IS CONSISTENTLY UNFAIR BETTER THAN SPORADICALLY FAIR? AN INVESTIGATION OF JUSTICE VARIABILITY AND STRESS

FADEL K. MATTA
University of Georgia

BRENT A. SCOTT
Michigan State University

JASON A. COLQUITT
University of Georgia

JOEL KOOPMAN
Texas A&M University

LIANA G. PASSANTINO
Michigan State University

Research on organizational justice has predominantly focused on between-individual differences in average levels of fair treatment experienced by employees. Recently, researchers have also demonstrated the importance of considering dynamic, within-individual fluctuations in fair treatment experienced by employees over time. Drawing on uncertainty management theory, we merge these two streams of research and introduce the concept of "justice variability," which captures between-person differences in the stability of fairness over time. Contrary to the intuitive notion that more fairness is always better, our work shows that being treated consistently unfairly can be better for employees than being treated fairly sometimes and unfairly at other times. Specifically, in a lab study, variably fair treatment resulted in greater physiological stress than both consistently fair and consistently unfair treatment. In a multilevel, experience-sampling field study, we replicated the positive association between justice variability and stress, and we also showed that justice variability exacerbated the positive, daily relationship between general workplace uncertainty and stress. Moreover, daily stress mediated the effects of justice variability on daily job dissatisfaction and emotional exhaustion. Finally, we showed that supervisors with more self-control tended to be less variable in their fair treatment over time.

"Visually it looks stunning … So stop doubting yourself. Be bold. Pie underneath the pastry looks cooked. Do you hear that on top? Good and crusty. So stop feeling upset with yourself. You've got to start believing in yourself."

"Why is the oven not on? Hello, derp brain! Why is the oven not on? … You donkey!"

"Nothing would make me happier to see you rise and absolutely nail the service tonight, okay?"

"I wish you'd jump in the oven! That would make my life a lot easier!"

(Smith, Weed, & Ramsay, 2005–present)

The above quotes are from celebrity chef Gordon Ramsay. Imagine that Gordon is your boss, and, during a single week of work, he directs the above statements toward you, each on a different day. One

day, he treats you with dignity and respect (what organizational scholars would call interpersonal justice or fairness; Bies & Moag, 1986; Greenberg, 1993), and, the next day, he doesn't. His behavior is erratic and unpredictable, and you can't figure out why. Clearly, it would be better if he always treated you in an interpersonally fair manner. However, would it be better if he were *consistently unfair* toward you? On the one hand, you would know what to expect each day. There would be some level of predictability in your daily interactions, even if they were negative. On the other hand, research has shown that people are better off when their overall level of fair treatment is higher as opposed to lower (for a meta-analysis, see Colquitt et al., 2013). So, even if he treats you fairly one day and unfairly the next, at least your average level of fair treatment is higher compared to the situation in which he always treats you unfairly.

To date, the overwhelming majority of research on organizational justice, or fairness in the workplace (Greenberg, 1990), has taken this latter position. Whether it has focused on between-individual differences in fair treatment (examining what happens when employees are treated more or less fairly than one another) or within-individual differences in fair treatment (examining what happens when a given employee is treated more or less fairly over time), research has generally concluded that the fairer, the better (Colquitt et al., 2013). However, that work has ignored the data points that give rise to those justice levels and whether those data points are consistent or variable—an issue that could matter even controlling for average levels.

As a more operational illustration, consider two employees who rate their experienced fairness on a 1-to-5 scale every day for several weeks, where "1" is *unfair* and "5" is *fair*. One employee may reach an average rating of "3" by providing a "3" every day, whereas another employee may reach an average rating of "3" by providing a "1" on half of the days and a "5" on the remaining half of the days. To date, both cross-sectional (between-individual) and dynamic (within-individual) studies have neglected this potential between-individual variability in justice. Although the literature has assumed that these two experiences are similar (because the employees report identical average levels of fairness), we suggest that they are not. Indeed, as we alluded to at the outset, it may even be the case that an employee who rates her fairness as a "1" every day will be better off than an

employee who averages a "3" as a result of erratic treatment.

With the above in mind, our primary objective is to extend theory and research on organizational justice by introducing the concept of "justice variability," which captures between-person differences in the stability of fairness over time. In introducing this concept, we draw on and extend uncertainty management theory (Lind & van den Bos, 2002; Van den Bos & Lind, 2002), because, as we will argue in this paper, uncertainty management theory not only has implications for average justice effects (as the literature has demonstrated), but it also has implications for justice variability. Specifically, taking uncertainty management theory's core tenet that uncertainty is stressful, we suggest that justice variability represents a specific form of uncertainty (i.e., uncertainty in fairness) that is stressful for employees to experience.

To demonstrate the importance of justice variability, we first manipulate it in a laboratory setting. We compare conditions in which participants receive interpersonal treatment that is highly inconsistent to conditions in which that treatment is consistently fair and consistently unfair. In doing so, we answer the important question of whether consistently unfair treatment is less harmful than variably fair treatment. We then conduct a multilevel, experience-sampling study to both replicate and extend our findings to a real-world setting. In that study, we examine not only whether justice variability is directly associated with daily levels of stress, but also whether it influences the strength of the daily relationship between general workplace uncertainty and stress. We also investigate whether justice variability is associated with important, daily work outcomes (i.e., job dissatisfaction, emotional exhaustion, and counterproductive work behavior [CWB]) through its relationship with stress. In addition, to begin to shed light on the factors that might create variability in justice for employees, we examine supervisor individual differences in self-control (e.g., Tangney, Baumeister, & Boone, 2004) as a predictor of variability in justice. Finally, we conduct supplemental analyses to eliminate justice minimum and maximum as alternative explanations for our results. Figure 1 depicts our hypothesized model.

