship with their supervisor as a form of social exchange in which each party seeks to reciprocate the costs and benefits received and maintain balanced contributions. Arguably, the psychological and sometimes physical costs employees experience through abuse exceed the benefits, creating an exchange imbalance.

Negative reciprocity principles (Gouldner, 1960) suggest that individuals attempt to resolve exchange imbalances in a quid pro quo fashion such that employees who are harmed by organizational authorities retaliate by harming the organization, supervisors, and other organizational members (Gouldner, 1960; Mitchell & Ambrose, 2007; Skarlicki & Folger, 1997). A self-gain assumption is fundamental to these explanations: People rationally choose to reciprocate behavior when the gains of the behavior are greater than its costs (Cook & Emerson, 1978; Gergen, 1980; Meeker, 1971; Pruitt, 1968). The presumed gains are that retaliation is satisfying and enjoyable (Gouldner, 1960; Knutson, 2004; Tripp, Bies, & Aquino, 2002), balances the exchange (Gouldner, 1960; Molm, Quist, & Wiseley, 1994), demonstrates a capability of defending the self (Bies, 1987; Bies & Tripp, 1995, 1996), and/or can potentially deter future harm (Bies, 1987; Bies & Tripp, 1995, 1996; Gouldner, 1960; Knutson, 2004; Skarlicki & Folger, 1997; Tripp & Bies, 1997). Indeed, a number of studies have found that employees harm the organization, supervisor, and other members with deviant behaviors to pay back organizational authorities for abuse (Detert, Treviño, Burris, & Andiappan, 2007; Duffy, Ganster, & Pagon, 2002; Mitchell & Ambrose, 2007; Tepper et al., 2009; Tepper, Henle, Lambert, Giacalone, & Duffy, 2008; Thau, Bennett, Mitchell, & Marrs, 2009).

The self-gain perspective is parsimonious, but is also limited and possibly inaccurate. In the context of ongoing and hierarchical work relationships, responding to abuse with deviance—behavior that violates norms and is harmful to the organization and its members (Bennett & Robinson, 2000; S. L. Robinson & Bennett, 1995)—likely causes more costs than gains for victims (Aquino, Tripp, & Bies, 2001; Tepper et al., 2009). Retaliation violates standards of appropriate behavior and incurs a costly risk of counterretaliation from both the supervisor and the organization (Aquino et al., 2001; Heider, 1958; Tepper et al., 2009). Hence, self-gain principles do not so easily explain why employees reciprocate abuse with deviance. This begs the question of why would victims of an abusive supervisor fail to maintain appropriate or rational behavior.

One potential answer to this question is the idea that the victimization experience promotes self-regulation impairment (Baumeister, 2001; Thau, Aquino, & Poortvliet, 2007). The experience of abuse challenges victims to process, interpret, and un-
derstand the causes and consequences of being harmed. These self-regulatory activities drain needed self-resources (like attention and willpower) to consider whether responding to abuse with deviance would violate normative expectations and provoke counterretaliation. In short, the experience of abuse promotes self-regulation impairment, which supersedes normative and rational considerations, and the self-regulation impairment prompted by abuse explains why employees reciprocate abuse with deviance (Aquino & Thau, 2009; Thau et al., 2007).

Both self-gain and self-regulation impairment views provide plausible explanations of deviant reactions to supervisor abuse. Yet, past research has not offered a test of these two competing explanations. This article addresses this gap in the literature. We explore the influence of distributive justice (DJ) on the abusive supervision–employee deviance relationship. DJ involves employees’ perceptions of fairness about the exchange of outcomes allocated by the organization compared with their contributions to the organization (Colquitt, 2001; Cropanzano & Ambrose, 2001; Deutsch, 1975). We posit that a comparative test is possible when taking into account that employees differentiate among various exchanges (Cropanzano & Mitchell, 2005; Lavelle, Rupp, & Brockner, 2007) and that abused employees may simultaneously experience high or low levels of DJ. Lavelle et al. (2007) argued, "It is possible for employees to experience a high level of social exchange with one party (e.g., coworkers) and at the same time report relatively low levels of social exchange with another (e.g., the organization)” (p. 847). Indeed, research shows that different forms of exchange jointly predict behavior (e.g., Erdogan & Enders, 2007; Sluss, Klimchak, & Holmes, 2008; Spencer & Rupp, 2009; Tangirala, Green, & Ramanujam, 2007). Empirical evidence also shows that reactions to abusive supervision are influenced by perceptions of other exchanges (e.g., Tepper et al., 2008; Thau et al., 2009). We extend these ideas and suggest that DJ can provide a strong inference test (Platt, 1964) to compare the self-gain and self-regulation impairment views because each makes opposing predictions for how DJ moderates the relationship between abusive supervision and employee deviance.

The self-gain view suggests that fair distributions would weaken the abusive supervision–employee deviance relationship. Compensatory exchange principles (Adams, 1965; Ekeh, 1974; Gergen, 1980; Homans, 1961; Walster, Walster, & Berscheid, 1978) imply that high levels of DJ make for a beneficial aspect of the organizational membership, which should offset the costs of abuse. Conversely, the self-regulation impairment view suggests that fair distributions should strengthen the abusive supervision–employee deviance relationship because DJ communicates information about the benefits of one’s organizational membership that is inconsistent with the costs of supervisor abuse (e.g., “My boss mistreats me” but “My organization compensates me fairly for what I do”). Employees’ attention and attempts to deal with the inconsistent information (Baumeister & Vohs, 2007; Richards & Gross, 1999; J. L. Robinson & Demaree, 2007) further drain self-regulatory abilities and make deviance even more likely.

By providing a comparative test of the self-gain versus self-regulation impairment views, our research makes four contributions to the literature. First, we tested the traditional, dominant view of retaliation to supervisor abuse (self-gain) against the self-regulation impairment view. We recognize that previous studies provide indirect evidence of self-regulation impairment. One study found that employees abused by their supervisors become psychologically exhausted (Tepper, 2000); psychologically exhausted employees are drained emotionally, cognitively, and physically, which implies that self-resources are drained. Indeed, DeJordy’s (2008) theoretical framework assumes that psychological exhaustion is a result of drained self-resources. Another study found that employees excluded from their work group engage in interpersonally deviant and self-defeating behaviors (Thau et al., 2007). Another study found that the ability to control the self was negatively related to counterproductive behaviors (Marcus & Schuler, 2004). There are also data showing that experimentally induced self-regulation impairment promotes aggression (e.g., Baumeister, DeWall, Ciarocco, & Twenge, 2005; Bushman & Baumeister, 1998; Twenge, Baumeister, Tice, & Stucke, 2001) and predicts retaliatory responses in people who were insulted (DeWall, Baumeister, Stillman, & Gailliot, 2007). Overall, these studies suggest that supervisor abuse may prompt self-regulation impairment, which then influences deviant responses. Still, none of these studies provided a full test of the relationships of abuse, self-regulation impairment, and deviance. More importantly, they did not provide a test of the self-gain versus self-regulation impairment views. Our study extends this research agenda.

A second theoretical and practical contribution of our study was to provide evidence to answer the question: Can fair organizational outcomes mitigate harmful responses to supervisor abuse, or does doing so make matters worse? Answering this question is important because the dynamics of abusive supervision and resulting employee deviance is a problem for organizations. Ex post organizational control (e.g., punishment) of line managers’ interpersonal treatment of employees can be costly because it involves extensive monitoring (e.g., Dornbusch & Scott, 1975; Prendergast & Topel, 1993). Instead of controlling line managers’ interpersonal behaviors, the self-gain view suggests that organizations can lessen victims’ deviant reactions by providing them ex ante benefits (DJ) that compensate for the abuse (cf. Arrow, 1963; Barnard, 1938).

A third contribution of our research is that we tested our predictions programmatically (S. T. Fiske, 2004; Locke, 1996, 2007). Study 1 tests the self-gain and self-regulation impairment views of the abusive supervision–employee deviance relationship by examining the moderating effects of DJ in a cross-sectional sample of working adults. Studies 2 and 3 constructively replicate (Lykken, 1968) these findings and extend them by examining the mediating effects of variables capturing self-regulation impairment (Study 2: ego depletion; Study 3: intrusive thoughts about the supervisor’s behavior). Study 2 does so in a two-wave design with a sample of working adults. Study 3 replicates Study 2 in a longitudinal, multiwave, within-individual design to test whether the predicted relationships are homologous across levels of analysis (e.g., Chen, Bliese, & Mathieu, 2005; Dalal, Lam, Weiss, Welch, & Hulin, 2009).

Last, a review of the abusive supervision literature (Tepper, 2007) suggests that research examining processes by which abusive supervision influences outcomes is needed, as is research exploring boundary conditions (like DJ). Therefore, the fourth contribution of our study was examining a neglected mediator (self-regulation impairment) and moderator (DJ). We first expound on the theoretical foundation of the predictions for our studies.
The Self-Gain View Versus the Self-Regulation Impairment View

Many different exchange theories explain behavior (for reviews, see Cropanzano & Mitchell, 2005; Cropanzano & Rupp, 2008). Seminal principles on which these applications are based share the underlying assumption that people are rational actors, guided by self-interest (e.g., Blau, 1964; Coleman, 1990; Ekeh, 1974; Emerson, 1976; Homans, 1961). Accordingly, people choose a particular course of action because they gain something desirable from that action and exchange with others to maximize their own benefits (Coleman, 1990; Emerson, 1976; Homans, 1961; Kelley & Thibaut, 1978).

The self-gain assumption is parsimonious, but like others before us (Clark & Mills, 1979; Elster, 1989; A. P. Fiske, 1991), we claim it is limited. Self-gain explanations are, at first glance, consistent with the positive relationship between supervisor abuse and employee deviance. However, data and theoretical arguments suggest that employees’ responding to supervisor abuse with deviance can be self-defeating (Ferris, Brown, & Heller, 2009; Thau et al., 2007). Retaliating with deviance violates normative standards and may provoke others to punish the supervisor’s victim with further harm (Aquino & Thau, 2009). For example, as an agent of the organization’s interests, the supervisor may counterretaliate by withdrawing valued outcomes (e.g., promotions, resources, helpful feedback; Aquino et al., 2001; Tepper et al., 2009). If the risks of counterretaliation are greater than the benefits of victims’ retaliation, then rational cost–benefit considerations do not fully account for why victims of abuse respond with deviance.

The self-regulation impairment view offers a potential solution to the supervisor abuse–employee deviance puzzle. Self-regulation theory (Baumeister, 1998) posits that the executive function of the self is responsible for behavior. Self-regulatory abilities (specifically self-resources) maintain impulses, active choice making, persistence, and emotions that influence behavior (consciously or unconsciously; Schmeichel & Baumeister, 2004). Schmeichel and Baumeister (2004) argued that self-resources “inhibit, override, or alter responses that may arise as a result of physiological processes, habit, learning, or the press of the situation” (p. 86). Some situations drain self-resources, which then impair one’s ability to maintain normative behavior.

