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Mindfulness Buffers Retaliatory Responses to Injustice: A Regulatory Approach

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We investigate the role of mindfulness as a regulatory factor by examining whether it mitigates the relationship between justice and retaliation. Drawing on theories of self-regulation, we integrate work on justice with emerging frameworks that identify mindfulness as an important work-related regulatory variable (Glomb, Duffy, Bono, & Yang, 2011). Specifically, we identify the role of mindfulness as a buffer of the ruminative thoughts and negative emotions that link injustice to retaliation. We test mediated moderation hypotheses in 2 samples. In Sample 1, two behavioral measures of retaliation are assessed in an experiment that manipulated both injustice and mindfulness. In Sample 2, we generalize our model to the field, examining employee responses regarding experiences with workplace injustice and retaliation. Results of both studies converge to support the proposed mediated moderation model that mindfulness buffers the effect of injustice on rumination and negative emotions, thus reducing retaliation. Our findings contribute to the broader literatures on self-regulation, organizational justice, and retaliation.

Keywords: mindfulness, self-regulation, organizational justice, retaliation, rumination

To be able to divorce themselves from what just happened that's inherent to them—a referee's bad call, or an issue that goes on individually or against your opponent. You've got to be able to come back to your center and center yourself again.

—Phil Jackson, on mindfulness training with the New York Knicks

Mindfulness, a psychological construct associated with nonjudgmental attention and awareness of present-moment experiences, is of increasing interest in organizations (e.g., Dane, 2011; Glomb, Duffy, Bono, & Yang, 2011). Emerging theoretical models of employee mindfulness suggest a self-regulatory function: Employee mindfulness optimizes behavior at work by enhancing a set of processes that “form a series of pathways by which mindfulness and mindfulness-based practices lead to improved self-regulation and, ultimately, higher functioning” (Glomb et al., 2011, p. 124). Despite emerging theory, little empirical work has focused on mindful self-regulation at work. We draw on the framework developed by Glomb and colleagues to argue that mindfulness is relevant when employees experience adverse events, helping to increase regulation over thoughts, emotions, and behaviors.

In particular, we argue that mindfulness reduces *workplace retaliation*—volitional behavior intended to “even the score” for a perceived injustice. Retaliation is costly to organizations and their members, leading to a range of undesirable outcomes (e.g., Bradfield & Aquino, 1999; Skarlicki & Folger, 2005; Thau & Mitchell, 2010), and is driven by dual regulatory processes—“cold,” instrumental cognitions and “hot,” affective reactions (Ambrose, Seabright, & Schminke, 2002; Lee & Allen, 2002). As this article unfolds, we argue that mindfulness mitigates suboptimal reactions to injustice—ruminative thought and outward negative emotion—thereby reducing retaliation.

Our research contributes in the following ways. We are among the first to examine the regulatory role of mindfulness in organizational contexts. By introducing mindfulness as a malleable psychological factor that buffers reactions to adverse workplace events, we extend research on more stable factors—such as trait negative affect, job attitudes, and rule commitment—that reduce rumination, negative emotion, and retaliation at work (e.g., Skarlicki & Rupp, 2010; Wang et al., 2013). Finally, we extend work suggesting that emotional regulation mitigates suboptimal employee responses to mistreatment (Lian et al., 2014; Wang, Liao, Zhan, & Shi, 2011) by examining a factor that optimizes both emotional and cognitive regulatory function at work.

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Mindfulness at Work

Mindfulness is a state of consciousness that can be increased with meditative exercises (Hafenbrack, Kinias, & Barsade, 2014; Kiken & Shook, 2011) and also varies naturally from person to person (e.g., Brown & Ryan, 2003). As Glomb et al.'s (2011) model suggests, both forms of mindfulness—state and trait—enhance self-regulatory processes, enabling people to “stay in the moment,” without evaluation or reaction.

According to Glomb et al. (2011), two core factors are basic defining elements of mindfulness: (a) decoupling of the self from

experience and (b) decreased automaticity. Mindfulness increases attention to momentary events—even adverse ones—but these core factors enable optimal responding in two ways. First, decoupling reduces the tendency to take things personally. Events are observed from a metaperspective whereby employees remain detached—separating ego from experiences—rather than inferring self-relevance. Adverse stimuli are experienced without perceived meaning for self-worth, reducing self-protective psychological processes (Brown, Ryan, & Creswell, 2007a, 2007b; Glomb et al., 2011). Second, reduced automaticity defuses tendencies to respond quickly and reactively to stimuli. Mindfulness reduces narrow, heuristic-based thought (Hafenbrack et al., 2014), leading employees to perceive a broader array of appropriate, autonomously regulated responses to adverse events (e.g., Glomb et al., 2011).

Glomb et al. (2011) also linked mindfulness to secondary self-regulatory processes that are proximal and relevant to work-related behavior. Specifically, mindfulness optimizes regulatory processes associated with work-relevant thoughts and emotions. Increases in mindfulness reduce self-oriented and automatic responses to adverse work events, observed as decreased cognitive rumination and negative emotion. As we argue next, Glomb and colleagues' mindful self-regulation framework can be integrated with dual-process models of justice to uncover the regulatory processes by which mindfulness will defuse reactions to injustice at work.

Mindfulness as a Buffer of Responses to Injustice

Dual-process conceptualizations of injustice emphasize the distinct contributions of both cognitive and emotional self-regulatory processes (Johnson & Lord, 2010; Li et al., 2011; Liu, Luksyte, Zhou, Shi, & Wang, 2015; Maas & van den Bos, 2009; Skarlicki & Rupp, 2010). Van den Bos (2007) conceptually integrated the two, describing injustice as a “hot cognitive process . . . in which cognitive and affective determinants often work together to produce people's judgments of what they think is just or unjust” (p. 61). Because mindfulness short-circuits cognitive and emotional reactions to negative events, it should be associated with more favorable responses to injustice by reducing rumination and negative emotions.

Rumination

Although extant research has identified the roles of justice cognitions and counterfactual thinking in reactions to injustice (e.g., Adams, 1965; Folger, 1986; Tripp, Bies, & Aquino, 2007), recent research has recognized that *rumination*, or recurrent thought and evaluation of a goal-disruptive event, is a key regulatory mechanism that leads to retaliation (e.g., Bies & Tripp, 1996; Bies, Tripp, & Kramer, 1997; Tripp & Bies, 2010; Wang et al., 2013). Rumination is triggered by experiences that threaten self-related goals (e.g., preservation of a positive self-image), such as mistreatment at work (Wang et al., 2013). Experiencing injustice at work sparks event-related ruminative thoughts that include revenge ideations (Tripp & Bies, 2010). Ruminative thoughts are repetitive, automatic cognitions that harp on negative events (Borders, Earleywine, & Jajodia, 2010); they are intrusive and self-focused and often linger until the discrepancy is resolved (Wang et al., 2013), narrowing an individual's perceived behavioral response repertoire (Borders et al., 2010).