Our investigation extends the literature on organizational justice in general, and uncertainty management theory in particular, in several ways. First, our laboratory study demonstrates that higher

FIGURE 1
Hypothesized Model
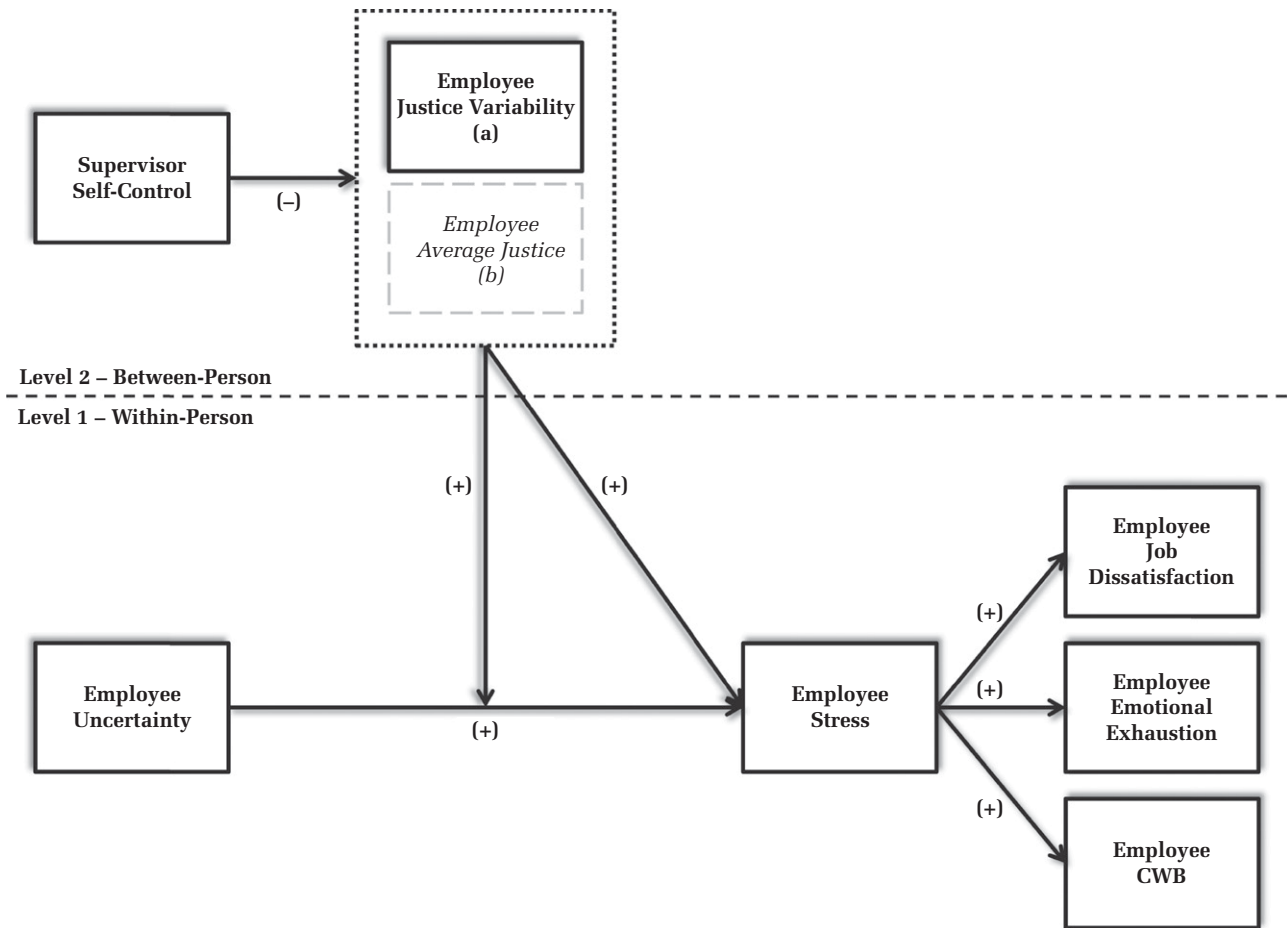
average levels of fair treatment do not necessarily result in desirable outcomes when those average levels of fair treatment are unstable, challenging the assumption in the justice literature that more justice is always better (Brockner, Wiesenfeld, & Diekmann, 2009; Khan, Quratulain, & Bell, 2014; Van den Bos, Bruins, Wilke, & Dronkert, 1999). Second, both studies demonstrate how differences in justice variability experienced by employees over time influence important work outcomes, thereby broadening the scope of uncertainty management theory. Although uncertainty management theory was introduced to explain why employees care about overall levels of fairness, as we elaborate below, its tenets hold particular relevance for justice variability. As a final contribution, we extend the nomological net of our justice variability construct by going to the source of that justice (i.e., the

supervisor), examining how differences in the supervisor's self-control influence dynamic patterns of fair treatment. In sum, these advancements increase the breadth of justice theories and show how both scholars and practitioners can gain a deeper understanding of fairness by considering factors beyond the mean (cf. Fleeson, 2001; Scott, Barnes, & Wagner, 2012).