If we apply the self-regulation impairment view to explain the supervisor abuse–employee deviance relationship, employees retaliate with deviance because supervisor abuse is psychologically challenging, motivating the self to process, interpret, and understand the causes and consequences of the harm (Aquino & Thau, 2009; Thau et al., 2007). The experience and focus on the abuse drain self-resources, which are needed to consider normative expectations and the risks of counterretaliation incurred by victims’ retaliation, making deviance more likely.

Yet, both self-gain and self-impairment explanations can account for the main effect of supervisor abuse on employee deviance. A first step toward a comparative test of the two explanations is to identify a boundary condition that would lead to opposing predictions for either of the two explanations. We argue that DJ can provide a fair comparative test of the two views. We explain our reasoning below.

A Comparative Test of Self-Gain Versus Self-Regulation Impairment Through DJ

Besides the socioemotional outcomes employees experience as a result of their supervisors’ behaviors, the organization allocates economic outcomes such as pay and rewards (e.g., Cropanzano & Ambrose, 2001). Whether employees derive utility from these outcomes depends to a large degree on whether they were fairly allocated (e.g., McFarlin & Sweeney, 1992; Skitka, Winquist, & Hutchinson, 2003), referred to as DJ (Homans, 1961). Equity theory (Adams, 1965) defines DJ as employees’ assessment of whether received rewards are matched proportionately to their contributions to the organization (Greenberg, 1988). Justice scholars contend that DJ is the most instrumental form of justice because it is rational assessments of gains and losses (Cropanzano, Rupp, Mohler, & Schminke, 2001). Data support these arguments and show that DJ is the best predictor of personal outcomes (for meta-analytic evidence, see Cohen-Charash & Spector, 2001; Colquitt, Conlon, Wesson, Porter, & Ng, 2001). Because DJ involves overall economic assessments of employees’ organizational membership, we believe it can provide for a fair test of the self-gain versus self-regulation impairment perspectives.

Self-gain explanations of the supervisor abuse–deviance relationship assume that the joint considerations of socioemotional and economic outcomes are central to determining employees’ reactions to abusive supervision. Although abuse by a legitimized organizational agent makes for a costly exchange, fair organizational outcomes (DJ) are perceived as a beneficial exchange. Traditional exchange reasoning (Adams, 1965; Ekeh, 1974; Emerson, 1976; Gergen, 1980; Homans, 1961; Walster et al., 1978) presumes that employees consider a cost–benefit ratio derived from their organizational membership and harm the organization when costs exceed benefits. Thus, the compensatory logic of cost–benefit considerations implies that DJ should offset the costs of supervisor abuse, making deviance less likely.

In contrast to the self-gain account of DJ, the self-regulation impairment view predicts that DJ should strengthen (rather than weaken) the abusive supervision–employee deviance relationship. Accordingly, not only is abuse a costly aspect of employees’ organizational membership, but it also challenges the self to understand, process, and interpret the causes and consequences of being harmed. The self-regulatory strength model (Baumeister, Bratslavsky, Muraven, & Tice, 1998) suggests that harm drains self-resources that are needed to maintain appropriate behavior (e.g., Stucke & Baumeister, 2006). Fair rewards (DJ) are generally perceived as a beneficial aspect of organizational membership; but in combination with supervisor abuse, high DJ provides inconsistent information about employees’ utility to their organization. The subsequent focus on that inconsistent information further drains self-resources that maintain appropriate behavior.

Theory and data on social cognition support these ideas. Information within a knowledge domain (e.g., the utility I derive of my membership with the organization) is organized into more specific information (e.g., the costs I experience through the interpersonal treatment of an organizational authority; the benefits I experience through the rewards I get from the organization; for a review, see S. T. Fiske & Taylor, 2008). People can hold consistent or inconsistent cognitions within the same knowledge domain. Dissonance theory (Festinger, 1957) predicts that inconsistent cognitions cre-
ate an aversive state, alerting attention to the inconsistency and motivating attempts to resolve it (Aronson, 1968; Festinger, 1957; Greenwald & Ronis, 1978).

We applied these principles to our study. Employees who are harmed by a legitimized organizational agent who also receive fair organizational rewards hold inconsistent cognitions about their utility to their organization and should, therefore, experience dissonance. As a result, they will be motivated to pay attention to the inconsistent information and deal with the dissonance. Self-regulatory strength research argues that both paying attention to and dealing with dissonance drain self-regulatory resources (Baumeister et al., 1998; Baumeister & Vohs, 2007; Richards & Gross, 1999; J. L. Robinson & Demaree, 2007)—the same resources that are also used to understand, process, and interpret the experience of abuse. The further draining of self-resources explains why DJ strengthens the supervisor abuse–deviance relationship.

Research provides direct evidence for the argument that dealing with inconsistent information and dissonance impairs self-regulatory abilities, and when that occurs, behavior that requires self-regulation is affected. For example, a study by Schmader and Johns (2003) found that inconsistent information received about individuals’ overall capabilities reduced their working memory capacity and subsequent performance. Another study (J. L. Robinson & Demaree, 2007) investigated the influence of emotional information (i.e., experiencing sadness) that is inconsistent with people’s behavioral expressions (i.e., smiling) on their behavior (i.e., performance). The results demonstrated that the dissonance experience was cognitively taxing and worsened performance on subsequent memory tasks that required self-regulation.

There are also theoretical arguments and data in the organizational literature supporting the notion that inconsistent information about one’s organizational membership will strengthen the impact of supervisor abuse on employee deviance. This research posits that inconsistent value information about the work relationship (abuse from the supervisor but fair rewards from the organization in our study) communicates to employees that the cause for the abuse lies within themselves rather than in the situation (i.e., the abusive supervisor; Duffy, Ganster, Shaw, Johnson, & Pagon, 2006; Saul, Simon, & Colquitt, 2008). Accordingly, high levels of DJ mean that the supervisor’s abuse is a personal attack and not a reflection of an overall poor system of allocating unfair socioemotional and economic outcomes (Kelley, 1968). Researchers argue that employees who experience attacks on the self have poor self-regulatory abilities and are more likely to engage in deviant work behaviors (Aquino & Douglas, 2003; Thau et al., 2007).

In sum, we present competing hypotheses (self-gain vs. self-regulation impairment) that explain the abusive supervision–employee deviance relationship and test which view provides for a better theory. If the self-gain view is the better explanation, then employees who experience attacks on the self have poor self-regulatory abilities and are more likely to engage in deviant workplace behaviors. Therefore, we predict the following:

**Hypothesis 1a:** According to the self-gain view, the positive relationship between abusive supervision and employee deviance will be weaker when DJ is high rather than low.

**Hypothesis 1b:** According to the self-regulation impairment view, the positive relationship between abusive supervision and employee deviance will be stronger when DJ is high rather than low.

### Study 1: An Initial Comparative Test of Self-Gain Versus Self-Regulation Impairment Explanations for Deviant Reactions to Supervisor Abuse

#### Method

**Sample and procedure.** We distributed surveys to individuals who were randomly selected and called for jury duty by a county circuit court in the southeastern United States. We addressed the potential jurors at the beginning of the day, while they waited to learn whether they would be required to serve. We explained that the survey had nothing to do with the jury or court system; rather, they were told that we wished to understand more about sensitive issues that affect employees at work. Interested participants picked up surveys and returned them to us on completion. Over the course of 4 weeks, 229 individuals agreed to participate in the study (31.9% response rate). Complete data were available for 216 cases. The average age of these participants was 43.60 years ($SD = 11.73$), and their tenure with the supervisor was 4.34 years ($SD = 4.80$); 57.41% were women.

**Measures.** Abusive supervision was assessed with Mitchell and Ambrose’s (2007) five-item short version of Tepper’s (2000) measure. Respondents rated perceptions of supervisor abuse over the past year on a 7-point scale (1 = strongly disagree, 7 = strongly agree; e.g., My boss ridicules me).

DJ was assessed with Colquitt’s (2001) four-item measure (e.g., Do your outcomes reflect the effort you have put into your work?). Respondents rated their agreement on a 5-point scale (1 = to a small extent, 5 = to a great extent).

Employee deviance was assessed with measures of organizational and supervisor-directed workplace deviance. We used Bennett and Robinson’s (2000) 12-item organizational deviance measure (e.g., Taken property from work without permission). Because we also assessed supervisor-directed deviance, we excluded one item that clearly overlapped with this construct (Neglected to follow my boss’s instructions). We assessed supervisor-directed deviance with Mitchell and Ambrose’s (2007) 10-item measure (e.g., Acted rudely toward my supervisor). For both measures, respondents indicated the extent to which they intentionally engaged in the respective behaviors over the past year on a 7-point scale (1 = never, 7 = daily).

Control variables were also considered. We controlled for employee age, tenure with the supervisor, and gender because these demographic characteristics have been related to deviant behaviors (Aquino & Douglas, 2003), victimization (Bowling & Beehr, 2006; Tepper, Duffy, Henle, & Lambert, 2006), and DJ (Cohen-Charash & Spector, 2001). We also controlled for procedural justice (PJ; using Colquitt’s, 2001, seven-item measure) because justice research suggests that PJ may account for the predicted interaction (for a review, see Colquitt & Greenberg, 2003).
Results

Descriptive statistics. Table 1 shows variables’ means, standard deviations, zero-order correlations, and reliability coefficients. The measures displayed acceptable reliabilities. The results show that abusive supervision was significantly positively related to supervisor-directed deviance, but not to organizational deviance, and was significantly negatively related to DJ.

Hypothesis tests results. We used multiple regression analyses to test our hypotheses; the results are reported in Table 2. All predictor variables were mean centered to minimize multicollinearity among them (Cohen, Cohen, West, & Aiken, 2003). We first entered control variables. Next, the main effects of abusive supervision and DJ were added, and finally, we added their interaction. The results show that over and above the effects of the main effects and the control variables, there was a significant Abusive Supervision × DJ interaction on supervisor-directed deviance (b = .07, p < .01) but not on organizational deviance (b = .04, ns). We probed the form of the interaction on supervisor-directed deviance using procedures recommended by Cohen et al. (2003) and calculated the simple slopes of supervisor-directed deviance on abusive supervision one standard deviation above and one standard deviation below the mean of DJ. The results support Hypothesis 1b, showing that the abusive supervision–supervisor-directed deviance relationship was more positive for high DJ (b = .48, p < .001) than low DJ (b = .31, p < .001; see Figure 1).