Mindfulness should reduce rumination after an injustice, because ruminative thoughts are both self-oriented and automatic. First, mind-

fulness enables decoupling—detachment of the self from experiences, including self-oriented cognitions (Glomb et al., 2011). Thoughts about an injustice will be viewed objectively rather than taken as evaluative information about the self. Second, mindfulness reduces automaticity, a defining feature of repetitive, intrusive cognitions like rumination. Together, the two core factors associated with mindfulness will short-circuit ruminative reactions to injustice. Indeed, mindfulness lessens individuals' preoccupation with past events by emphasizing present-centered attention (Brown & Ryan, 2003; Ramel, Goldin, Carmona, & McQuaid, 2004; Shapiro, Carlson, Astin, & Freedman, 2006). In sum, we hypothesized the following:

Hypothesis 1: The positive effect of injustice on ruminative thought will be weaker for individuals high in mindfulness.

Negative Emotion

Injustice often results in negative emotions, which occur as part of an automatic, reactive process (e.g., van den Bos, 2007). Outward-focused negative emotions (e.g., anger, hostility, frustration) are common reactions to perceived unfairness, because they adaptively fuel behavioral tendencies to right a wrong and reduce discrepancies between self-relevant expectations of fair versus actual treatment (Barclay, Skarlicki, & Pugh, 2005; Wang et al., 2013). Indeed, the association between injustice and state negative affect is robust (Colquitt et al., 2013).

Mindfulness will reduce self-serving and automatic emotional reactions to injustice. First, by decoupling, mindful individuals will draw less self-relevant, goal-disruptive meaning from unfair events. Thus, mindfulness will reduce self-protective and negative action-oriented emotional reactions following an injustice. Second, by reducing automaticity of emotion, mindfulness will decrease negative emotional responses to adverse events (Brown et al., 2007a; Glomb et al., 2011; Wright, Day, & Howells, 2009). Mindfulness is associated with improved down-regulation of negative emotion and up-regulation of positive emotions (Fredrickson, Cohn, Coffey, Pek, & Finkel, 2008; Giluk, 2009, 2010; R. D. Siegel, 2010), and recent work has linked mindfulness to increased job satisfaction and reduced emotional exhaustion through enhanced affective regulation (Hülshager, Alberts, Feinholdt, & Lang, 2013). Further, neuroscientific research suggests that individuals high in trait mindfulness have enhanced neural circuitry in the prefrontal cortex, which is associated with improved emotion regulation in the limbic system (Farb et al., 2010; Farb, Anderson, & Segal, 2012; D. J. Siegel, 2007). In sum, we hypothesized the following:

Hypothesis 2: The positive effect of injustice on outward-focused negative emotion will be weaker for individuals high in mindfulness.

A Mediated Moderation Model of Mindfulness and Retaliation

Although dual-process models of workplace fairness suggest that injustice leads to cold cognitions and hot affective responses (van den Bos, 2007), less work has examined how these processes might simultaneously link to retaliation behavior. Cognitively, transgression-focused rumination motivates retribution (Bies & Tripp, 1996; Bordia, Restubog, & Tang, 2008; Bradfield & Aquino, 1999). Repetitive cognitions sustain event saliency (Bor-

dia et al., 2008) and transform action tendencies associated with provocation into aggressive behaviors (Denson, Pedersen, Friese, Hahm, & Roberts, 2011). Injustice also leads to retaliation through negative emotional states (Barclay et al., 2005; Colquitt et al., 2013; Fox, Spector, & Miles, 2001), particularly for outward negative emotions that motivate discrepancy-reducing actions (Barclay et al., 2005; Gailliot & Tice, 2008). Thus, both cognition and emotion underlie the injustice–retaliation relationship.

On the basis of Glomb et al.'s (2011) model of mindful self-regulation, we hypothesized that when mindfulness is high, unfairness is less likely to elicit negative thoughts and emotions, consequently exerting less influence on retaliation. Through its core effects of decoupling and reduced automaticity, mindfulness inhibits suboptimal regulatory processes—transgression-focused rumination and outward negative emotions—that are proximal to retaliation behavior. Indeed, mindfulness leads individuals to consider a broader range of behavioral responses (Wright et al., 2009) and to have increased behavioral tolerance for negative events (Baer, 2003; Borders et al., 2010; Heppner et al., 2008). We therefore hypothesized mediated moderation, such that ruminative thought and outward-focused negative emotion partially mediate the relationship between injustice and retaliatory behaviors, and that these effects are moderated by mindfulness (see Figure 1).

Hypotheses 3a–c: Mindfulness moderates the indirect effect of injustice on retributive theft (3a), retributive performance evaluation (3b), and reciprocal deviance (3c) through ruminative thought and outward-focused negative emotion, such that the indirect effects are weaker (vs. stronger) when mindfulness is higher (vs. lower).

Sample 1

Method

Sample. Participants were 117 undergraduate students, graduate students, and university staff at a southeastern university, recruited via e-mail and offered \$12 to take part in a relaxation study. Eight individuals who failed attention checks were removed from analyses.

Of the 109 participants, 69% were female, and 54.1% were Caucasian. On average, participants were 22.64 years old ($SD = 8.01$).

Procedure. We used a 2 (injustice, fair control) \times 2 (mindfulness, mind wandering control) factorial design and randomly assigned participants to conditions. Two experimenters played roles simulating a work hierarchy (e.g., J. Christian, M. Christian, Garza, & Ellis, 2012; Jones & Skarlicki, 2005): a research assistant and a supervisor. The supervisor (a) gave feedback and (b) paid participants.

Following Colquitt, Scott, Judge, and Shaw (2006), participants sat at individual stations where 11 expensive-looking pens were visible. The assistant instructed participants to choose a pen to use, adding that it would be theirs to take home. They were then given 5 min to perform a difficult, six-page proofreading task. The assistant explained that the supervisor would evaluate their work on the task, give individual feedback, and reward adequate performance with a \$3 bonus.

Next, participants listened to either (a) a mindfulness or (b) a control (mind wandering) audio clip (Hafenbrack et al., 2014; Kiken & Shook, 2011) through sound-reducing headphones. Afterward, injustice was manipulated as participants received either fair or unfair supervisor feedback regarding performance on the proofreading task. Participants were subsequently instructed to sit for 2 min, allowing time to experience any postfeedback ruminative thoughts and emotions. After the 2 min, an online survey containing manipulation checks and mediator measures was completed, followed by an anonymous evaluation of the supervisor's performance. Finally, the supervisor entered the room and stated, "I know my assistant said you could keep a pen, but I would have to buy more for the remaining sessions, so I would appreciate it if you didn't take one" (Colquitt et al., 2006). The supervisor left, giving participants a chance to steal pens. All participants were debriefed and paid a total of \$15.