DEFINING JUSTICE VARIABILITY

Although scholars of organizational behavior and related disciplines (e.g., psychology) historically have focused their attention on individual differences in the overall level of a given construct, it has long been acknowledged that meaningful individual differences also may exist in the variability of a given construct over time (e.g., Murray, 1938). Supporting

this notion, studies on interpersonal trust (Fleeson & Leicht, 2006), self-esteem (e.g., Kernis, Cornell, Sun, Berry, & Harlow, 1993), personality (Fleeson, 2001), and emotional labor (Scott et al., 2012) have shown that individuals differ in how variable they are in each of these constructs, and those differences exhibit predictive validity over and above their average levels. Here, we incorporate the idea of justice variability in order to broaden our understanding of how individuals experience fairness in the workplace.

In accordance with existing research on variability (e.g., Kernis et al., 1993; Scott et al., 2012), as noted above, "justice variability" represents between-person differences in the stability of fairness over time. A few points about our definition should be noted. First, we conceptualize justice variability as a characteristic emanating from the source of fair treatment—typically, employees' supervisors. Therefore, differences in levels of variability between supervisors could arise as a result of either personal factors (e.g., the supervisor's traits) or situational factors (e.g., the organization's policies change). We investigate a supervisor's trait level of self-control as a potential basis for justice variability in order to provide insight into whether justice variability can, in fact, be conceptualized as a relatively stable managerial difference. Similar to within-person fluctuations in interpersonal trust (Fleeson & Leicht, 2006), within-person fluctuations in justice are likely to depend, in large part, on the actions of another individual (i.e., the supervisor). This external locus of control should have implications for how employees might cope with variability in justice relative to variability constructs that have more of an internal locus of control (e.g., self-esteem)—a point to which we return in the general discussion below.

Second, although our focus is on variability in the overall level of fair treatment, that focus is not meant to deny the potential existence (and importance) of variability in the specific dimensions of justice typically examined in the literature (i.e., distributive, procedural, informational, and interpersonal; e.g., Colquitt, 2001). We focus on overall fairness because uncertainty management theory centers on "a global impression of fair treatment, rather than on one or another of the traditional modalities of fairness" (Lind & van den Bos, 2002: 196). Moreover, given that this study is the first (to our knowledge) to examine variability in justice, it is important to first demonstrate the utility of perceptions of variability at a general

level before moving on to a more specific, dimensional level.

That said, consistent with the literature on average justice, it may be possible for supervisors to be variable on some dimensions of justice and not others. Importantly, although research on average justice suggests that employees can experience high average levels on some aspects of justice and not others, research shows that overall fairness "is an important and useful construct—one that warrants attention in parallel to the vast research on justice facets" (Ambrose, Wo, & Griffith, 2015: 109). Indeed, research on organizational justice suggests that (a) individuals "experience justice in a more holistic, Gestalt-like manner" (Ambrose et al., 2015: 110); (b) overall perceptions of fairness are theoretically downstream from the justice dimensions, and are the proximal mechanism by which justice dimensions influence important justice-related outcomes (Colquitt & Rodell, 2015; see also Ambrose & Schminke, 2009; Kim & Leung, 2007); and (c) large-scale differences across the different dimensions are atypical because they have strong positive correlations both at the between-person (e.g., Colquitt et al., 2013) and within-person (e.g., Johnson, Lanaj, & Barnes, 2014) levels of analysis. Thus, beginning with overall fairness and then moving to the study of the dimensions provides the most parsimonious approach to the study of justice variability.

Finally, it should be noted that our conceptualization of justice variability, with its implications of stability versus instability in fair treatment, would appear to share similarities with one of the six criteria typically judged to assess procedural justice. In his seminal work, Leventhal (1980) introduced consistency (across persons and time) as one of six rules for evaluating procedural fairness. Strictly speaking, however, Leventhal's (1980) notion of consistency is confined to procedures surrounding allocation decisions, and, although justice variability may be the result of inconsistency in procedures governing such decisions, it may just as easily arise from inconsistency in other forms of fair treatment, such as being respectful, truthful, unbiased, and equitable (Adams, 1965; Bies & Moag, 1986; Leventhal, 1980). For example, although a supervisor could consistently use the same procedure for determining pay raises over time, justice variability may arise because the supervisor is inconsistent in the respect that he/she provides to a subordinate in his/her daily interactions. Thus, the construct of justice variability is much broader than Leventhal's (1980) procedural rule of consistency.

Having defined the central construct of our investigation, we now develop specific hypotheses resulting from the integration of justice variability into the tenets of uncertainty management theory.

STUDY 1: THEORY AND HYPOTHESES

Justice Variability and Stress

Uncertainty management theory is based upon the notion that employees want to "feel certain about their world and their place within it" (Van den Bos & Lind, 2002: 5). Within the theory, "uncertainty" is defined very broadly, occurring when individuals possess an inability to predict the future and/or experience inconsistency among cognitions, experiences, or behaviors (Van den Bos & Lind, 2002). Considering that evaluations of fairness are in response to some event or experience, we suggest that justice variability represents a specific form of uncertainty; namely, uncertainty in fair treatment. Indeed, given that it is extremely important for individuals to "try to anticipate how fairly they will be treated in the future" (Jones & Skarlicki, 2013: 5), inconsistency in fair treatment—and thus being unable to accurately predict future fair treatment—is likely to be a salient source of uncertainty for employees.