Discussion

Study 1 provides support for the self-regulation impairment view and shows that employees who experience supervisor abuse are more likely to engage in deviance directed at their supervisor when organizational outcomes are fair (Hypothesis 1b). These results cannot be explained through the self-gain view. If employees had based their decision to engage in deviant behaviors on cost–benefit considerations, then the costs associated with the abuse should have been offset by the benefits of fair organizational outcomes, making retaliation less likely. More specifically, the relationship between abusive supervision and employee deviance should have been weakened when DJ was high rather than low. In contrast, our results show the opposite: The relationship was strengthened when DJ was high rather than low.

This interaction pattern is consistent with the argument that the abusive supervision experience impairs self-regulatory abilities and influences employee deviance. According to the self-regulation impairment view, employee deviance occurs because employees’ self-resources were depleted due to the victimization experience (Aquino & Thau, 2009; Thau et al., 2007). Perceptions of fair outcomes (DJ) provide a further drain on self-resources, as people typically need these resources to pay attention to and deal with the dissonant information.

Although there are strengths to Study 1’s design (e.g., its diverse, randomly selected sample of working adults), there are limitations to consider. Unlike some previous abusive supervision–employee deviance research, we did not make specific predictions about the target of the deviance (supervisor vs. organization; e.g., Mitchell & Ambrose, 2007; Tepper et al., 2009; Thau et al., 2009) because the abuse experience should affect victims’ self-regulatory capabilities broadly. We had no a priori reason to believe the attention to norms is reduced only in the domain of actions toward the supervisor versus the organization. Yet, the interaction was significant only on supervisor-directed deviance. Exploring the interaction on organizational deviance through simple slope analyses revealed a marginally significant positive slope for high DJ and a nonsignificant slope for low DJ. It is possible that the failure to find the interaction on organizational deviance is due to statistical power issues (Cohen et al., 2003). Interactions in field studies are difficult to find (McClelland & Judd, 1993). Constructive replication is needed to determine whether they hold up across samples and methods (Lykken, 1968). Therefore, we conducted a second study to see whether Study 1’s findings generalize across samples.

Apart from constructive replication, we also wanted to address other potential limitations of Study 1’s design with the second study. First, Study 1’s variables were all measured at one point in time, which limits causal inferences and can lead to percept–percept inflations that challenge statistical conclusion validity (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). Second, though Study 1 supports the pattern of the interaction predicted by Hypothesis 1b, we do not know whether the assumed self-regulation impairment accounts for the results found, as we did not assess self-regulation impairment directly. Measurement of self-regulation impairment is needed to answer this question. Therefore, Study 2 examines the mediation effect of self-regulation impairment with a measure of ego depletion on the abusive supervision–employee deviance relationship and seeks to replicate the moderating effects of DJ.

Study 2: Ego Depletion as a Form of Self-Regulation Impairment and Mediator of the Relationship Between Abusive Supervision and Employee Deviance

An assumption in the self-regulation impairment view is that abusive supervision directly drains self-resources needed for self-regulation, which is why victims respond with deviance. Thus, the}

---

1 For all hypothesis tests presented in Studies 1, 2, and 3, the same set of analyses was conducted without control variables as a supplemental test. In all analyses for each of the studies, the results without the control variables lead to the same substantive conclusions as those presented within the results sections of Studies 1, 2, and 3.

2 With Study 1’s data, we also collected employees’ perceptions of organizational support (POS; with Eisenberger, Cummings, Armeli, & Lynch’s, 1997, eight-item measure). POS is typically considered an “exchange” variable (see Cropanzano & Mitchell, 2005). We reran the analyses using POS as a potential mediator; the results provide no support for the mediation effect of POS. The Abuse × DJ interaction did not predict POS (b = .07, 95% CI [.06, .12], ns). Including POS to Model 3 of Study 1’s results did not substantially affect the interaction on supervisor-directed deviance (b = .07, 95% CI [.02, .11], p < .01) or organizational deviance (b = .04, 95% CI [.01, .09], ns) or organizational deviance (b = .02, 95% CI [.31, .31], ns) nor organizational deviance (b = .02, 95% CI [.22, .22], ns) when the Abuse × DJ interaction was controlled for. Finally, there were no significant indirect effects of abuse on deviance via POS at different levels of DJ (bias-corrected 95% confidence intervals for the indirect effects included zero). Therefore, we believe these results suggest that social exchange relations, specifically POS, did not present as a mediator of the abusive supervision–employee deviance relationship.
Table 1

**Study 1: Summary Statistics and Zero-Order Correlations**

<table>
<thead>
<tr>
<th>Variable</th>
<th>M</th>
<th>SD</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>43.60</td>
<td>11.72</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tenure with supervisor</td>
<td>4.34</td>
<td>4.80</td>
<td>.37</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gender *</td>
<td>0.57</td>
<td>0.50</td>
<td>−.05</td>
<td>−.06</td>
<td>−.06</td>
<td>−.06</td>
<td>−.06</td>
<td>−.06</td>
<td>−.06</td>
<td>−.06</td>
</tr>
<tr>
<td>Procedural justice</td>
<td>3.24</td>
<td>1.00</td>
<td>.01</td>
<td>.14</td>
<td>−.08</td>
<td>.91</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Abusive supervision</td>
<td>1.59</td>
<td>1.02</td>
<td>.05</td>
<td>−.00</td>
<td>.04</td>
<td>−.28</td>
<td>.91</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Distributive justice</td>
<td>3.36</td>
<td>1.31</td>
<td>−.03</td>
<td>.04</td>
<td>−.11</td>
<td>.59</td>
<td>−.24</td>
<td>.94</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Supervisor-directed deviance</td>
<td>1.46</td>
<td>0.58</td>
<td>.37</td>
<td>−.02</td>
<td>−.09</td>
<td>−.13</td>
<td>.57</td>
<td>−.11</td>
<td>.80</td>
<td>.37</td>
</tr>
<tr>
<td>Organizational deviance</td>
<td>1.60</td>
<td>0.54</td>
<td>−.13</td>
<td>−.03</td>
<td>−.18</td>
<td>−.05</td>
<td>.07</td>
<td>.01</td>
<td>.37</td>
<td>.79</td>
</tr>
</tbody>
</table>

*Note.* N = 216. Cronbach’s alpha are shown in italics along the diagonal. Correlations greater than |.14| are significant at *p* < .05, and those greater than |.18| are significant at *p* < .01 (two-tailed).

\* 0 = male, 1 = female.

Strength of self-resources is a critical indicator of self-regulation impairment (for a review, see Baumeister & Heatherton, 1996). Baumeister and colleagues (e.g., Baumeister et al., 1998; Bushman & Baumeister, 1998; Schmeichel & Baumeister, 2004) argued that harm to the self (i.e., abusive supervision) is particularly relevant because it effectively depletes one’s “ego” (called ego depletion; Baumeister et al., 1998; Bushman & Baumeister, 1998). Ego depletion is defined as a “reduction in the self’s capacity or willingness to engage in volitional action (including controlling the environment, controlling the self, making choices, and initiating action) caused by prior exercise of volition” (Baumeister et al., 1998, p. 1253). In short, ego depletion captures the availability, or rather expenditure, of self-regulatory resources (Gailliot, Schmeichel, & Baumeister, 2006; Twenge, Muraven, & Tice, 2004).

On the basis of this reasoning, we argue that the abusive supervision experience is too taxing and will drain needed self-resources, specifically ego depletion (e.g., Finkel & Campbell, 2001; Gailliot et al., 2006; Sassenberg, Moskowitz, Jacoby, & Hansen, 2007; Twenge et al., 2004). Moreover, and extending Study 1, we expect that self-regulation impairment via ego depletion will be stronger when victimized employees also perceive organizational outcomes to be fair (DJ) because the self will use additional resources to process the inconsistent information about the employee’s organizational utility. Therefore, we predict the following:

**Hypothesis 2:** The positive relationship between abusive supervision and self-regulation impairment is stronger when DJ is high rather than low.

Study 1 supports the self-regulation impairment view, showing that DJ strengthened the effects of abusive supervision on employee deviance. The underlying reason for this effect is that abusive supervision promotes self-regulation impairment, particularly at high levels of DJ. Self-regulation impairment (via ego depletion) that follows from the combination of supervisor abuse and DJ makes it less likely that people will consider the potential costs of their actions, thereby making deviant reactions more likely. Our theoretical arguments are consistent with a mediated-moderation framework (Edwards & Lambert, 2007): The Abusive Supervision × DJ interaction on employee deviance is mediated through self-regulation impairment (ego depletion). More specifically, self-regulation impairment theory (Baumeister et al., 1998) implies that supervisor abuse indirectly affects employee deviance through self-regulation impairment (ego depletion) and the first stage of the indirect effect (i.e., supervisor abuse on self-regulation impairment) is moderated by DJ. Formally, we predict the following:

**Hypothesis 3:** The interactive effect between abusive supervision and DJ on deviant behaviors is mediated by self-regulation impairment.

### Method

**Sample and procedure.** Participants were recruited with the assistance of the StudyResponse project (http://studyresponse.syr.edu), an online data collection service that allows researchers to advertise their studies to adult participants. The service advertised...
our study to 1,000 employed individuals who were willing participants at two points in time (4 weeks apart). In exchange for their participation in our study, participants were entered into a lottery drawing for the chance to win 30 $50 gift certificates to Amazon.com.

Five hundred seventy-seven individuals responded to the first survey (a 57.7% response rate); 452 individuals responded to the second survey (a 78.3% response rate). Complete data for the analyses were available for 375 (supervisor-directed deviance) and 371 (organizational deviance) participants, respectively. The average age of the participants was 41.80 years ($SD = 11.30$), and the average tenure with the supervisor was 4.44 years ($SD = 4.53$); 68% were women. Abusive supervision and the control variables were collected at Time 1; ego depletion, supervisor-directed deviance, and organizational deviance were collected at Time 2.

**Measures.** Abusive supervision and DJ were assessed with the same measures as in Study 1; however, respondents were asked in Study 2 to rate perceived abusive supervision in general.

Ego depletion was assessed with a 25-item measure assessing the availability of self-regulatory resources (Gailliot et al., 2006; Twenge et al., 2004). Respondents indicated the extent to which the information in each statement was true in general on a 7-point scale (1 = not true, 7 = very true; e.g., I feel like my willpower is gone, I feel drained).

Employee deviance was assessed with the same supervisor-directed and organizational deviance measures used in Study 1. As with abusive supervision in Study 2, respondents were asked to rate their engaged behavior in general.

Control variables were also considered. The same set of control variables (age, tenure with supervisor, gender, PJ) in Study 1 was used in Study 2.

**Results**

**Descriptive statistics.** Table 3 shows variables’ means, standard deviations, zero-order correlations, and reliability coeffi-
cients. The measures displayed acceptable reliabilities. Abusive supervision was significantly positively related to ego depletion, supervisor-directed deviance, and organizational deviance and negatively related to DJ. Ego depletion was significantly and negatively related to DJ and positively related to supervisor-directed and organizational deviance.