Manipulations: Injustice. We manipulated global injustice, which involved manipulating distributive, procedural, and interactional justice simultaneously (Ambrose & Schminke, 2009; J. Christian et al., 2012). Following Colquitt et al.'s (2006) method, participants received feedback about the proofreading task that was either fair or unfair. Supervisor feedback, including the \$3 bonus payment, was given privately in a nearby room (see Table 1 for manipulation scripts).

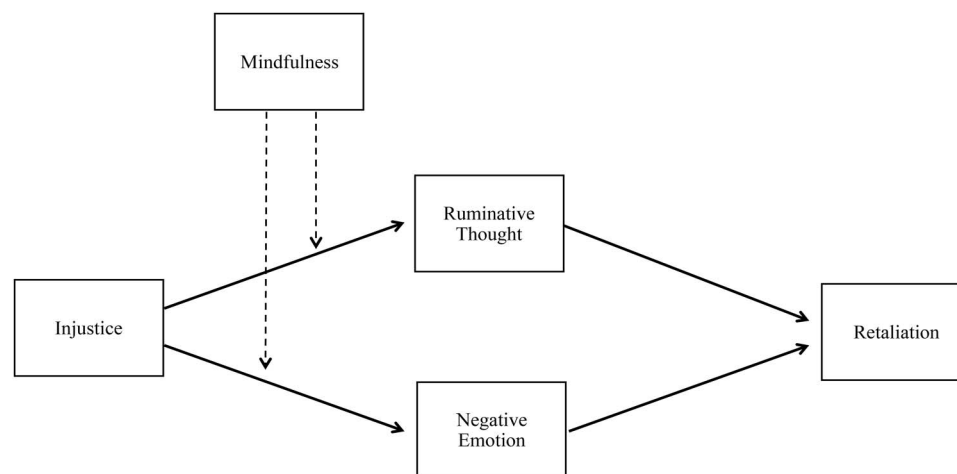


Figure 1. Hypothesized model.

Table 1
Justice Manipulation Scripts

Condition	
Injustice	Control (fair)
“I quickly glanced at your work on the proofreading task, and it’s pretty obvious that you did not put very much effort into this task [PJ]. I know you guys only participate in these studies for the money, but I don’t care whether you get paid [IJ]. I’m not giving you the extra three bucks [DJ].”	“First, I’d like to thank you for taking the time to participate today—I know people around here are really busy, and we appreciate you putting in the effort [IJ]. I carefully read through your work on this difficult proofreading task and can see you put a lot of effort into it [PJ]. So based on your effort and performance on this task, I’m going to give you an extra \$3 [DJ].”

Note. Adapted from Colquitt, Scott, Judge, and Shaw (2006). PJ = procedural justice; IJ = interactional justice; DJ = distributive justice.

Manipulations: Mindfulness. Participants listened to one of two 12-min audio recordings adapted from Kiken and Shook (2011) and described in Table 2. The mindfulness recording informed participants that the exercise would help them become more “present focused,” increasing awareness of what was happening “in the moment.” A 4-min instructional segment preceded an 8-min practice period interspersed with three brief reminders at 2.5-min intervals. This type of manipulation has been shown to effectively induce mindful states in novices (e.g., Hafenbrack et al., 2014; Kiken & Shook, 2011). Participants in the control condition were given mind wandering instructions, an induction that elicits baseline wakeful states (e.g., Hafenbrack et al., 2014; Kiken & Shook, 2011). This recording paralleled the structure of the mindfulness induction, with 4 min of instruction followed by 8 min of practice.

Measures. Unless otherwise indicated, participants rated responses using a five-point scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*).

Mindfulness manipulation check. Immediately following the audio clip, individuals rated their experience in the preceding minutes using two five-point scales: (a) 1 (“I thought about anything I wanted to” [control]) to 5 (“I focused on the present” [mindfulness]) and (b) 1 (“I let my mind wander freely” [control]) to 5 (“I was mindful of the present moment” [mindfulness]).

Justice manipulation check. Four items adapted from the Perceived Organizational Justice scale (Ambrose & Schminke, 2009) assessed fairness: (a) “Overall, I was treated fairly in this experiment”; (b) “In general, the treatment I received here was fair”; (c) “It seems

the way things worked in this experiment were not fair” (reversed); and (d) “For the most part, this experiment treated people fairly.”

Retaliation intention. To validate our focal behavioral measures of retaliation, we measured intent to retaliate (Jones & Skarlicki, 2005), which was expected to positively correlate with the retaliation variables. We used four items: (a) “I would complain about my treatment”; (b) “I would recommend this study to my friends who are planning to participate in a study”; (c) “It is possible that participants would complain about their treatment”; and (d) “I am enthusiastic about volunteering for future research with this same experimenter.” Items (b) and (d) were reverse coded.

Ruminative thought. Four items adapted from the Anger Rumination Scale (ARS; Sukhodolsky, Golub, & Cromwell, 2001) assessed postfeedback rumination: (a) “I thought about events that angered me for a long time”; (b) “I had difficulty forgiving people who hurt me”; (c) “I thought about the reasons people treated me badly”; and (d) “I reenacted an anger episode in my mind after it had happened.” Instructions were modified to assess momentary rumination by asking participants to report “the extent to which you had the following experiences during the study today.”

State negative emotion. Three items from the Positive and Negative Affect Schedule (PANAS; Watson, Clark, & Tellegen, 1988) assessed outward-focused negative emotion postfeedback—hostile, irritable, and upset (cf. Barclay et al., 2005)—on a scale ranging from 1 (*not at all*) to 5 (*extremely*).

Retaliation. We used two behavioral indicators of retaliation. First, *retributive theft behavior* was measured with pen theft (Colquitt

Table 2
Mindfulness Manipulation Description

		Condition
Segment	Mindfulness	Control (mind wandering)
Instructions	For 4 min, participants were instructed to anchor attention to their breathing, to maintain a sense of curiosity about momentary thoughts and feelings without judgment, and to refocus their attention on the present moment by attending to the breath cycle if their thoughts wandered.	For 4 min, participants were instructed to think about anything that came to mind from the past, present, or future.
Reminders	During the 8-min practice segment, participants received the following brief reminders: (a) “Gently maintain attention on your breathing, being with each breath in for its full duration and each breath out for its full duration.” (b) “If your mind wanders, acknowledge that it has wandered to reconnect to the present, and gently shift your attention back to noticing the feeling of each breath.” (c) “Let yourself become more familiar with the process of this experience.”	During the 8-min practice segment, participants received the following brief reminders: (a) “Remember, this is time for your mind to wander freely.” (b) “As a reminder, you don’t have to or even want to think about just one thing; think about as many different things as you want.” (c) “Don’t focus too hard on anything. Think freely.”

Note. Adapted from Kiken and Shook (2011).