Lind and van den Bos's (2002) theorizing focused largely on stress as a central outcome of uncertainty, with "stress" defined as an individual's response to a situation in which there is something at stake for the individual and the demands of the environment tax or exceed the individual's resources and capacities (LePine, LePine, & Jackson, 2004). Specifically, uncertainty elicits feelings of reduced control over one's life, which are aversive and stressful to experience (Van den Bos & Lind, 2002). Indeed, the notion that a lack of control is stressful is featured prominently not only in uncertainty management theory, but also in other models of stress (for a review, see Sonnentag & Frese, 2003). Numerous studies provide empirical evidence for the linkage between uncertainty and stress. In the laboratory, for example, research has shown that anxiety increases when individuals receive unpredictable shocks as opposed to immediate, expected ones (e.g., Badia, McBane, Suter, & Lewis, 1966; Lanzetta & Driscoll, 1966; Pervin, 1963). Similarly, in the field, research has demonstrated that job-related uncertainty is associated with stress (Bordia, Hobman, Jones, Gallois, & Callan, 2004; Mantler, Matejicek, Matheson, & Anisman, 2005; O'Driscoll & Beehr, 1994). These studies are consistent with meta-analytic estimates linking lack of control, which is felt in situations of uncertainty, with stress-related physiological symptoms such as backaches, headaches, sleep disturbances, and gastrointestinal problems (Nixon, Mazzola, Bauer, Krueger, & Spector, 2011).

As such, we suggest that justice variability is directly associated with stress (over and above average levels of justice) because of the perceived lack of control over the important resources that accompany fair treatment (e.g., pay, voice in decision making, information, and respectful treatment). Importantly, fair treatment that is variable is not only likely to be more uncertain and less predictable than fair treatment that is consistent, but it is also likely to be more uncertain and less predictable than *unfair* treatment that is consistent. In this latter situation, as noted at the outset, there is likely at least some comfort in knowing what to expect from one interaction to the next. Accordingly, employees who experience variably fair treatment on the part of their supervisor will be unable to achieve stability in their perceptions of fairness, allowing discomfort caused by uncertainty to persist. This notion that uncertainty in fairness is stressful sets the stage for circumstances in which variably fair treatment is more stressful to employees than both consistently fair and consistently unfair treatment, because consistency in treatment provides a level of predictability for employees in repeated interactions with their supervisors.

In addition to uncertainty management theory, the above arguments are also in line with fairness heuristic theory (a precursor to uncertainty management theory) which posited that (a) employees rely on fairness heuristics to ensure that fairness judgments are available when making decisions about whether to cooperate or behave in self-interested ways, (b) fairness heuristics are most useful when heuristics are stable, and (c) employees desire not to revisit fairness heuristics because reexaminations consume valuable cognitive resources (Lind, 2001). Indeed, Lind (2001) suggested that, despite the desire to not revisit fairness heuristics, they are revisited when fairness information is highly discrepant with previous fairness judgments. Such fairness-related discrepant events are likely to occur regularly when justice variability is high, taxing employees' resources as they attempt to make sense of why unexpected fairness-related events occur.

Hypothesis 1. Justice variability is positively associated with stress.

STUDY 1: METHOD

The goal of Study 1 was to demonstrate the importance of justice variability in a controlled laboratory environment before building a larger uncertainty management model of justice variability to test in the field. To this end, we designed a laboratory study in which participants were randomly assigned to one of three fair treatment conditions (i.e., always fair, always unfair, or variably fair), and participants' heart rates were measured over the course of the task to provide a physiological indicator of stress.

Participants

Participants were 202 junior- and senior-level undergraduate students enrolled in a management course at a large Midwestern university. Voluntary participation in the study was one option for students to complete a research credit requirement for the course. Additionally, all participants were eligible for cash prizes ($25) on the basis of their individual task performance.

Description of Task

During the study, participants engaged in a stock price simulation that has been used in several past studies (e.g., DeShon & Alexander, 1996; Drach-Zahavy & Erez, 2002; Earley, Connolly, & Ekegren, 1989). We chose this task for two main reasons. First, this stock price simulation could be configured such that it would be unfeasible for participants to accurately determine their own overall performance during the task. This was important because the supervisor fair and unfair manipulations needed to be realistic regardless of whether participants objectively performed well or poorly on the task. Second, the simulation was face valid to the participants, as they were enrolled in business classes and were informed that the study was focused on the effects of stock pricing on stress.