**Hypothesis tests results.** Hypotheses 1, 2, and 3 were tested in the following multiple regression models. Model 1 tested whether DJ moderated the relationship between abuse and supervisor-directed and organizational deviance, as it did in Study 1 (Hypothesis 1b). Model 2 tested whether DJ moderated the relationship between abuse and ego depletion (the mediator; Hypothesis 2). Model 3 was the same model as Model 1 but included ego depletion in the regression equation (Hypothesis 3). We tested the mediated-moderation prediction using Edwards and Lambert’s (2007) approach. Accordingly, Models 2 and 3 jointly define a mediated-moderation model, in which the first stage of the mediated (i.e., indirect) effect of abusive supervision on deviance is moderated by DJ (Edwards & Lambert, 2007, Equations 5 and 6). Mediated moderation occurs if (a) DJ moderates the relationship between abusive supervision and deviance in Model 2 and (b) the mediating (i.e., indirect) effect defined through Models 2 and 3 varies according to the level of DJ. The strength and the significance of the indirect effect were calculated with simple effects analyses (Edwards & Lambert, 2007, Equation 19).

Indirect effects involve the calculation of product terms across regression equations, which often have a nonnormal distribution. Conventional significance tests for nonnormal distributions in ordinary least squares lead to a high Type I error rate (Shrout & Bolger, 2002). We used the multiple regression module in MLwiN (Version 2.02; Rashbash, Charlton, Browne, Healy, & Cameron, 2005) and bootstrapped 1,000 samples to obtain bias-corrected parameter estimates and associated confidence intervals (CIs). The results are reported in Tables 4 (for supervisor-directed deviance) and 5 (for organizational deviance). The simple effects analyses detailing indirect, direct, and total effects of abusive supervision at high and low levels of DJ are reported in Tables 6 (for supervisor-directed deviance) and 7 (for organizational deviance). The results show that there were no significant interactions between ego depletion and DJ on both supervisor-directed (b = .03, ns) and organizational deviance (b = .01, ns). Moreover, adding this second-stage moderation effect to Model 3 did not improve model fit. These results further support Hypothesis 3, as the more complex mediated-moderation model is not a better fit for our data than the one we hypothesized.

**Supplemental analyses.** Finally, in supplemental analyses we explored whether the indirect effect we found was suggestive of partial or complete mediation (R. M. Baron & Kenny, 1986). The simple effects analyses reported in Tables 6 and 7 show that the direct effects of supervisor abuse on deviance was significant, which is consistent with partial mediation; the effects of abuse on deviance are partially transmitted through ego depletion (R. M. Baron & Kenny, 1986; MacKinnon, Lockwood, Hoffman, West, & Sheets, 2002). Additionally, we compared the fit of a complete mediation model (in which all parameters involving abuse were removed) with the fit of a partial mediation model (i.e., Model 3).

3 The direction and significance of the regression parameter estimates for Studies 2 and 3 without the bootstrap procedure lead to the same substantive conclusions.
Table 4
Study 2: Mediated-Moderation Effects of Abusive Supervision × Distributive Justice and Ego Depletion on Supervisor-Directed Deviance

<table>
<thead>
<tr>
<th>Variable</th>
<th>Supervisor-directed deviance (Model 1)</th>
<th>Ego depletion (Model 2)</th>
<th>Supervisor-directed deviance</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>b</td>
<td>95% CI</td>
<td>b</td>
</tr>
<tr>
<td>Age</td>
<td>−.01**</td>
<td>[−.01, −.00]</td>
<td>−.01**</td>
</tr>
<tr>
<td>Tenure with supervisor</td>
<td>.02*</td>
<td>[.01, .03]</td>
<td>.00</td>
</tr>
<tr>
<td>Gender</td>
<td>−.15*</td>
<td>[−.24, −.05]</td>
<td>.11</td>
</tr>
<tr>
<td>Procedural justice</td>
<td>−.07</td>
<td>[−.14, −.00]</td>
<td>−.16***</td>
</tr>
<tr>
<td></td>
<td>ΔR²</td>
<td>.12</td>
<td></td>
</tr>
<tr>
<td></td>
<td>LR χ² test</td>
<td>70.31***</td>
<td></td>
</tr>
<tr>
<td>Abusive supervision</td>
<td>.38***</td>
<td>[.32, .43]</td>
<td>.21***</td>
</tr>
<tr>
<td>Distributive justice</td>
<td>.03</td>
<td>[−.03, .09]</td>
<td>−.09*</td>
</tr>
<tr>
<td></td>
<td>ΔR²</td>
<td>.23</td>
<td></td>
</tr>
<tr>
<td></td>
<td>LR χ² test</td>
<td>123.69***</td>
<td></td>
</tr>
<tr>
<td>Abusive Supervision × Distributive Justice</td>
<td>.07**</td>
<td>[.02, .12]</td>
<td>.11***</td>
</tr>
<tr>
<td></td>
<td>ΔR²</td>
<td>.01</td>
<td></td>
</tr>
<tr>
<td></td>
<td>LR χ² test</td>
<td>11.01**</td>
<td></td>
</tr>
<tr>
<td>Ego depletion</td>
<td>.07*</td>
<td>[.01, .14]</td>
<td></td>
</tr>
<tr>
<td></td>
<td>ΔR²</td>
<td>.01</td>
<td></td>
</tr>
<tr>
<td></td>
<td>LR χ² test</td>
<td>5.26*</td>
<td></td>
</tr>
<tr>
<td>Ego Depletion × Distributive Justice</td>
<td></td>
<td>.36</td>
<td></td>
</tr>
<tr>
<td></td>
<td>R²</td>
<td>.36</td>
<td></td>
</tr>
</tbody>
</table>

Note. N = 375. Effects are unstandardized regression coefficients. Likelihood ratio (LR) χ² test indicates model fit increase via log-likelihood difference test. CI = bias-corrected confidence interval.

ª = male, 1 = female.
* p < .05. ** p < .01. *** p < .001, two-tailed.

The comparison test showed that for both supervisor-directed deviance, χ²(2) = 126.16, p < .001, and organizational deviance, χ²(2) = 56.60, p < .001, the less parsimonious, partial mediation model fit the data better than the complete mediation model. Consequently, the results in Study 2 can be described as evidence for partial mediation.

**Discussion**

Study 2 provides more direct evidence of the self-regulation impairment view of deviant responses to supervisor abuse. We replicated the Abusive Supervision × DJ interaction on supervisor-directed deviance found in Study 1, and the interaction effect on organizational deviance was significant. These findings provide additional empirical support for Hypothesis 1b in a different sample of working adults, from diverse industries and jobs. These results suggest that victimized employees do not discriminate across targets of deviance when they received high rather than low levels of fair outcomes. The results also provide support for Hypothesis 2, as supervisor abuse was more strongly related to ego depletion when DJ was high rather than low. Last, the results support Hypothesis 3 because DJ moderated the first stage of the indirect effect of abusive supervision on employee deviance.

Study 2 has notable strengths. It shows that the results found in Study 1 generalize across both samples and methods. Replicating the interaction pattern predicted by the self-regulation impairment view speaks to the robustness of the phenomenon. We also directly assessed self-regulation impairment, and our results show that it mediated the effects of abusive supervision on employee deviance. Overall, Study 2’s results provide a full test of the predictions made by the self-regulation impairment perspective about employee reactions to abuse.

Despite these strengths, Study 2 is not without limitations. Scholars contend the focus of self-regulation impairment is on psychological processes within individuals (e.g., Baumeister, 1998; Beal, Weiss, Barros, & MacDermid, 2005; Wegner, 1994). Although the between-individuals results of Studies 1 and 2 are consistent with self-regulation impairment, whether the findings generalize to within-individual relationships is unknown (e.g., Chen et al., 2005; Dalal et al., 2009). To make this inference, abuse, self-regulation impairment, and deviance should be assessed in a longitudinal design (Singer & Willett, 2003). Also, past research suggests that controlling for employees’ trait hostility is important when examining responses to victimization because people with this trait are more likely to be victimized (for a review, see Aquino & Thau, 2009), engage in deviance (Judge, Scott, & Ilies, 2006), and feel more injustices (Aquino, Lewis, & Bradfield, 1999), and so we controlled for trait hostility in Study 3. Finally, Study 2 measured self-regulation impairment through an ego depletion measure, which past research (e.g., Finkel & Campbell, 2001; Galliot et al., 2006; Sassenberg et al., 2007; Twenge et al., 2004) suggests adequately captures relentless attempts to understand, process, and interpret the causes and consequences of the harm. It does not measure actual cognitive activity.

Some theorists contend that a more direct measure is an assessment of psychological phenomena that occur when resources are drained—
Table 5
Study 2: Mediated-Moderation Effects of Abusive Supervision × Distributive Justice and Ego Depletion on Organizational Deviance

<table>
<thead>
<tr>
<th>Variable</th>
<th>Organizational deviance (Model 1)</th>
<th>Organizational deviance (Model 2)</th>
<th>Organizational deviance (Model 3)</th>
<th>Organizational deviance (Model 4)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>b</td>
<td>95% CI</td>
<td>b</td>
<td>95% CI</td>
</tr>
<tr>
<td>Age</td>
<td>−0.01***</td>
<td>[−0.02, −0.01]</td>
<td>−0.01***</td>
<td>[−0.02, −0.01]</td>
</tr>
<tr>
<td>Tenure with supervisor</td>
<td>0.01</td>
<td>[0.00, 0.02]</td>
<td>0.00</td>
<td>[−0.00, 0.01]</td>
</tr>
<tr>
<td>Gender</td>
<td>0.12</td>
<td>[−0.22, −0.03]</td>
<td>0.12</td>
<td>[−0.00, −0.25]</td>
</tr>
<tr>
<td>Procedural justice</td>
<td>0.01</td>
<td>[−0.06, 0.09]</td>
<td>−0.17</td>
<td>[−0.27, −0.07]</td>
</tr>
<tr>
<td>Procedural justice ΔR²</td>
<td>0.10</td>
<td></td>
<td>0.17</td>
<td></td>
</tr>
<tr>
<td>LR χ² test</td>
<td>60.92***</td>
<td></td>
<td>88.02***</td>
<td></td>
</tr>
<tr>
<td>Abusive supervision</td>
<td>0.27***</td>
<td>[0.22, 0.32]</td>
<td>0.21***</td>
<td>[0.13, 0.29]</td>
</tr>
<tr>
<td>Distributive justice</td>
<td>−0.03</td>
<td>[−0.10, −0.02]</td>
<td>−0.08</td>
<td>[−0.17, −0.01]</td>
</tr>
<tr>
<td>ΔR²</td>
<td>0.13</td>
<td></td>
<td>0.05</td>
<td></td>
</tr>
<tr>
<td>LR χ² test</td>
<td>67.86***</td>
<td>24.18***</td>
<td>67.86***</td>
<td>24.18***</td>
</tr>
<tr>
<td>Abusive Supervision × Distributive Justice ΔR²</td>
<td>0.06</td>
<td>[0.01, 0.11]</td>
<td>0.11</td>
<td>[0.04, 0.18]</td>
</tr>
<tr>
<td>LR χ² test</td>
<td>6.58*</td>
<td>10.94**</td>
<td>6.58*</td>
<td>10.94**</td>
</tr>
<tr>
<td>Ego depletion</td>
<td>0.18***</td>
<td>[0.11, 0.25]</td>
<td>0.18***</td>
<td>[0.11, 0.24]</td>
</tr>
<tr>
<td>LR χ² test</td>
<td>27.51***</td>
<td></td>
<td>27.51***</td>
<td></td>
</tr>
<tr>
<td>Ego Depletion × Distributive Justice ΔR²</td>
<td>0.01</td>
<td>[−0.03, 0.06]</td>
<td>0.01</td>
<td>[−0.03, 0.06]</td>
</tr>
<tr>
<td>LR χ² test</td>
<td>−0.93</td>
<td></td>
<td>−0.93</td>
<td></td>
</tr>
<tr>
<td>R²</td>
<td>0.24</td>
<td></td>
<td>0.24</td>
<td></td>
</tr>
</tbody>
</table>