Table 3
Means, Standard Deviations, and Correlations Among Variables in Sample 1

Variable	<i>n</i>	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7	8	9
1. Injustice	109	0.48	0.50	—								
2. Mindfulness	109	0.51	0.50	.01	—							
3. Justice manipulation check	108	3.65	1.15	-.67***	-.09	(.90)						
4. Mindfulness manipulation check	107	2.48	1.08	.03	.49***	-.00	(.84)					
5. Retaliation intention	108	2.38	1.09	.82***	-.06	-.76***	-.01	(.85)				
6. Ruminative thought	109	1.47	0.78	.17†	-.20*	-.09	-.18†	.26**	(.85)			
7. Negative emotion	109	1.34	0.53	.53***	-.13	-.50***	-.10	.64***	.26**	(.80)		
8. Theft behavior	108	0.40	0.56	.16	.14	-.14	-.03	.28**	.24*	.32**	—	
9. Performance evaluation	109	4.35	0.87	-.32**	-.08	.40***	-.12	-.46***	-.08	-.34***	-.14	—

Note. Listwise deletion was used for missing data. Reliabilities are reported in parentheses on the diagonal. Injustice: 0 = fair condition, 1 = injustice condition. Mindfulness: 0 = control condition, 1 = mindfulness condition.

† $p < .10$. * $p < .05$. ** $p < .01$. *** $p < .001$.

et al., 2006). Because the supervisor indicated that taking a pen would harm her (e.g., indicating that she needed to save them for the remainder of the sessions), keeping a pen reflected retaliation against the supervisor in the form of theft. Retaliation scores ranged from 0 to 3, where 0 indicated that no pen was taken from the participant's desk and 3 was the maximum. Second, *retributive performance evaluations* were assessed using "confidential" participant ratings of the supervisor that were unrelated to actual performance (J. Christian et al., 2012; Jones & Skarlicki, 2005). Efforts to thwart promotion are a measure of retaliation (J. Christian et al., 2012; Kremer & Stephens, 1983), and, thus, participants were instructed that their ratings of the supervisor who gave them feedback would help determine whether she should be promoted to lab director. To ensure that the results were not influenced by actual performance, participants rated supervisor knowledge about the proofreading task, which could not differ across conditions because the script held knowledge constant across conditions. A five-point scale was used, ranging from 1 (*knows nothing about the task*) to 5 (*knows everything about the task*), with lower ratings reflecting retaliatory behavior.

Results

Correlations, descriptive statistics, and reliabilities are reported in Table 3, and means are reported in Table 4.

Manipulation check: Injustice manipulation. Overall fairness was lower in the injustice condition ($M = 2.86$, $SD = .91$) than in the fair condition ($M = 4.39$, $SD = 0.82$), $F(1, 106) = 85.86$, $p < .001$, $\eta^2 = .45$.

Manipulation checks: Mindfulness manipulation. Mindfulness was higher in the mindful condition ($M = 2.98$, $SD = 1.04$) than in the control condition ($M = 1.93$, $SD = .82$), $F(1, 105) = 32.92$, $p < .001$, $\eta^2 = .24$.

Validation of dependent variables: Retaliation measures. Retaliation intention was related to theft ($r = .28$) and performance evaluations ($r = -.46$), suggesting that both behaviors were valid measures of retaliation.

Tests of moderation hypotheses. Hypotheses 1 and 2 predicted that mindfulness would attenuate the effect of injustice on ruminative thought and negative emotion. Significant Injustice \times Mindfulness interactions for ruminative thought ($B = -0.72$,

$p < .05$) and negative emotion ($B = -0.57$, $p < .01$) are presented in Table 5. As shown in Table 4, the injustice-control condition reported increased rumination (all t s > 2.60 , all p s $< .05$) and negative emotion (all t s > 2.91 , all p s $< .01$) relative to any other condition (see Figures 2 and 3). Thus, Hypotheses 1 and 2 were supported.

Tests of mediated moderation hypotheses. Hypotheses 3a and 3b predicted that mindfulness would attenuate the indirect effects of injustice through ruminative thought and negative emotion on retributive theft (3a) and retributive performance evaluation (3b). Support for Hypotheses 1 and 2 meets the first condition for mediated moderation. Next, tests of the conditional indirect effects of injustice on retaliation were examined with simultaneous entry of ruminative thought and negative emotion.¹ As Table 6 shows, the indirect effect through ruminative thought was not significant for the mindfulness condition (coefficient = -0.03 , $p > .05$) but was positive and significant for the control condition (coefficient = 0.23 , $p < .05$). The indirect effect through negative emotion was not significant for the mindfulness condition (coefficient = 0.18 , $p > .05$) but was positive and significant for the control condition (coefficient = 0.61 , $p < .05$). Therefore, Hypothesis 3a received full support. As Table 7 shows, the indirect effect through negative emotion was attenuated for participants in the mindfulness condition (coefficient = -0.11 , $p < .05$) compared with the control condition (coefficient = -0.33 , $p < .05$). However, the indirect effect through ruminative thought was not significant at any level of mindfulness. Thus, Hypothesis 3b was partially supported.

Sample 2

Method

We performed a constructive replication using a second sample to provide benefits that the laboratory cannot, such as demonstrating external validity with employed individuals representing an

¹ Because retributive theft is a count variable, Poisson regression analysis was used to test the conditional indirect effects for dual mediators in a path model for Hypothesis 3a.

Table 4
Means and Standard Deviations by Condition in Sample 1

Variable	Fair, mindful (<i>n</i> = 29)		Fair, control (<i>n</i> = 28)		Injustice, mindful (<i>n</i> = 27)		Injustice, control (<i>n</i> = 25)	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Ruminative thought	1.36 ^a	0.81	1.34 ^a	0.76	1.28 ^a	0.45	1.97 ^b	0.91
Negative emotion	1.14 ^{a,b}	0.34	1.01 ^a	0.06	1.42 ^b	0.50	1.87 ^c	0.61
Theft behavior	0.41 ^a	0.50	0.21 ^a	0.42	0.54 ^a	0.65	0.44 ^a	0.65
Performance evaluation	4.45 ^{a,b}	0.78	4.79 ^b	0.42	4.11 ^a	1.01	4.00 ^a	0.96

Note. *N* = 109. Means within rows with different superscripts are significantly different from one another at *p* < .05. Injustice: 0 = fair condition, 1 = injustice condition. Mindfulness: 0 = control condition, 1 = mindfulness condition. Higher values for ruminative thought indicate increased rumination levels. Higher values for negative emotion indicate elevated negative emotional states. Higher values for theft behavior indicate greater retaliation. Higher values for performance evaluation indicate less retaliation.

array of occupations in which retaliatory behavior can occur. We demonstrate the relevance of our theorizing for untrained individuals given that the majority of workers in the United States have never undergone mindfulness training, yet many people focus on the present as part of their baseline attentional patterns (Brown & Ryan, 2003; Glomb et al., 2011).