During the simulation, participants made 180 estimations of a hypothetical company's stock price based upon three potential indicators of firm performance—growth, advertising, and market share. For each trial (i.e., each estimation), each indicator of firm performance was drawn from a uniform distribution that varied from 20 to 180 ($M = 100$). The correct price of the stock was determined

by a linear regression of the three performance indicators and an error term. The magnitude of the error term was normally distributed and was set to account for 10% of the variation in the stock price (on average). The correct stock prices were scaled to range from $5 to $200 in each period ($M = 100$, $SD = 40$). After each trial, participants were presented with their estimate, the correct price, and the difference between those two values. Participants were given 20 seconds to view the results before beginning the next trial. To ensure complexity and ambiguity in accurately estimating both the stock price and individual performance, the linear regression of the three performance indicators was altered after 90 trials. Overall, the speed with which participants had to formulate their stock estimations, coupled with the inclusion of the random error term in the regression equation, resulted in a challenging task in which participants could not easily gauge how well they were performing, particularly relative to other participants.[1]

Procedure

Participants initially entered a computer lab and were asked to complete a brief (approximately 20-minute) survey for another unrelated study. After completing the survey, half of the participants were asked to remain in the original computer lab, and the other half of the participants were asked to follow a researcher to another computer lab in the building. In each of the respective rooms, participants were first trained to use the heart rate monitors and then were trained on the details of the stock pricing simulation task.

Just prior to beginning the exercise, participants in each room were informed that the participants in the other room would serve as their supervisors for the exercise. Specifically, the participants were told that their supervisor would provide them with 12 rounds (after every 15 performance trials) of individualized feedback over the course of the simulation through a pop-up instant messenger. However, although the participants were told that they had a supervisor in

---

[1] Despite the task being challenging, our instructions (available upon request from the first author) made it clear that the task involved skill (rather than luck), and we informed participants that they would be paid based on their estimation accuracy. Moreover, prior studies (e.g., DeShon & Alexander, 1996; Drach-Zahavy & Erez, 2002; Earley et al., 1989) have utilized this task to assess skill.

the other room, the supervisor feedback was actually generated by the simulation. The computer simulation randomly assigned participants into one of three conditions—always fair supervisor statements, always unfair supervisor statements, or variably fair supervisor statements (i.e., alternating fair and unfair supervisor statements in order to maximize justice variability).

Once participants began the simulation, the task paused after every 15 performance trials. At each pause, participants received the computer-generated fair/unfair supervisor statements, and they were directed to measure their heart rate before beginning the next 15 performance trials. At the completion of the study, participants completed a survey assessing the overall fairness of the treatment that they received from their supervisor, what they thought the study was about, and the effort they expended on the task.

Prior to analyzing the data, we conducted a variety of quality checks to ensure the validity and legitimacy of the collected data. Specifically, we removed participants who failed to measure their heart rate on at least 8 of the 12 possible measurements (5 participants). In addition, based on the answers to the open-text questions (what participants thought the study was about and their effort on the task), we removed participants who guessed that the supervisor was fictitious and/or who indicated that they did not try on the task (36 participants).[2] These quality

checks resulted in an effective sample size of 161 participants.

Manipulations

As noted at the outset, although our focus was on overall perceptions of fairness in accordance with uncertainty management theory, it was necessary to manipulate justice via one of the dimensions. Considering that our context focused on repeated electronic statements made by supervisors over a short period of time, we felt it would be most appropriate to manipulate interpersonal rules of justice (i.e., respect and dignity; Greenberg, 1993). Indeed, research has indicated that, relative to other dimensions of justice (i.e., distributive, procedural, and informational), interpersonal justice is likely to vary the most over short durations (Scott, Garza, Conlon, & Kim, 2014). Moreover, Bies (2015) noted that interpersonal justice plays an important role in the delivery of feedback and evaluation—including the delivery of criticism, performance evaluation, and performance appraisals. Thus, we manipulated interpersonal rules of justice to enhance experimental realism and believability given the context.

Prior to Study 1, we created an initial pool of 18 interpersonally fair and 18 interpersonally unfair statements that would be fitting for our context. We then conducted a brief pilot study in which the fair and unfair statements were provided to 50 employed participants from Amazon's Mechanical Turk (Buhrmester, Kwang, & Gosling, 2011) who rated the fairness of each statement (1 = *to a very small extent* to 5 = *to a very large extent*) using the Colquitt, Long, Rodell, and Halvorsen-Ganepola (2015) 3-item overall fairness scale (α = .98). We selected 12 of the 18 fair statements and 12 of the 18 unfair statements to use in Study 1, based upon the overall fairness ratings as well as their face validity for the task. The 12 fair statements used in Study 1 averaged an overall fairness score of 4.33 (*SD* = .55), the 12 unfair statements selected for the study averaged an overall fairness score of 1.30 (*SD* = .36), and a paired-samples *t*-test demonstrated that the difference in the means was significant, $t(43) = 28.96$, $p < .01$. Thus, the pilot study indicated that the 12 fair statements successfully manipulated fairness, and the 12 unfair statements successfully manipulated unfairness. Examples of the fair statements included "Thanks for your effort during the last round," "All I can say is that I'm glad I am working with you," and "It's

---

[2] As suggested by an anonymous reviewer, we reanalyzed our data including the 36 participants who guessed the supervisor was fictitious and/or claimed they did not try on the task. Although the pattern of results (in terms of effect sizes) was identical, the significance level in contrasting the variably fair condition with the always fair ($p = .08$) and always unfair ($p = .08$) conditions were both marginally significant rather than significant at the $p < .05$ level. The likely explanation for this slight variation in results is that hypothesis guessing within experimental conditions is a threat to the validity of putative causes and effects (Cook & Campbell, 1979). According to Cook and Campbell (1979: 66), hypothesis guessing within experimental conditions "may not only obscure true treatment effects, but also result in effects of diminished interpretability." Interestingly, within the always fair condition, we found significant differences in the heart rate of the participants who guessed the supervisor was fictitious and/or claimed they did not try on the task and the remaining participants, suggesting the potential bias and threat to validity of including those participants in our data that was voiced by Cook and Campbell (1979). For those reasons, we report the results with the 36 participants removed.