Note. N = 371. Effects are unstandardized regression coefficients. Likelihood ratio (LR) χ² test indicates model fit increase via log-likelihood difference test. CI = bias-corrected confidence interval.

* p < .05. ** p < .01. *** p < .001, two-tailed.

Table 6
Study 2: Simple Effects Analyses for Supervisor-Directed Deviance

| Variable | First-stage moderation P_MX 95% CI | Direct effect P_{X|Y} 95% CI | Indirect effect P_{X|Y} P_{M|X} 95% CI | Total effect (P_{X|Y} + P_{X|Y} P_{M|X}) 95% CI |
|----------|-----------------------------------|--------------------------------|--------------------------------------|-----------------------------------------------|
| DJ high  | 0.31***                           | 0.42**                         | 0.02**                               | 0.44**                                       |
|          | [0.20, 0.43]                      | [0.34, 0.50]                   | [0.00, 0.05]                         | [0.36, 0.52]                                 |
| DJ low   | 0.10*                             | 0.29**                         | 0.01*                                | 0.30**                                       |
|          | [0.01, 0.21]                      | [0.22, 0.36]                   | [0.00, 0.02]                         | [0.23, 0.37]                                 |
| Difference | 0.21**                           | 0.13*                         | 0.02*                                | 0.14**                                       |
|          | [0.07, 0.36]                      | [0.03, 0.23]                   | [0.00, 0.04]                         | [0.04, 0.25]                                 |

Note. P_MX = path from abusive supervision to ego depletion; P_{X|Y} = path from abusive supervision to supervisor-directed deviance; P_{Y|M|X} = path from ego depletion to supervisor-directed deviance; CI = bias-corrected confidence interval; DJ = distributive justice.

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

those reflective of a cognitively taxed or exhausted self (Baumeister et al., 1998; Fischer, Greitemeyer, & Frey, 2007, 2008; Tice, Baumeister, Shmueli, & Muraven, 2007). We adopted these ideas in Study 3.

Study 3: Intrusive Thoughts as Mediator of the Relationship Between Abusive Supervision and Employee Deviance

We designed Study 3 to further test the robustness of our findings, while addressing the limitations identified above. Studies 2 and 3 support the self-regulation impairment view about the supervisor abuse–employee deviance relationship between individuals: Employees who experience high levels of abusive supervision tend to experience self-regulation impairment (particularly at high levels of DJ), and in turn, this influences the likelihood of deviant behavior. Although the between-individuals results support the self-regulation impairment explanation, they leave open questions about the explanatory power of a particular theory (Chen et al., 2005).

Researchers have noted that the validity, parsimony, and breadth of a theory can be evaluated by showing that the theory’s predictions are generalizable not only across samples but also across levels of analysis (Chen et al., 2005; Dalal et al., 2009; Klein, Dansereau, & Hall, 1994). On the basis of the data we have presented so far, we do not know whether on occasions in which a given employee experiences abusive supervision he
or she will experience self-regulation impairment (particularly at high levels of DJ) and whether this will influence his or her deviant behavior. Study 3 addresses this concern with a multi-wave, longitudinal design. Over multiple measurement occasions, employees reported their perceptions of supervisor abuse and their engaged deviance as well as their experienced self-regulation impairment (the mediator). Finally, we measured DJ as a between-individuals variable to test whether DJ moderates the within-individual relationships between abuse and self-regulation impairment.

Study 3 extends the findings of Study 2 by assessing victims’ cognitively taxed or exhausted self (e.g., Baumeister et al., 1998; Fischer et al., 2007, 2008; Tice et al., 2007) as a measure of self-regulation impairment. Self-regulation impairment is assessed with a measure of intrusive thoughts about the supervisor’s behavior. A high degree of intrusions drains self-resources (Baumeister & Heatherton, 1996; Oaten, Williams, Jones, & Zadro, 2008; Wegner, 1994) because intrusions are consistent, unwanted thoughts and imagery (Horowitz, Wilner, & Alvarez, 1979), making it hard for people to turn their attention away from the victimization experience and move on (McCullough, Bellah, Kilpatrick, & Johnson, 2001). Most people experience intrusions on an unconscious level, but when self-regulation is impaired, intrusions register more frequently (Matthews, Schwean, Campbell, Saklofske, & Mohamed, 2000). Indeed, research shows that people who try to suppress unwanted thoughts show subsequently more self-regulation impairment (Muraven, Tice, & Baumeister, 1998; J. L. Robinson & Demaree, 2007). In short, intrusive thoughts are an indicator of self-regulation impairment. The more intrusive thoughts experienced, the fewer self-resources will be available for abused employees to consider the consequences of their behavior, making deviance more likely.

Thus, Study 3’s design uses a multimeasure approach. In addition to the different measure of self-regulation impairment, we assessed deviance with a general measure of antisocial behaviors (S. L. Robinson & O’Leary-Kelly, 1998) and DJ with Niehoff and Moorman’s (1993) measure. Doing so allowed us to test whether the results found in Studies 1 and 2 are measure specific. Moreover, we assessed employees’ trait hostility as a between-participants control variable in Study 3 to further strengthen the statistical conclusion validity of our findings.

Table 7
Study 2: Simple Effects Analyses for Organizational Deviance

<table>
<thead>
<tr>
<th>Variable</th>
<th>First-stage moderation</th>
<th>Direct effect</th>
<th>Indirect effect</th>
<th>Total effect</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$P_{MK}$</td>
<td>95% CI</td>
<td>$P_{YX}$</td>
<td>95% CI</td>
</tr>
<tr>
<td>DJ high</td>
<td>.32***</td>
<td>[.20, .44]</td>
<td>.27**</td>
<td>[.18, .35]</td>
</tr>
<tr>
<td>DJ low</td>
<td>.10</td>
<td>[.02, .19]</td>
<td>.19**</td>
<td>[.12, .26]</td>
</tr>
<tr>
<td>Difference</td>
<td>.22**</td>
<td>[.08, .37]</td>
<td>.08</td>
<td>[.03, .18]</td>
</tr>
</tbody>
</table>

Note. $P_{MK}$ = path from abusive supervision to ego depletion; $P_{YX}$ = path from abusive supervision to organizational deviance; $P_{YMPMK}$ = path from ego depletion to organizational deviance; CI = bias-corrected confidence interval; DJ = distributive justice.

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

Figure 2. Study 2: Interaction between abusive supervision and distributive justice on supervisor-directed deviance.
Sample and procedure. We recruited 60 part- and full-time working adults through a behavioral research laboratory web site. We advertised the study as being about “work experiences.” Once prospective participants signed up, they received detailed instructions on the study procedure. They were told that there was no deception involved in the study and that participation was voluntary. At this point, participants filled in a web-based survey, providing us with their demographics and reporting the hostile emotions they experienced during the last year. We then sent e-mail to all participants over a period of 5 weeks on Mondays and Thursdays to remind them to fill in the web-based survey. These 10 measures assessed their perceptions of supervisor abuse, intrusive thoughts about their supervisor, and antisocial behaviors. We assessed DJ in a final survey to constructively replicate the Abuse × DJ interaction found in Studies 1 and 2. The supervisor is often the one who communicates news about rewards and compensation; so abuse may color DJ perceptions (Tepper, 2000). This possible link between abuse and DJ judgments should make it less likely to find moderation, providing a conservative test of our interaction hypothesis (Cohen et al., 2003). At the end of the

Method

Figure 3. Study 2: Interaction between abusive supervision and distributive justice on organizational deviance.

Figure 4. Study 2: Interaction between abusive supervision and distributive justice on ego depletion (self-regulation impairment).
study, we debriefed participants about the purpose of our study and what we suspected to find with it. Participants received $45 on completion of the study.

Participants’ average age was 25.66 years (SD = 7.84); average tenure with the supervisor was 11.32 months (SD = 15.96); 68% of the sample were women. We used observations in the analysis sample only when participants indicated that they had worked in the last 2 days so that employees who did not work as frequently as others would not report the same experience twice (the results reported subsequently did not change when including observations from participants who had worked in the last 3 days). The analysis sample included 352 total observations nested within 50 participants. The maximum number of observations (per participant) was 10 (10 participants), the minimum number was one (one participant), and the average was seven (eight participants with two to four observations and 31 with five to nine).

Measures. Abusive supervision was measured with the same items in Studies 1 and 2. However, we asked respondents to consider their supervisors’ behaviors during their past few workdays.

DJ was assessed with Niehoff and Moorman’s (1993) measure (e.g., I think that my level of pay is fair), set on a 7-point scale (1 = strongly disagree, 7 = strongly agree).

Self-regulation impairment was measured with the Impact of Events Scale (Horowitz et al., 1979), adapted to specific events (e.g., McCullough et al., 2001) and here to the supervisor’s behaviors (e.g., I thought about my supervisor’s behavior when I didn’t mean to; I had trouble falling asleep or staying asleep because of pictures or thoughts about my supervisor’s behavior that came to my mind). Respondents indicated how often they experienced these thoughts in their past few workdays on a 4-point scale (1 = not at all, 4 = often).

Employee deviance was assessed with a seven-item antisocial behaviors measure (S. L. Robinson & O’Leary-Kelly, 1998). Respondents indicated the frequency with which they engaged in the behaviors listed (e.g., Grewed with coworkers; Deliberately bent or broke a rule) on a 7-point scale (1 = never, 7 = very often).