Sample and procedure. Participants were 270 employed individuals who responded to an online survey in exchange for payment of \$1. Participants were recruited through Amazon's Mechanical Turk (<http://mturk.com/>), which is argued to be a reliable data source (Buhrmester, Kwang, & Gosling, 2011). Six individuals failed attention checks and were removed from analyses. Of the remaining 264 respondents, 53% of the sample members were female, and 79.2% were Caucasian. On average, participants were 36.47 years old (*SD* = 11.43).

Measures. Unless otherwise indicated, participants rated responses using a five-point scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*).

Perceived unfairness. Global justice (Ambrose & Schminke, 2009) assessed perceptions of workplace unfairness.

Trait mindfulness. The Mindfulness Attention and Awareness Scale (Brown & Ryan, 2003) assessed trait mindfulness. Participants reported the frequency with which they experienced 15 different items on a five-point scale ranging from 1 (*almost never*) to 5 (*almost always*). Example items are "I find it difficult to stay

focused on what's happening in the present" and "I find myself preoccupied with the future or the past." All items were reverse coded so that higher scores indicated increased mindfulness.

Ruminative thought. We used the full 20-item version of the ARS (Sukhodolsky et al., 2001). Instructions referred to work-related events to reflect ruminative thoughts about workplace experiences. Example items are "When something makes me angry, I turn the matter over and over again in my mind" and "I thought about the reasons people treated me badly."

Outward-focused anger. Outward-focused anger was assessed using the seven-item anger subscale from the Aggression Questionnaire (Buss & Perry, 1992). Instructions were adapted to reflect anger at work. Example items are "I have trouble controlling my temper" and "When I'm frustrated, I let my irritation show."

Retaliation. A 19-item reciprocal deviance measure (Bennett & Robinson, 2000) was used to assess retaliation behavior. Instructions from this scale were adapted so that responses reflected retaliatory reactions to unfair workplace treatment by asking participants to indicate their agreement "that you have done any of the following in order to get back at the organization or someone you work with for treating you unfairly or harming you in some way." Example items are "Said something hurtful to someone at work" and "Falsified a receipt to get reimbursed for more money than you spent on business expenses."

Table 5

Coefficient Estimates for the Mediated Moderation Model for Dual-Process Mediators as Dependent Variables in Sample 1

Variable	Ruminative thought						Negative emotion					
	Step 1			Step 2			Step 1			Step 2		
	<i>B</i>	<i>SE</i>	<i>t</i>	<i>B</i>	<i>SE</i>	<i>t</i>	<i>B</i>	<i>SE</i>	<i>t</i>	<i>B</i>	<i>SE</i>	<i>t</i>
Constant	1.48	0.07	20.18***	1.48	0.07	20.70***	1.34	0.04	31.48***	1.35	0.04	33.17***
Injustice	0.26	0.15	1.80 [†]	0.27	0.14	1.86 [†]	0.56	0.09	6.56***	0.56	0.08	6.93***
Mindfulness	-0.32	0.15	-2.17*	-0.32	0.14	-2.23*	-0.15	0.09	-1.72 [†]	-0.15	0.08	-1.82 [†]
Injustice × Mindfulness				-0.72	0.29	-2.50*				-0.57	0.16	-3.53**
<i>R</i> ²		.26*			.35**			.55***			.61***	
ΔR^2					.05*						.07**	

Note. *N* = 109, *df* = 106 in Step 1 and 105 in Step 2. Listwise deletion was used for missing data. Unstandardized regression coefficients are reported. Injustice: 0 = fair, 1 = injustice. Mindfulness: 0 = control, 1 = mindfulness. All predictors were centered before analysis.

[†] *p* < .10. * *p* < .05. ** *p* < .01. *** *p* < .001.

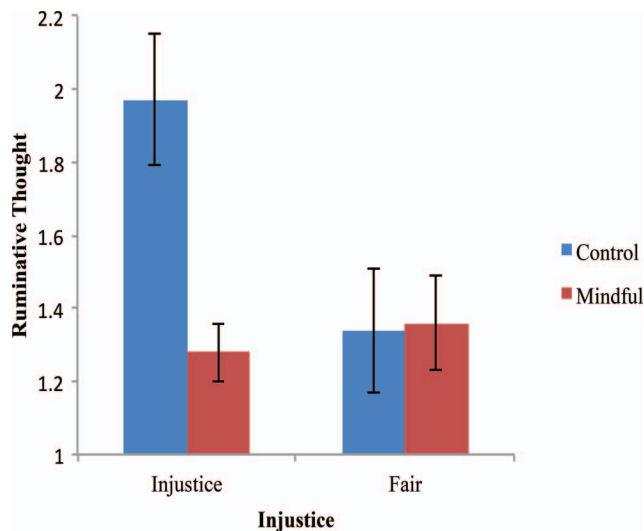


Figure 2. Interactive effects of injustice and mindfulness on ruminative thought in Sample 1. Error bars represent standard errors. See the online article for the color version of this figure.

Control variables. We controlled for gender, age, and negative affect in light of research suggesting that these variables are associated with unethical or deviant behaviors at work (Berry, Ones, & Sackett, 2007). Negative affect was assessed using 10 items from the PANAS (Watson et al., 1988).

Results

Intercorrelations, descriptive statistics, and reliabilities are reported in Table 8.

Tests of moderation hypotheses. Hypotheses 1 and 2 predicted that mindfulness would attenuate the effect of injustice on ruminative thought and negative emotion. As Table 9 shows, there was a significant Unfairness × Mindfulness interaction effect on

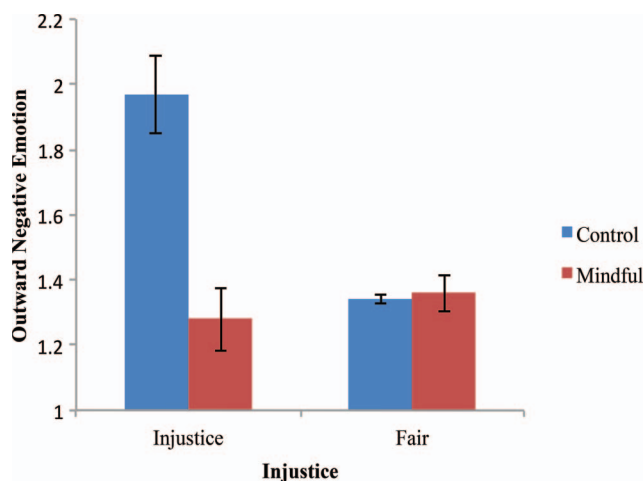


Figure 3. Interactive effects of injustice and mindfulness on outward negative emotion in Sample 1. Error bars represent standard errors. See the online article for the color version of this figure.