great to work with a motivated person." Examples of the unfair statements included "You should be ashamed of your efforts on that last round," "All I can say is that I wish I was working with someone else," and "It sucks to work with an unmotivated person."[3]

Participants in the always fair condition were presented with one fair statement after each of the 12 rounds (i.e., after 15 performance trials). Participants in the always unfair condition were presented with one unfair statement after each of the 12 rounds. Participants in the variably fair condition received alternating statements that were fair one round and unfair the next. The variably fair condition was counterbalanced so that half of the participants received fair statements in the first round and unfair statements in the last round, and the other half of the participants received unfair statements in the first round and fair statements in the last round (there were no significant differences in ratings of fairness between the counterbalanced groups). To avoid any ordering effects, each fair/unfair statement was always presented at the same round of the simulation across all three conditions.

Measures

Fairness manipulation check. At the completion of the task, we measured participants' perceptions of overall fairness using the above-mentioned scale developed by Colquitt et al. (2015).[4] Participants were asked to indicate the extent to which their supervisor's feedback during the task was fair (1 = *to a very small extent* to 5 = *to a very large extent*). The items from this three-item scale were "During the simulation, did your supervisor act fairly?," "During the simulation, did your supervisor do things that were fair?," and "During the simulation, did your supervisor behave like a fair person would?" Coefficient α for this scale was .98.

Heart rate and standard deviation of heart rates. To operationalize physiological stress, heart rate was measured using Omron HEM-637 automated heart rate monitors that have been used in several past studies (e.g., Dimotakis, Conlon, & Ilies, 2012; Ilies, Dimotakis, & De Pater, 2010; Jordan, Sivanathan, & Galinsky, 2011). Heart rate is commonly used as a physiological indicator of stress (e.g., Beehr & Newman, 1978; Jordan et al., 2011; Perrewe, Zellars, Ferris, Rossi, Kacmar, & Ralston, 2004) because exposure to psychological stressors activates an adrenomedullary response that is "characterized by release into the bloodstream of epinephrine and norepinephrine and increases in peripheral responses such as heart rate and blood pressure" (Ganster, Fox, & Dwyer, 2001: 956). We assessed heart rate immediately after each of the 12 supervisor fair/unfair statements because adrenomedullary hormones dissipate quickly. We then averaged the heart rate assessments from Rounds 4 through 12 for each participant (i.e., rounds where consistency/variability had manifested to participants). The results are qualitatively identical when using averaged heart rate assessments from all 12 rounds. In addition to heart rate, heart rate variability (HRV) has also been used as a physiological indicator of stress; "HRV refers to the interval between heart beats, which varies from beat to beat" (Geisler & Schröder-Abé, 2015: 555). Unfortunately, our devices did not capture the data necessary to accurately estimate HRV because "HRV measures are derived by estimating the variation among a set of temporally ordered interbeat intervals. Obtaining a series of interbeat intervals requires a continuous measure of heart rate,

---

[3] An anonymous reviewer questioned whether these statements could reflect overall positive versus negative feedback about participant performance. To address this, we conducted a supplemental study using 100 employed participants from Amazon's Mechanical Turk (Buhrmester et al., 2011) to test whether perceptions of fairness and interpersonal justice for each of the 12 fair messages and 12 unfair messages varied depending upon whether the participants were told that they were performing well, performing poorly, or were uncertain about how well they were performing. In all three conditions (i.e., performing well, performing poorly, or uncertain about how well they were performing), participants viewed the fair statements as fair and unfair statements as unfair. Moreover, there were no significant differences between conditions (i.e., performing well, performing poorly, or uncertain about how well they were performing) in perceptions of fairness for the fair and unfair statements. Detailed results are available upon request from the first author. In sum, although the statements could be interpreted as performance feedback, participants found the statements to be fair/respectful (unfair/disrespectful) regardless of whether performance was high, low, or uncertain.

---

[4] Although our theorizing focuses on overall fairness, we also assessed interpersonal justice and interpersonal injustice using the Colquitt et al. (2015) scales. The results for the manipulation checks for all three conditions using the interpersonal justice scale (and, conversely, the interpersonal injustice scale) were qualitatively identical to the overall fairness results presented in Table 1.

typically electrocardiography (ECG)" (Appelhans & Luecken, 2006: 231). Although taking the standard deviation of heart rates (i.e., the standard deviation of beats per minute across the simulation) does not fully capture the HRV construct described in the past literature, we also used the standard deviation of heart rates as a second potential indicator of physiological stress.[5]

STUDY 1: RESULTS AND DISCUSSION

Manipulation Check Study

Although we ideally would have had participants complete items on the fairness of their treatment after each of the 12 supervisor statements in the main study, we were concerned that doing so would disengage them from the stock pricing task and would arouse suspicion about the intent of the study. For example, we felt the integrity of the study would be jeopardized if we informed participants that the study was about the effects of stock pricing on stress but surveyed them about the fairness of the treatment they received from their supervisor approximately every five minutes. Therefore, to serve as manipulation checks, we conducted a supplemental study using 99 employed participants from Amazon's Mechanical Turk (Buhrmester et al., 2011) to determine whether each of our three manipulated conditions (i.e., always fair, always unfair, or variably fair) influenced justice variability, average justice, and fairness-related uncertainty in the predicted directions.