As in Studies 1 and 2, we controlled for age, tenure with supervisor, and gender. We did not assess PJ but instead controlled for employees’ trait hostility (six items: angry, irritable, hostile, scornful, disgusted, and loathing). Respondents indicated the extent they felt these emotions during the past year on a 7-point scale (1 = not at all, 7 = extremely). Following common practice in longitudinal data analyses, we controlled for measurement occasion because across participants there may be, on average, a time trend in the dependent variables, but the slopes for time may differ per participant (Singer & Willett, 2003; Snijders, 1996).

Results

Descriptive statistics. Table 8 shows variables’ means, standard deviations, between-individuals zero-order correlations, and reliability coefficients. The measures displayed acceptable reliabilities. The results also show that between individuals, the average level of supervisor abuse was significantly and positively related to the average level of intrusions, and the average level of intrusions was significantly and positively related to employee deviance. The between-individuals correlations among the other study variables failed to reach statistical significance. Within individuals, supervisor abuse was significantly and positively related to intrusions and deviance. Intrusions were significantly and positively related to employee deviance. DJ was significantly and negatively related to intrusions.

Variance partitioning and analysis. We used multilevel analysis to analyze our data because Study 3’s purpose was to analyze within-individuals relationships between abuse and deviance over time. Multilevel analysis is appropriate because the data structure in Study 3 was nested (i.e., repeated measurements nested within individuals; Snijders, 1996). To further evaluate whether multilevel analysis is appropriate, we estimated so-called null models to examine the amount of within-individual (a2) and between-individuals (b2) variance in the dependent variables. The ratio of between individuals to total variance defines the intraclass correlation coefficient (ICC; Snijders & Bosker, 1999). For employee deviance, we found a significant amount of both within-individual (a2 = .11, 95% CI [.10, .13]) and between-individuals (b2 = .20, 95% CI [.13, .29]) variance (ICC = .65). The within-individual (a2 = .11, 95% CI [.9, .12]) and between-individuals (b2 = .07, 95% CI [.05, .11]) variance in intrusions was also significant (ICC = .39). The positive ICC values indicate statistical dependence in the data, which lead to bias in ordinary-least-squares-type analyses and suggest that multilevel analysis is appropriate.

Multilevel analysis considers statistical dependence in the estimation of parameters and standard errors (Snijders & Bosker, 1999). Another reason why multilevel analysis is appropriate is that compared with other types of longitudinal data analyses (e.g., repeated measures analysis of variance, structural equation modeling), multilevel analysis allows participants to have missing observation data (Hox, 2002; Snijders, 1996).

We used MLwiN (Rashbash et al., 2005) to estimate bootstrapped, multilevel, mixed-effects regression models with bias correction. Measurement occasions were defined as lower level units and participants as higher level units in the multilevel models. As in Study 2, we bootstrapped 1,000 samples. We chose the so-called standard error specification for a longitudinal multilevel model (Singer & Willett, 2003). In this specification, the composite error term is homoscedastic across people and both heterogeneous and correlated over time within people. This specification is parsimonious and adaptive to many empirical situations (Singer & Willett, 2003). We used within-person centering for the abuse and intrusions variables because our conceptual interest was to explain the relationships among these variables and employee deviance within individuals. This centering technique can lead to under- or over-prediction in hierarchical models, and so the average level of abuse and intrusions was controlled for when entering the within-person centered variables into the multilevel regression models (Kreft, de Leeuw, & Aiken, 1995; Singer & Willett, 2003). All other measured variables were grand mean centered; accordingly, gender and measurement occasion were not centered. In keeping with Singer and Willett’s (2003) recommendations to test for cross-level interaction effects in longitudinal multilevel models, in all models estimated, variables that varied within individuals (abusive supervision, intrusions, measurement occasions) were included as fixed effects with random slopes, and variables that did not vary significantly predicted the dependent variables.

4 We explored alternative error structure specifications, which did not provide a better model fit.
within persons (age, gender, tenure, hostility, DJ, average level of intrusions, average level of abusive supervision) were included as fixed effects only. Random slopes were estimated jointly with the respective variable’s fixed effects. To establish whether adding parameters to a particular model increased model fit, we estimated chi-square-based likelihood ratio tests. The results are reported in Table 9.

### Table 8
**Study 3: Summary Statistics and Zero-Order Correlations**

<table>
<thead>
<tr>
<th>Variable</th>
<th>M</th>
<th>SD</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Age</td>
<td>25.66</td>
<td>7.84</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Tenure with supervisor</td>
<td>11.32</td>
<td>15.96</td>
<td>.58**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Gendera</td>
<td>0.68</td>
<td>0.47</td>
<td>-.12</td>
<td>.13</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Hostility</td>
<td>3.03</td>
<td>1.39</td>
<td>.21</td>
<td>-.18</td>
<td>-.36**</td>
<td>.88</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Abusive supervision</td>
<td>1.38</td>
<td>0.64</td>
<td>-.05</td>
<td>-.18</td>
<td>-.10</td>
<td>.34</td>
<td>.95</td>
<td>-.41***</td>
<td>.46***</td>
<td>-.26***</td>
</tr>
<tr>
<td>6. Distributive justice</td>
<td>4.85</td>
<td>1.47</td>
<td>-.26</td>
<td>.12</td>
<td>.21</td>
<td>-.37**</td>
<td>-.48**</td>
<td>.93</td>
<td>-.12</td>
<td>-.06</td>
</tr>
<tr>
<td>7. Intrusions</td>
<td>1.27</td>
<td>0.30</td>
<td>-.04</td>
<td>-.14</td>
<td>**.10</td>
<td>.44**</td>
<td>.35**</td>
<td>-.19</td>
<td>.88</td>
<td>.39***</td>
</tr>
<tr>
<td>8. Deviant behaviors</td>
<td>1.35</td>
<td>0.50</td>
<td>.12</td>
<td>.01</td>
<td>.15</td>
<td>.32*</td>
<td>.19</td>
<td>-.07</td>
<td>.46</td>
<td>.80</td>
</tr>
</tbody>
</table>

**Note.** Correlations under the diagonal are between-individuals correlations ($N = 50$). Abusive supervision, intrusions, and deviant behaviors are averaged to calculate between-individuals correlations. Correlations above the diagonal are within-individual correlations ($N = 252$). Within-individual correlations were calculated based on standardizing regression coefficients in a multilevel model between one predictor and one criterion. Cronbach’s alpha are shown in italics along the diagonal.

* $0 = $ male, $1 = $ female.

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

### Hypothesis tests results.

We investigated the same three models as in Study 2. In Model 1, we tested whether DJ moderated the within-person relationship between supervisor abuse and employee deviance similar to the between-persons results found in Studies 1 and 2 (Hypothesis 1b). Model 2 tested whether DJ moderated the within-person relationship between supervisor abuse and intrusions (the mediator). Model 3 was the same model

### Table 9
**Study 3: Mediated-Moderation Effects of Abusive Supervision $\times$ Distributive Justice and Intrusive Thoughts on Employee Deviance**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Employee deviance (Model 1)</th>
<th>Intrusive thoughts (Model 2)</th>
<th>Employee deviance (Model 3)</th>
<th>Employee deviance (Model 4)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$b$</td>
<td>95% CI</td>
<td>$b$</td>
<td>95% CI</td>
</tr>
<tr>
<td>Age</td>
<td>.01</td>
<td>[-.01, .03]</td>
<td>-.01</td>
<td>[-.02, .01]</td>
</tr>
<tr>
<td>Tenure with supervisor</td>
<td>.00</td>
<td>[-.01, .01]</td>
<td>.00</td>
<td>[-.00, .00]</td>
</tr>
<tr>
<td>Gendera</td>
<td>.14</td>
<td>[-.11, -.37]</td>
<td>.08</td>
<td>[-.11, -.27]</td>
</tr>
<tr>
<td>Hostility</td>
<td>.12</td>
<td>[.02, .22]</td>
<td>.12*</td>
<td>[.04, .20]</td>
</tr>
<tr>
<td>Measurement occasion</td>
<td>-.02**</td>
<td>[-.03, -.01]</td>
<td>-.01</td>
<td>[-.03, .00]</td>
</tr>
<tr>
<td>$\Delta R^2$</td>
<td>.05</td>
<td>.04</td>
<td>.05</td>
<td>.05</td>
</tr>
<tr>
<td>$\Delta R^2$</td>
<td>.11</td>
<td>.23</td>
<td>.11</td>
<td>.11</td>
</tr>
<tr>
<td>Average of abusive supervision</td>
<td>.14</td>
<td>[.07, .32]</td>
<td>.20*</td>
<td>[.05, .36]</td>
</tr>
<tr>
<td>Abusive supervision</td>
<td>.32***</td>
<td>[.22, .43]</td>
<td>.44***</td>
<td>[.22, .64]</td>
</tr>
<tr>
<td>Distributive justice</td>
<td>.05</td>
<td>[.06, .16]</td>
<td>.06</td>
<td>[.01, .13]</td>
</tr>
<tr>
<td>$\Delta R^2$</td>
<td>.11</td>
<td>.23</td>
<td>.11</td>
<td>.11</td>
</tr>
<tr>
<td>$\Delta R^2$</td>
<td>39.72***</td>
<td>37.59***</td>
<td>39.72**</td>
<td>39.72**</td>
</tr>
<tr>
<td>Abusive Supervision $\times$ DJ</td>
<td>.08**</td>
<td>[.02, .14]</td>
<td>.14*</td>
<td>[.01, .26]</td>
</tr>
<tr>
<td>$\Delta R^2$</td>
<td>.01</td>
<td>.01</td>
<td>.01</td>
<td>.01</td>
</tr>
<tr>
<td>$\Delta R^2$</td>
<td>16.68**</td>
<td>3.93*</td>
<td>16.68***</td>
<td>16.68***</td>
</tr>
<tr>
<td>Average of intrusive thoughts</td>
<td>.82***</td>
<td>[.03, 1.29]</td>
<td>.82***</td>
<td>[.03, 1.30]</td>
</tr>
<tr>
<td>Intrusive thoughts</td>
<td>.50**</td>
<td>[.18, .81]</td>
<td>.50**</td>
<td>[.15, .83]</td>
</tr>
<tr>
<td>$\Delta R^2$</td>
<td>56</td>
<td>.56</td>
<td>.56</td>
<td>.56</td>
</tr>
<tr>
<td>$\Delta R^2$</td>
<td>178.76***</td>
<td>178.76***</td>
<td>178.76**</td>
<td>178.76**</td>
</tr>
</tbody>
</table>

**Note.** $N = 352$, $k = 50$. Mixed-effects multilevel regression model with persons nested within measurement occasions. Likelihood ratio ($LR$) $\chi^2$ test indicates model fit increase via log-likelihood difference test. Within each model, the model fit of the control variables was compared with the fit of a null (intercept only) model. Random part of the model is not displayed in the table (available from the authors). CI = bias-corrected confidence interval.