Table 6
Results for Conditional Indirect Effects on Theft in Sample 1

Variable	Indirect effect	SE	95% CI	
			LL	UL
Conditional indirect effects: Ruminative thought				
Mindfulness	-0.03	0.07	-0.154	0.099
Control	0.23	0.09	0.048	0.416
Conditional indirect effects: Negative emotion				
Mindfulness	0.18	0.11	-0.033	0.401
Control	0.61	0.19	0.241	0.970

Note. N = 108. Listwise deletion was used for missing data. Unstandardized regression coefficients are reported. Bootstrap sample size: 1,000. CI = confidence interval; LL = lower limit; UL = upper limit.

ruminative thought ($B = -0.14, p < .05$) as well as negative emotion ($B = -0.20, p < .05$). Simple slopes tests revealed that lower mindfulness was associated with higher rumination ($B = 0.33, p < .05$), and higher mindfulness was associated with lower rumination ($B = 0.13, p < .05$) in response to unfair treatment at work (see Figure 4). Lower mindfulness was associated with increased anger in response to unfairness ($B = 0.27, p < .05$), whereas this effect was mitigated for individuals high in trait mindfulness ($B = -0.02, p > .05$) at work (see Figure 5). These results support Hypotheses 1 and 2.

Test of mediated moderation hypothesis. Hypothesis 3c predicted that mindfulness would attenuate the indirect effect of injustice on reciprocal deviance through ruminative thought and negative emotion. The first condition for mediated moderation was met by finding support for Hypotheses 1 and 2. As shown in Table 10, the indirect effect on reciprocal deviance through ruminative thought was not significant at high levels of mindfulness (coefficient = 0.03, $p > .05$) but was positive and significant at low (coefficient = 0.07, $p < .05$) and mean (coefficient = 0.05, $p < .05$) levels. Also, the indirect effect on reciprocal deviance through anger was not significant at high levels (coefficient = -0.01, $p > .05$) but was positive and significant at low (coefficient = 0.07, $p < .05$) and mean (coefficient = 0.03, $p < .05$) levels of mindfulness. These results support Hypothesis 3c.

Table 7
Results for Conditional Indirect Effects on Performance Evaluation in Sample 1

Variable	Indirect effect	SE	95% CI	
			LL	UL
Conditional indirect effects: Ruminative thought				
Mindfulness	-0.00	0.02	-0.054	0.029
Control	0.01	0.07	-0.114	0.187
Conditional indirect effects: Negative emotion				
Mindfulness	-0.11	0.08	-0.333	-0.007
Control	-0.33	0.16	-0.674	-0.020

Note. N = 109. Unstandardized regression coefficients are reported. Bootstrap sample size: 1,000. CI = confidence interval; LL = lower limit; UL = upper limit.

Table 8
Means, Standard Deviations, and Correlations Among Variables in Sample 2

Variable	<i>n</i>	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7	8
1. Perceived unfairness	259	2.18	1.00	(.94)							
2. Trait mindfulness	257	3.71	0.73	-.26***	(.91)						
3. Ruminative thought	256	2.08	0.82	.45***	-.40***	(.95)					
4. Anger	259	1.86	0.78	.32***	-.41***	.66***	(.85)				
5. Reciprocal deviance	257	1.68	0.72	.32***	-.46***	.53***	.51***	(.93)			
6. Negative affect	263	1.70	0.77	.35***	-.48***	.50***	.49***	.42***	(.93)		
7. Gender	264	0.53	0.50	-.05	-.05	.03	.04	-.13*	.02	—	
8. Age	264	36.47	11.43	-.06	.08	-.14*	-.16**	-.12*	-.21**	.05	—

Note. Listwise deletion was used for missing data. Reliabilities are reported in parentheses on the diagonal. Gender: 0 = male, 1 = female.
* $p < .05$. ** $p < .01$. *** $p < .001$.

Discussion

The purpose of this research was to investigate the role of mindfulness as a self-regulatory factor that mitigates processes underlying the injustice–retaliation relationship. We first manipulated both injustice and mindfulness in a controlled experiment with behavioral dependent variables. We next tested whether our model generalizes to the field, examining natural variation in employee mindfulness. The results converged to suggest that mindfulness reduces retaliation by buffering suboptimal motivational mechanisms.

Theoretical Implications

Our study has several theoretical implications. First, we advanced theories of mindfulness in organizations by examining its

relationship with motivational factors. We moved beyond the traditional focus of research identifying its beneficial effects on health, stress, and well-being (for a review, see Chiesa & Serretti, 2010) to test emerging conceptualizations of mindfulness as having positive self-regulatory and behavioral implications at work (e.g., Glomb et al., 2011; Hafenbrack et al., 2014). Models of self-regulation have proven useful in identifying psychological factors (e.g., emotion regulation [Lian et al., 2014; Wang et al., 2011]; experiential vs. rational processing [Skarlicki & Rupp, 2010]) that mitigate reactions to negative experiences at work. By integrating mindful self-regulation theories with dual-process models, we identified a set of cognitive and emotional factors that are buffered by mindfulness, reducing the indirect effect of injustice on retaliation. This model has implications for research on other forms of work-relevant self-regulation, such as attentional

Table 9
Coefficient Estimates for the Mediated Moderation Model for Dual-Process Mediators as Dependent Variables in Sample 2

Variable	Step 1			Step 2			Step 3		
	<i>B</i>	<i>SE</i>	<i>t</i>	<i>B</i>	<i>SE</i>	<i>t</i>	<i>B</i>	<i>SE</i>	<i>t</i>
Ruminative thought ^a									
Constant	1.30	0.21	6.29***	1.65	0.20	8.11***	1.63	0.20	8.10***
Age	-0.004	0.004	-0.98	-0.004	0.004	-1.12	-0.004	0.004	-1.17
Gender	0.04	0.09	0.47	0.05	0.09	0.52	0.07	0.09	0.75
Negative affect	0.52	0.06	8.65***	0.33	0.07	4.96***	0.32	0.07	4.85***
Unfairness				0.24	0.05	5.10***	0.23	0.05	5.07***
Trait mindfulness				-0.20	0.07	-2.91**	-0.22	0.07	-3.29**
Unfairness × Mindfulness							-0.14	0.06	-2.22*
<i>R</i> ²		.26***			.36***			.37***	
ΔR^2					.10***			.01*	
Anger ^b									
Constant	1.11	0.20	5.54***	1.41	0.20	6.90***	1.39	0.20	6.94***
Age	-0.003	0.004	-0.88	-0.004	0.004	-1.01	-0.004	0.004	-1.11
Gender	0.05	0.09	0.53	0.05	0.09	0.61	0.09	0.09	1.01
Negative affect	0.50	0.06	8.45***	0.33	0.07	4.89***	0.31	0.07	4.74***
Unfairness				0.12	0.05	2.69**	0.12	0.05	2.64**
Trait mindfulness				-0.23	0.07	-3.43**	-0.27	0.07	-4.06***
Unfairness × Mindfulness							-0.20	0.06	-3.24**
<i>R</i> ²		.25***			.31***			.34***	
ΔR^2					.06***			.03**	

Note. Listwise deletion was used for missing data. Unstandardized regression coefficients are reported. Gender: 0 = male, 1 = female. All predictors were centered prior to analysis.