In this supplemental study, participants imagined they were engaged in the same 12-round stock pricing exercise used in the main study. However, following each supervisor message, instead of assessing heart rate, participants rated the overall fairness of the treatment received from their hypothetical supervisor, using the Colquitt et al. (2015) 3-item overall fairness scale ($\alpha = .96$).[6] Following previous research on variability constructs (e.g., Eid & Diener, 1999; Fleeson, 2001; Kernis et al., 1993; Scott et al., 2012), we operationalized justice variability as each participant's standard deviation in overall fairness over the 12 rounds and average

justice as the mean level of overall fairness over the 12 rounds. We also assessed fairness-related uncertainty at the conclusion of the 12 rounds by adapting the 4-item Colquitt, LePine, Piccolo, Zapata, and Rich (2012) uncertainty scale to focus on fairness-related uncertainty (e.g., "there was a lot of uncertainty in how fairly you were being treated," $\alpha = .94$).

Means and standard deviations for the Manipulation Check Study by condition appear in italicized text in Table 1. We conducted one-way analyses of variance (ANOVAs) to test whether average justice, justice variability, and fairness-related uncertainty varied by condition. These analyses revealed significant mean differences on average justice ($F = 250.73$, $p < .01$), justice variability ($F = 128.27$, $p < .01$), and fairness-related uncertainty ($F = 76.65$, $p < .01$) by condition. Therefore, we proceeded with our planned comparisons. Planned comparisons (see Table 1) showed that participants in the always fair condition ($M = 4.29$, $SD = .57$) viewed their supervisor feedback as more just than participants in the always unfair condition ($M = 1.40$, $SD = .50$) and participants in the variably fair condition ($M = 3.17$, $SD = .52$). Additionally, participants in the variably fair condition viewed their supervisor feedback as more just than participants in the always unfair condition. Importantly, planned comparisons also showed that participants in the variably fair condition experienced more justice variability ($M = 1.68$, $SD = .40$) than participants in the always fair ($M = .42$, $SD = .33$) and always unfair ($M = .42$, $SD = .38$) conditions. Finally, planned comparisons showed that participants in the variably fair condition perceived more fairness-related uncertainty ($M = 3.86$, $SD = .93$) than participants in the always fair ($M = 1.48$, $SD = .73$) and always unfair ($M = 1.63$, $SD = .92$) conditions. As such, we turn to the results of the main study.

Main Study

Means and standard deviations by condition appear in Table 1. We conducted a one-way ANOVA to test whether ratings of overall fairness varied by condition. This analysis revealed significant mean differences on ratings of overall fairness by condition ($F = 78.75$, $p < .01$). Therefore, we proceeded with our planned comparisons for overall fairness. Consistent with the overall level of fairness manipulated in the three conditions, planned comparisons (see Table 1) showed that, at the conclusion of the study, participants in the always fair condition

---

[5] We thank an anonymous reviewer for this suggestion.

[6] Although our theorizing focuses on overall fairness, we also assessed interpersonal justice and interpersonal injustice using the Colquitt et al. (2015) scales. The Manipulation Check Study results for all three conditions using the interpersonal justice scale (and, conversely, the interpersonal injustice scale) were qualitatively identical to the overall fairness results presented in Table 1.

TABLE 1
Manipulation Check Study and Study 1 Means and Standard Deviations by Condition

Variable	1. All Fair Condition		2. All Unfair Condition		3. Variably Fair Condition		Planned Comparisons		
	M	SD	M	SD	M	SD	1 vs. 2	1 vs. 3	2 vs. 3
Average Justice (MC Study)	*4.29*	*.57*	*1.40*	*.50*	*3.17*	*.52*	*2.89**	*1.12**	*−1.77**
Justice Variability (MC Study)	*.42*	*.33*	*.42*	*.38*	*1.68*	*.40*	*.00*	*−1.26**	*−1.26**
Fairness Uncertainty (MC Study)	*1.48*	*.73*	*1.63*	*.92*	*3.86*	*.93*	*−.15*	*−2.38**	*−2.23**
Overall Fairness	3.85	.73	1.83	1.00	2.43	.90	2.02*	1.42*	−.61*
Heart Rate	72.28	11.45	72.37	11.06	77.15	11.95	−.10	−4.88*	−4.78*
Heart Rate Standard Deviation	4.32	2.18	4.73	2.16	5.59	4.17	−.41	−1.27*	−.86

Notes: $n = 161$ for Study 1 ($n = 61$ for all fair, $n = 50$ for all unfair, $n = 50$ for variably fair); $n = 99$ for Manipulation Check (MC) Study ($n = 33$ for all fair, $n = 33$ for all unfair, $n = 33$ for variably fair). MC Study results are italicized. Variance in cell sizes for the main study occurred due to the random assignment procedure conducted by the computer simulation. Heart rate is the average heart rate across measurements 4–12 during the task.

* $p < .05$

($M = 3.85$, $SD = .73$) viewed their supervisor feedback as more fair than participants in the always unfair condition ($M = 1.83$, $SD = 1.00$) and participants in the variably fair condition ($M = 2.43$, $SD = .90$). Additionally, participants in the variably fair condition viewed their supervisor feedback as more fair than participants in the always unfair condition.