* $0 = $ male, $1 = $ female.

* $p < .05$. ** $p < .01$. *** $p < .001$. 
as Model 1, but we included intrusions in the multilevel regression equation. We then compared the fit of Model 3 with an alternative model (Model 4), in which DJ also moderated the effect of intrusions (the mediator) on deviance.

The first model results show a significant cross-level Abuse × DJ interaction on employee deviance (γ = .08, p < .01; see Table 9). Simple slopes of employee deviance on abusive supervision were calculated one standard deviation above and below the mean of DJ. The results support Hypothesis 1b and show that the abusive supervision–employee deviance relationship was more positive for high DJ (b = .44, p < .001) than low DJ (b = .20, p < .01; see Figure 5).

There was a significant Abuse × DJ interaction on intrusions (γ = .14, p < .05; see Model 2). The simple effects analyses (see Table 10) support Hypothesis 2 and show that the first-stage moderation effect of DJ on the supervisor abuse–employee deviance relationship was stronger for high DJ (b = .64, p < .001) than low DJ (b = .24, p < .01; see Figure 6).

Model 3’s results show that the Abuse × DJ interaction was no longer significant (γ = .06, ns) when intrusions were included in the multilevel regression model but show that intrusions significantly predicted employee deviance (γ = .50, p < .01). Models 2 and 3 jointly define the mediated-moderation model. The simple effects analyses results (see Table 10) further support Hypothesis 3. The first stage of the indirect effect of abusive supervision on employee deviance was stronger for high DJ (P = .32, p < .01) than low DJ (P = .12, p < .05), and this difference was significant (P < .05). These results provide evidence of our mediated-moderation model.

We next compared Model 3 with Model 4, which added the second-stage moderation effect (Intrusions × DJ) to Model 3. The results show that the Intrusions × DJ interaction was not significant (γ = −.06, ns) and adding a second-stage moderation effect to Model 3 did not improve model fit. These results provide further support for Hypothesis 3, as the more complex mediated-moderation model is not a better fit for our data than the one we hypothesized.

Supplemental analyses. Finally, in supplemental analyses we explored whether the indirect effect we found was suggestive of partial or complete mediation (R. M. Baron & Kenny, 1986). The simple effects analysis reported in Table 10 shows that the direct effects of supervisor abuse on deviance was not significant, which is consistent with complete mediation; the effects of abuse on deviance are fully transmitted through intrusive thoughts (R. M. Baron & Kenny, 1986; MacKinnon et al., 2002). Additionally, we compared the fit of a complete mediation model (in which all fixed and random parameters involving abuse were removed) with the fit of a partial mediation model (i.e., Model 3). The comparison test showed that the less parsimonious, partial mediation model did not fit the data better than the more parsimonious, complete mediation model, χ²(7) = 7.49, ns. Consequently, the results in Study 3 can be interpreted as evidence for complete mediation.

Discussion

Study 3’s results fully support Hypotheses 1b, 2, and 3. Across various measurement occasions, abusive supervision was more strongly related to employee deviance when DJ was high rather than low. Similarly, abusive supervision was more strongly related to intrusive thoughts about the supervisor’s behavior when DJ was high rather than low. DJ moderated the first stage of the indirect effect of abusive supervision on employee deviance through intrusive thoughts, supporting mediated moderation. These results provide consistent evidence of the self-regulation impairment explanation of why abused employees engage in harmful behaviors.

We believe Study 3’s findings provide more evidence to support the self-regulation impairment view, using a longitudinal, multimeasure design. The frequency of intrusive thoughts about the supervisor’s behavior captures self-regulatory cognitive activity.
devoted to understanding, processing, and interpreting the supervisor’s behavior. Intrusions about the supervisor’s behavior measured specifically how the self becomes drained. We also used alternative measures for employee deviance and DJ. Finally, we employed a within-person design, showing that Study 2’s findings generalize across levels of analysis. The results of Study 3 replicate the interactive pattern found in Studies 1 and 2. Furthermore, by collecting DJ at the end of the periods, we potentially addressed bias associated with sensitivity to the research purpose. Thinking about how the supervisor treated participants might have colored how they then perceived their rewards over time, introducing error to our interaction test. Consequently, by design, our research provides for a conservative, comparative test of the self-gain view against the self-regulation impairment view of the abusive supervision–employee deviance relationship.

**General Discussion**

The goal of the current research was to examine whether a self-gain or self-regulation view better explains why employees respond to supervisor abuse with deviance. We argued that DJ perceptions allowed for a comparative test because each view makes opposing predictions about DJ’s influence on the abusive supervision–employee deviance relationship. The self-gain view predicts that DJ would weaken the effects of abuse on deviance; compensatory logic suggests that the benefits of DJ would offset the costs of abuse. The self-regulation impairment view predicts that DJ would strengthen the effects of abuse on deviance; receiving inconsistent information about the employees’ organizational utility would further drain the self-resources needed to consider normative expectations and counterretaliation risks. Across diverse samples, measures, designs, and statistical techniques, the results show that DJ strengthened the positive relationship between abusive supervision and employee deviance.

The findings suggest that the reason why employees respond to abusive supervision with deviance is because being abused drains self-resources (particularly at high levels of DJ). This mediated-moderation effect is consistent with self-regulatory strength (Baumeister et al., 1998) and victimization models (Aquino & Thau, 2009; Thau et al., 2007). Abuse prompts self-regulation

<table>
<thead>
<tr>
<th>Variable</th>
<th>$P_{MX}$</th>
<th>95% CI</th>
<th>$P_{RX}$</th>
<th>95% CI</th>
<th>$P_{YM}P_{MX}$</th>
<th>95% CI</th>
<th>$(P_{YX} + P_{YM}P_{MX})$</th>
<th>95% CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>DJ high</td>
<td>.64***</td>
<td>[.32, .94]</td>
<td>.28</td>
<td>[−.01, .58]</td>
<td>.32**</td>
<td>[.11, .65]</td>
<td>.60**</td>
<td>[.28, .98]</td>
</tr>
<tr>
<td>DJ how</td>
<td>.24**</td>
<td>[.00, .49]</td>
<td>.11</td>
<td>[−.12, .32]</td>
<td>.12*</td>
<td>[.01, .32]</td>
<td>.23</td>
<td>[−.02, .46]</td>
</tr>
<tr>
<td>Difference</td>
<td>.39*</td>
<td>[.00, .75]</td>
<td>.18</td>
<td>[−.14, .50]</td>
<td>.20</td>
<td>[.02, .55]</td>
<td>.37</td>
<td>[.02, .84]</td>
</tr>
</tbody>
</table>

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

Table 10

| Study 3: Simple Effects Analyses for Deviant Employee Behaviors |

Figure 6. Study 3: Interaction between abusive supervision and distributive justice on intrusive thoughts (self-regulation impairment).
impairment by draining self-resources that are needed to consider the risks associated with retaliating and make deviance more likely. Our studies programmatically tested these predictions. Study 1’s design shows that DJ strengthened the abusive supervision–deviance relationship. The designs of Studies 2 and 3 integrated two self-regulation impairment measures (Study 2: ego depletion; Study 3: intrusive thoughts about the supervisor’s behavior).

The results in Studies 2 and 3 showed significant indirect effects of abuse on deviance (particularly at high levels of DJ) that were consistent with Hypothesis 3’s mediated-moderation prediction. The indirect effects in Study 2 were comparatively weaker than the indirect effects in Study 3. Supplemental analyses suggested that the effects of self-regulation impairment in Study 2 partially mediated the relationship between Abusive Supervision × DJ on deviance, whereas self-regulation impairment in Study 3 completely mediated the relationship. That we had found partial mediation in Study 2 and complete mediation in Study 3 further supports our argument that the measure used in Study 2 (i.e., ego depletion) did not quite map onto self-regulation impairment in the context of abuse as well as the measure used in Study 3 (i.e., intrusive thoughts about the supervisor’s behavior). Although the strength of the indirect effects we found differs across studies, the overall pattern of results suggests that supervisor abuse influences victims’ experienced self-regulation impairment (particularly at high levels of DJ), which then influences their engaged deviant behavior.

Overall, our research challenged the self-gain account of deviant responses to supervisor abuse and speaks to a more complex theoretical model—one that considers the consequences of victimization on self-regulation. Importantly, the results generalized across samples, methods, and levels of analysis, highlighting the breadth and robustness of the theoretical predictions made by the self-regulation perspective. Tepper et al. (2009; see also Sitkin, 2007) argued that there is “tremendous value in conducting multiple tests of the same phenomenon” because it is evidence for the robustness of the phenomenon (p. 165). Our studies also highlight a key process variable (self-regulation impairment) and moderator (DJ) that strengthens the effects of supervisor abuse on deviance. Last, our studies’ results imply that organizational decision makers cannot consider DJ as an ex ante control mechanism for supervisor abuse. Fair outcomes do not lessen deviant responses to abusive supervision; worse, they make deviance more likely.

Theoretical Implications

Traditional exchange explanations (e.g., reciprocity, social exchange, equity) of deviant responses to supervisor abuse share the underlying assumption that retaliation is motivated by self-gain. These explanations are parsimonious, but are limited. By violating normative expectations, victims risk counterretaliation by others. The risks of counterretaliation may be and often are greater than the benefits that may come from retaliation (Aquino et al., 2001; Tepper et al., 2009). If cost–benefit considerations drive deviant responses to abuse, then additional benefits (high DJ) should make deviance less likely and additional costs (low DJ) should make them more likely. Instead, our research shows that the self-gain view was unsupported and the self-regulation impairment view was supported. DJ strengthened the relationship between abuse and employee deviance, and Studies 2 and 3 suggest that the reason why this effect occurs is because (particularly at high levels of DJ) supervisor abuse indirectly affects deviance through self-regulation impairment (ego depletion and intrusive thoughts).

Our findings imply the possibility that past research on the abusive supervision–deviance relationship using traditional self-gain reasoning may be reframed as self-regulation impairment. For example, Thau et al. (2009) argued that the abusive supervision—employee deviance relationship was strengthened for those who experienced high (rather than low) uncertainty in their exchange relationship with the organization because victims devoted more attention to the abusive supervisor, heightening the desire to retaliate. The results, however, may also imply that self-regulation impairment prompted by abuse is magnified by the expenditure of self-regulatory resources needed to cope with the uncertainty. Still, we concede that for research that has not examined variables that specifically account for self-gain, self-regulation impairment, and/or other processes, understanding why abusive supervision influences deviance is less clear.