^a $N = 245$, $df = 241$ in Step 1, 239 in Step 2, and 238 in Step 3. ^b $N = 246$, $df = 242$ in Step 1, 240 in Step 2, and 239 in Step 3.

† $p < .10$ * $p < .05$. ** $p < .01$. *** $p < .001$.

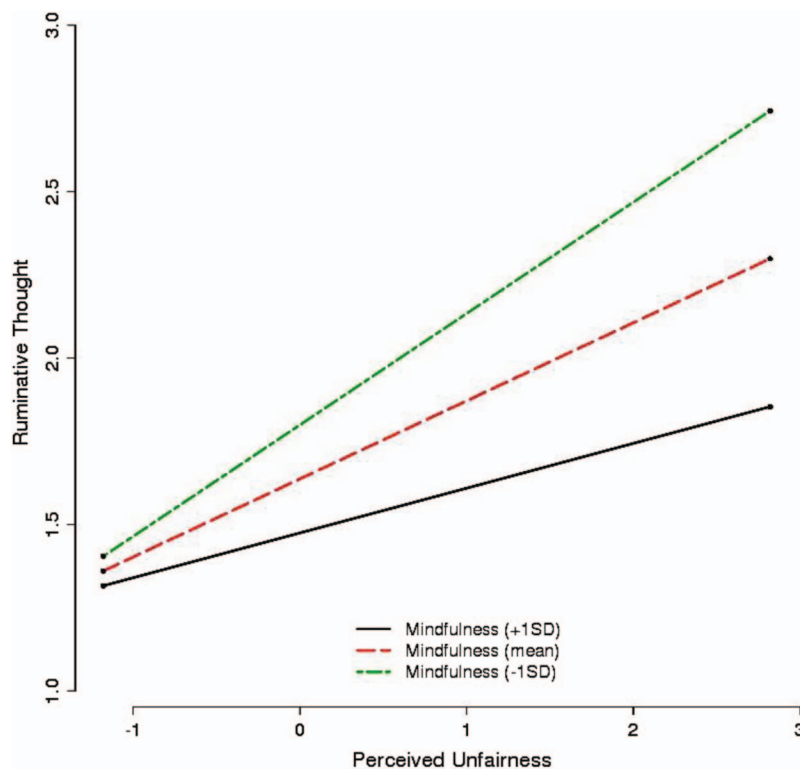


Figure 4. Interactive effects of unfairness and trait mindfulness on ruminative thought in Sample 2. Lines are simple slopes plotted at +1 standard deviation, mean, and -1 standard deviation levels of mindfulness on the basis of values of mean-centered predictors. See the online article for the color version of this figure.

resources (Beal, Weiss, Barros, & MacDermid, 2005; Kanfer & Ackerman, 1989), work engagement (e.g., M. Christian, Eisenkraft, & Kapadia, 2014), and emotion regulation (e.g., Beal, Trougakos, Weiss, & Green, 2006). For instance, Rupp and Spencer (2006) found that unfairness experiences are associated with emotional labor; our framework suggests that mindfulness might reduce this effect.

Second, this is the first study to hypothesize and test the role of mindfulness in the injustice-retaliation relationship by demonstrating that a trainable psychological mindset helps to diffuse negative employee reactions. This has implications for our understanding of counterproductive behavior. Although much of the extant research has focused on identification of exogenous antecedents—including unfairness (Fox et al., 2001; Greenberg, 1990; Greenberg & Alge, 1998), personal offenses (e.g., Aquino, Tripp, & Bies, 2001), sleep deprivation (Barnes, Schaubroeck, Huth, & Ghumman, 2011; M. Christian & Ellis, 2011), and abusive supervision (e.g., Lian et al., 2014; Tepper, 2000)—research is beginning to identify contextual and individual difference moderators (e.g., Colquitt et al., 2006; Lian et al., 2014; Liu et al., 2015; Mitchell & Ambrose, 2007; Tepper, Henle, Lambert, Giacalone, & Duffy, 2008; Welsh, Ellis, M. Christian, & Mai, 2014). Still, unexplained variance remains in the relationship between justice and counterproductive behavior (Colquitt et al., 2006). We addressed this gap, and our results suggest that mindfulness could have beneficial effects on a range of undesirable behaviors in organizations. For example, psychological contract breach leads to deviance (Bordia et al., 2008), and our results suggest that mindfulness may moderate this effect.

Finally, our work contributes to the organizational justice literature in two ways. First, our findings add to the emerging evidence that reactions to injustice can be understood within the context of dual-process theories (e.g., Li et al., 2011; Liu et al., 2015; van den Bos, 2007). Second, our work extends emerging research on justice and rumination (e.g., Tripp & Bies, 2010; Wang et al., 2013). In doing so, we have moved beyond focusing on justice perceptions, counterfactual thinking, or relative comparisons as cognitive outcomes of injustice (e.g., Adams, 1965; Folger, 1986; Tripp et al., 2007).

Practical Implications

Undesirable perceived injustice is often unavoidable in organizations (e.g., companywide layoffs, choosing among multiple eligible employees for a single promotion). Our findings suggest new options for reducing retaliation at work. In addition to leader training in fairness principles (e.g., Greenberg, 2006; Skarlicki & Latham, 1997), employers may benefit from more proactive strategies such as promoting employee mindfulness. This might be done by increasing education about mindfulness techniques, creating an organizational culture that recognizes the merits of mindfulness, or conducting large-scale interventions.

Moreover, our findings suggest that mindfulness training may be a useful tool for managers mediating disputes among employees in conflict-resolution scenarios and may truncate cycles of co-worker retaliation. Our study suggests that this training is not initially difficult for novice meditators and that learning these