Our test of the self-gain versus self-regulation view makes a distinct contribution to understanding why victims of supervisor abuse reciprocate with deviance and the results highlight limitations with traditional exchange reasoning, extending beyond the supervisor abuse–employee deviance relationship. Some scholars criticize the rational action core of traditional exchange reasoning and argue that instrumental motives alone cannot always explain why people reciprocate or fail to reciprocate (e.g., Clark & Mills, 1979; Elster, 1989; A. P. Fiske, 1991). To be sure, we do not discount self-gain motives as a simple and powerful explanation of exchange behavior. We instead argue that by solely relying on self-gain principles, scholars may not ask questions and test predictions that go beyond the rational actor model (cf. Cropanzano, Stein, & Goldman, 2007; De Dreu & Nauta, 2009; Korsgaard, MeGlino, Lester, & Jeong, 2010).

Our study shows the impact of social exchanges on the psychology of the self. Employees who are harmed in exchanges with their supervisor are less able to maintain normative and rationally appropriate behavior because the victimization experience drains self-resources. In addition, our findings contribute to the foci approach of exchange theory, showing that other exchange relations—those that provide inconsistent information about employees’ organizational membership (i.e., high DJ)—further drain self-resources. In short, our findings suggest that there is more to exchange behavior than rational cost–benefit considerations. A generalization from our results to theory construction, then, is that self-gain models are less likely to account for exchange phenomena when individuals are harmed, self-impaired, and/or receive inconsistent information about their organizational membership. Whether these generalizations extend to other exchange situations is an important avenue for future research.

Our research also uniquely contributes to an emerging view on the role of the self in explaining harmful behaviors and reactions to victimization (Aquino & Douglas, 2003; Ferris, Brown, & Heller, 2009; Ferris, Brown, Lian, & Keeping; Thau et al., 2007). It substantiates the need to consider psychological processes, as the self is particularly fragile when individuals are victimized. Abused employees’ self-resources become depleted; they become preoccupied and try to understand and process the transgressor’s behaviors, making behaviors that violate normative standards more
likely. Thus, our research empirically supports Aquino and Thau's (2009) contention that "victimized employees may become locked into a vicious cycle in which the experience of victimization motivates them to engage in behaviors that invite further victimization" (p. 731).

**Practical Implications**

Organizational decision makers may believe controlling supervisors' behavior is sometimes difficult, and so they may have little faith in truly preventing supervisor abuse. Whereas DJ is generally described as a well-functioning control mechanism for employee behavior (Cropanzano & Greenberg, 1997), the current study suggests that it is counterproductive as a compensatory mechanism for supervisor abuse. Instead, fair outcomes exacerbate supervisor-abused victims' harmful responses. Consistent costs or consistent benefits are a better strategy for organizations than inconsistencies (J. N. Baron & Kreps, 2003). To control employee deviance, the best strategy is to prevent supervisor abuse and allocate outcomes fairly.

Indeed, abusive supervision undermines organizational effectiveness (Detert et al., 2007) because it leads to many negative outcomes. It negatively influences subordinates' work attitudes (e.g., Aryee, Chen, Sun, & Debrah, 2007; Tepper, 2000), performance (Detert et al., 2007), and citizenship behaviors (Aryee et al., 2007; Zellars, Tepper, & Duffy, 2002) and is highly destructive to employees (e.g., psychological distress, work–family conflict; Tepper, 2000). Our research provides sobering evidence to support these arguments. Therefore, identifying abusive supervisors is an essential first step to mitigating its destructive effects. Moreover, providing training to supervisors on how to appropriately interact with their employees is warranted.

Last, decision makers should consider how to help employees minimize the self-draining effects of abuse. Recent theory and research extending the self-regulatory strength model provide evidence on how to deal with abusive contexts, and suggest that organizations may strengthen self-resources with training (e.g., Baumeister, Gailliot, DeWall, & Oaten, 2006; Gailliot, Plant, Butz, & Baumeister, 2007; Muraven & Baumeister, 2000; Muraven, Baumeister, & Tice, 1999; Oaten & Cheng, 2006). This research refers to self-resources as akin to a muscle, where initial exercise may be exhausting (e.g., abuse, victimization) but continuous, fruitful exercise over time may strengthen it. This implies that organizations can build interventions to assist employees who deal with abusive others (i.e., counselors, police officers, customer service agents). Employees might experience simulated abusive interactions and be taught interpersonal skills to deal with them. Over time, such training would strengthen self-resources and allow employees to better cope with the situation, find constructive solutions, and reduce destructive reactions.

**Limitations**

Our article is not without limitations. For example, all our data are self-reported, which may promote common method variance bias. Although researchers have found that common method variance does not pose a biasing problem (Spector, 1987, 2006), we do not know whether we would have found the same results with another source reporting some of the study variables. Yet, given the sensitive nature of the phenomena of interest (i.e., abusive supervision, employee deviance), the method seems appropriate (e.g., Aquino & Thau, 2009; Dalal, 2005; Tepper, 2007), especially given recent research evidence showing the limitations of other reports of deviance (e.g., Dalal, 2005; Sackett, Berry, Wiemann, & Laczo, 2006). In addition, we believe the designs (the time lags) of Studies 2 and 3 lessen the possibility that common method variance biased our data.

A last limitation is that our data are based on surveys, and so causal inferences are limited. We did try to handle this by measuring the mediator at Time 2 in Study 2 and through a complex within- and between-individuals design in Study 3. Ideally, we would have liked to have a bigger sample in Study 3 to increase statistical power, but we made a classical trade-off between the costs of data collection and the likelihood of finding the effects (Snijders & Bosker, 1999). Still, recent research suggests that the results of Study 3 were unlikely biased by the sample size, particularly because bootstrapping was also used (Maas & Hox, 2005). Further, we note from social psychology experimental results that victimization causes self-regulation impairment (Baumeister et al., 2005), which causes harmful behaviors (Stucke & Baumeister, 2006). Their evidence, the preliminary evidence we cited earlier, and our results suggest that our proposed causal chain is plausible.

**Future Research Directions**

This article provides ground for several new research questions. For example, future research may examine the conditions under which exchanges are governed by a self-gain versus self-regulation impairment logic. We already generalized our results to theoretical predictions under which the self-gain logic is unlikely to hold (e.g., experiencing harm, self-regulation impairment, inconsistent utility). A potential test of this idea is to investigate classical exchange situations that are explained by self-gain motives (e.g., cooperation in iterated vs. one-shot interactions; Axelrod, 1984), manipulate one of the three generalized conditions under which self-gain is unlikely to hold, and test for their effects.

Another research problem to investigate is whether the effects we found are more pronounced in people who are particularly vulnerable to victimization. For example, it may be that employees whose self-worth is staked on their organizational membership are more likely to undergo self-regulation impairment when they are abused (Ferris, Brown, Lian, & Keeping, 2009). It may also be that certain individuals hold characteristics (e.g., low trait self-control; Marcus & Schuler, 2004) that make them more susceptible to impairment following abuse.

Further, researchers might examine effects of self-regulation impairment on behaviors other than deviance. Self-regulatory strength research shows that self-regulation impairment influences a variety of behaviors (see Baumeister, Heatherton, & Tice, 1994). For instance, self-regulation impairment influences behaviors requiring regulatory impulse control with long-term costs (e.g., alcohol consumption, gambling, unnecessary spending, smoking, unhealthy eating). Self-regulation impairment also influences behaviors that require attention to norms (e.g., helping or harming). Potentially, impaired self-resources may also increase behaviors that are typically thought of as “positive” (e.g., helping behaviors),

as long as the situational context defines helping as normatively inappropriate. We leave these ideas for future study.

In addition, it would be interesting to see whether environmental factors influence self-regulatory abilities and the abusive supervision–employee deviance relationship. We argued that fair distributions further drain self-resources when employees are abused because they provide inconsistent information about the utility of the organizational membership. We hope future researchers explore the effects of other situational cues that may provide for inconsistencies. For example, it is possible that psychologically safe climates intensify the effects of abuse. The effects of abuse might also intensify if employees report to more than one supervisor and the other supervisor is highly supportive. We hope researchers explore these ideas further.

Understanding other causes of self-regulation impairment is needed. According to the regulatory depletion model, any activity that involves self-regulation depletes self-resources. This may be particularly true for employees who are forced to fake expressions at work. J. L. Robinson and Demaree’s (2007) work shows that experienced versus expressed emotions (feeling sad but forced to smile) impair self-regulatory abilities, which worsen task performance. Similarly, self-regulation impairment may result from holding inconsistent values. Research shows that employees put on “facades of conformity” when their values do not match their employers’ values, and these facades influence turnover intentions and emotional exhaustion (Hewlin, 2003, 2009). Our research suggests that the reason why may be self-regulation impairment.

Finally, researchers might consider examining in more detail the dynamics of dissonance. We believe our results provide suggestive evidence of the dissonance experience. However, measuring dissonance directly and exploring the ways by which employees attempt to reduce dissonance when they receive inconsistent information about their organizational membership might provide insight on the process and when dissonance-reducing attempts are effective and ineffective.

Conclusion

Self-gain assumptions provide a parsimonious starting point to a theory of retaliation, but they cannot explain why—given the probable risks of counterretaliation—abused employees tend to respond with deviant behaviors. To account for this puzzle, assumptions about how victimization affects the self are necessary. Our research showed how the self-regulation impairment perspective embraces assumptions that can explain why victims of abuse fail to consider the likely costs of retaliation, and these predictions were supported in studies involving different data and methodological approaches.

More generally, we believe our study speaks to the issue of when the assumption of rational actors is useful and when it is not in explaining organizational behavior. A general heuristic could be to start off with the parsimonious assumption of self-gain and retain it as long as the theory does not meet empirical facts implying “irrational behavior” (Lindenberg, 1992). Our findings suggest that when we observe seemingly irrational phenomena, we need to extend self-gain models with assumptions about how the particular social context in which the puzzling behavior takes place affects the psychology of self-regulation. In this spirit, we challenge future research to consider the role of the self in explaining reciprocity in social exchanges.

References


Edwards, J. R., & Lambert, L. S. (2007). Methods for integrating mediation and statistical procedures for delineating and testing multilevel theories of prosocial and lagged citizenship–counterproductivity associations, and dy-
SELF-GAIN OR SELF-REGULATION IMPAIRMENT?


Correction to Thau and Mitchell (2010)

In the Online First Publication of the article “Self-Gain or Self-Regulation Impairment? Tests of Competing Explanations of the Supervisor Abuse and Employee Deviance Relationship Through Perceptions of Distributive Justice,” by Stefan Thau and Marie S. Mitchell (Journal of Applied Psychology, doi:10.1037/a0020540), the note to Table 10 on p. 1024 inadvertently referred to $P_{YM}$ as the path from ego depletion to deviant employee behaviors. The note instead should have referred to $P_{YM}$ as the path from intrusive thoughts to deviant employee behaviors.

DOI: 10.1037/a0021629