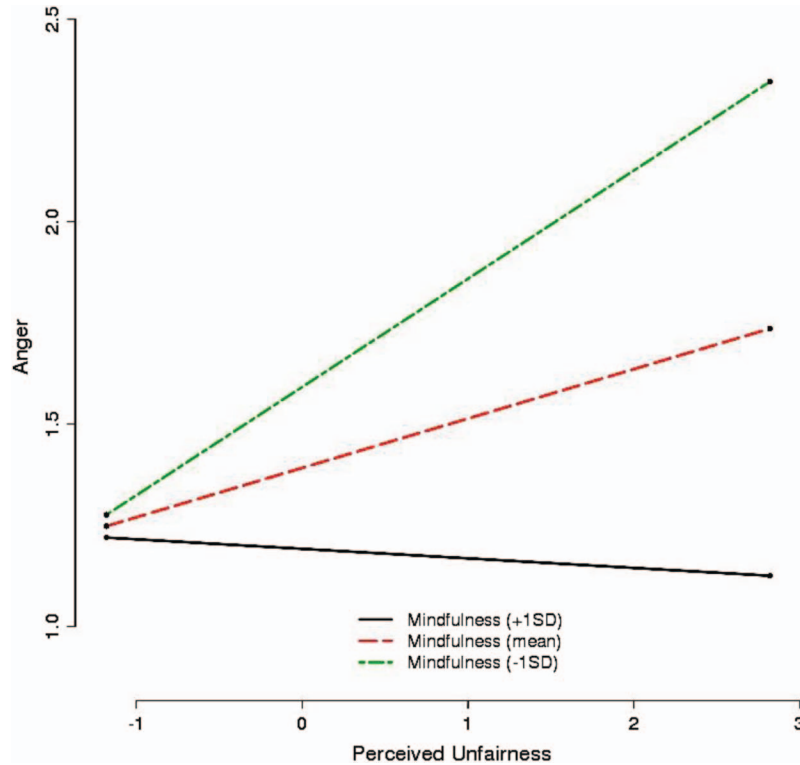


Figure 5. Interactive effects of unfairness and trait mindfulness on anger in Sample 2. Lines are simple slopes plotted at +1 standard deviation, mean, and -1 standard deviation levels of mindfulness on the basis of values of mean-centered predictors. See the online article for the color version of this figure.

skills is efficacious in the short term, consistent with other recent accounts of brief, one-time inductions in novices (Friese, Messner, & Schaffner, 2012; Hafenbrack et al., 2014; Hesser, Molander, Jungermann, & Andersson, 2013; Kiken & Shook, 2011; Wenk-Sormaz, 2005). This helps to reinforce the practical appeal of mindfulness training for employers in search of more immediate and proximal interventions.

Table 10
Results For Conditional Indirect Effects On Reciprocal Deviance (Sample 2)

Variable	Mindfulness	Indirect effect	SE	95% CI	
				LL	UL
Conditional indirect effects: Ruminative thought					
Low mindfulness (-1 SD)	-0.75	0.07	0.03	0.021	0.139
Average mindfulness	-0.02	0.05	0.02	0.013	0.094
High mindfulness (+1 SD)	0.71	0.03	0.02	-0.002	0.070
Conditional indirect effects: Anger					
Low mindfulness (-1 SD)	-0.75	0.07	0.03	0.027	0.145
Average mindfulness	-0.02	0.03	0.02	0.007	0.078
High mindfulness (+1 SD)	0.71	-0.01	0.02	-0.047	0.024

Note. $N = 235$. Listwise deletion was used for missing data. Unstandardized regression coefficients are reported. Bootstrap sample size: 1,000. CI = confidence interval; LL = lower limit; UL = upper limit.

Limitations and Future Directions

Alongside its strengths, the current research had several limitations that future research may address. Consistent with previous work on retaliation (J. Christian et al., 2012; Jones & Skarlicki, 2005; Kremer & Stephens, 1983), the first study prioritized internal validity and provided a strong test using an experimental design that maximized the “can it happen?” question (see Ilgen, 1986). We created exchange relationships using incentives that parallel those in an actual job. We also measured retaliation behaviors that not only had real consequences for the target but also correlated with behavioral intentions. Still, differences between our study and actual organizational settings may limit the external validity of the findings. To address this limitation, we obtained a second, cross-sectional sample of employed adults. We examined natural variation in employee mindfulness, a more distal source of mindful states (Brown & Ryan, 2003), which provided an additional test of our framework. Despite problems with common-method variance associated with cross-sectional self-report designs (McGrath, 1982; Pedhazur & Schmelkin, 1991; Podsakoff, MacKenzie, Lee, & Podsakoff, 2003), the compensatory design tradeoffs of both studies helped to triangulate our findings in ways that a single study could not. Still, future work might extend this research by implementing alternative, more in-depth field designs that capitalize on temporal separation and reduce common-method concerns (e.g., pre-post field intervention, experience sampling methodology).

There are several other ways that research can build on our framework. We focused on retaliation responses to global injustice; however, future studies may uncover possible independent effects of justice dimensions. Although retaliatory behavior appears to be relatively equivocal across types of injustice (Ambrose et al., 2002), researchers might develop theoretical justifications to examine mindfulness in the presence of specific dimensions. For example, researchers interested in interpersonal conflict might be concerned with interactional justice, whereas those examining reward structure might focus on distributive justice. Moreover, examining the impact of transgression severity might help us understand whether mindful states have an upper bound of effectiveness.

Also, the effects reported here might be applied to other precipitating factors for retaliation aside from top-down injustice. For example, coworkers often have conflicts among themselves or in teams and may retaliate against each other. Future studies could explore the role of mindfulness as a mitigating factor when conflicts arise among peers. It is likely that employees in mindful states will be more apt to harness potential benefits of conflict (e.g., Jehn, 1995) and respond more constructively.

Our framework might be applied more generally in future organizational studies on mindfulness and other behaviors that are guided by self-regulatory phenomena. For example, scholars might consider mindfulness in relation to employee safety. Mindfulness may encourage greater attentiveness to on-task behaviors in dangerous situations and increase safety motivation, an important predictor of accidents and injuries (M. Christian, Bradley, Wallace, & Burke, 2009). Given the importance of self-regulation to discretionary behaviors (e.g., M. Christian et al., 2014), mindfulness may also moderate the effects of constructs such as work engagement and self-control on citizenship and withdrawal behavior.

Future research might also examine the impact of mindfulness on proactive workplace outcomes. Moving beyond mindfulness as a factor that mitigates undesirable employee reactions and behaviors, researchers should consider that mindful states may promote positive psychological processes and behaviors. Bradfield and Aquino (1999) argued that identifying factors that discourage vengeful behavior is important but that organizational research should also focus on how to better promote forgiveness at work. Thus, investigating possible effects of mindfulness on outcomes like forgiveness is an important future direction. Moreover, emerging research indicates that mindfulness strengthens the saliency of long-term goals and values, promoting persistent, goal-striving behavior (Brown et al., 2007a, 2007b; Shapiro et al., 2006). Our research supports the association between mindfulness and goal-congruent behavior, even under adverse conditions. Alternatively, some have theorized that the beneficial outcomes of mindfulness may be limited in some contexts (e.g., Dane, 2011). Although our framework and findings support the enhancing effects of mindfulness, future research might address this theoretical tension.

Finally, our framework considers the dual impact of cognitive and emotional mechanisms underlying the injustice–retaliation relationship. It is possible that the two processing modes operate sequentially or interact rather than operating simultaneously, as modeled in the current study. Although additional analyses did not reveal an interactive effect of the two mediators, future studies could consider a possible exacerbating relationship or investigate

their temporal sequence. For example, Wang et al. (2013) found that service employee rumination about customer mistreatment led to increased negative mood the following day.

Our research focused specifically on the role of employee mindfulness as a regulatory buffer for the association between organizational justice and retaliation; however, this study has broader implications for organizational research. Our hope is that scholars expand our current understanding of workplace behavior by integrating work on mindfulness and its regulatory functions.

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