Hypothesis 1 predicted that justice variability is positively associated with stress. To test this hypothesis, we first conducted a one-way ANOVA to test whether heart rate and standard deviation of heart rates varied between the variably fair condition and the consistent conditions (i.e., the always fair and always unfair conditions).[7] This analysis revealed significant mean differences on heart rate ($F = 6.14$, $p < .05$) and standard deviation of heart rates ($F = 4.72$, $p < .05$) between the variably fair condition and the consistent conditions. Therefore, we proceeded with planned comparisons between the variably fair condition and each of the consistent conditions (i.e., the always fair and always unfair conditions). Beginning with heart rate (i.e., our primary indicator of physiological stress), consistent with Hypothesis 1, planned comparisons (see Table 1) showed that participant heart rate was higher in the variably fair condition ($M = 77.15$,

[7] We collapsed across the two consistent conditions in the one-way ANOVA because our hypothesis centered on the effects of variably fair treatment versus consistent treatment (regardless of the overall level of fairness), and no differences were expected across the two consistent conditions (i.e., the always fair and always unfair conditions).

$SD = 11.95$) than participant heart rate in the always fair condition ($M = 72.28$, $SD = 11.45$). Importantly, participant heart rate was also higher in the variably fair condition than in the always unfair condition ($M = 72.37$, $SD = 11.06$). Turning to the results for standard deviation of heart rates (i.e., a second potential indicator of physiological stress), the variably fair condition ($M = 5.59$, $SD = 4.17$) resulted in a larger standard deviation of heart rates than the always fair condition ($M = 4.32$, $SD = 2.18$). Although the variably fair condition had a larger standard deviation of heart rates than the always unfair condition ($M = 4.73$, $SD = 2.16$), that difference was not statistically significant.

When considering these results in their totality, contrary to what one would expect based on the overall levels of fairness, being treated consistently unfairly was less stressful than being treated variably fairly. Interestingly, this result held even though average justice was both objectively and subjectively higher when participants were treated variably in comparison to when participants were always treated unfairly. These results demonstrate that, in some situations, justice variability can be equally (if not more) important than the overall level of fair treatment. Consequently, they show that focusing on justice levels while ignoring variability provides an incomplete picture of the phenomenon of workplace fairness. In addition, they challenge the assumption in the justice literature that more justice is always better (Brockner et al., 2009; Khan et al., 2014; Van den Bos et al., 1999).

Having established the importance of justice variability for employee stress, we next build a more comprehensive uncertainty management model of justice variability and report a test of that model

using multilevel experience-sampling data obtained in a field setting.

STUDY 2: THEORY AND HYPOTHESES

Justice Variability, General Workplace Uncertainty, and Stress

In addition to justice variability directly influencing stress (as predicted in Hypothesis 1), it is also likely to play an important moderating role in the relationship between general workplace uncertainty and stress (see Figure 1). On this point, as Lind and van den Bos (2002: 181) stated, "fairness and uncertainty are so closely linked that it is in fact impossible to understand the role of one of these concepts in organizational psychology without reference to the other." A central tenet of uncertainty management theory is that, when faced with general workplace uncertainty, individuals look to the fairness of their treatment as a means of managing and coping with that uncertainty. In the words of the theory's authors, "people use fairness to manage their reactions to uncertainty" (Lind & van den Bos, 2002: 216).

Although uncertainty management theory posits that individuals utilize judgments of fairness to manage forms of general workplace uncertainty they face, the empirical studies stemming from uncertainty management theory to date have centered exclusively on average justice effects. Specifically, this literature demonstrates that average justice buffers the stressful effects of general workplace uncertainty (Lind & van den Bos, 2002; Van den Bos, 2001; Van den Bos & Lind, 2002; Van den Bos & Miedema, 2000). Yet this raises a critical question: What if those judgments of fairness themselves are uncertain?

As it turns out, uncertainty management theory provides a potential answer to this question. According to Lind and van den Bos (2002: 199):

> [people] need certainty in their fairness judgments to manage external uncertainty. It would do little good, after all, to try to manage one's concerns about uncertainty in the environment if one had no certainty about one's fairness judgment. To do so would be simply to exchange one uncertainty for another.

Therefore, a close inspection of uncertainty management theory reveals that justice variability is a potentially important factor affecting how individuals react to general workplace uncertainty.

Applied to the current investigation, it follows that fair treatment that is variable, fluctuating from one point in time to another, should be less predictable compared to fair treatment that is consistent over time. Consequently, justice variability should do little to manage general workplace uncertainty because it generates a new, specific form of uncertainty (i.e., uncertainty in fair treatment) that is stressful in and of itself to experience. Thus, in addition to increasing levels of stress directly (as we proposed in Hypothesis 1), we expect that justice variability is likely to exacerbate the relationship between feelings of general workplace uncertainty and stress (see Figure 1). Again, we expect that these effects will hold controlling for the average level of fairness. That is, given two employees with the same average level of fairness over time, the employee whose fair treatment is variable will be worse off than the employee whose fair treatment is stable.

> *Hypothesis 2. Justice variability moderates the relationship between employee general workplace uncertainty and employee stress, such that the positive relationship is weaker for employees with low justice variability and stronger for those with high justice variability.*

Downstream Outcomes of Justice Variability, General Workplace Uncertainty, and Stress

Although stress is the central outcome of uncertainty management theory (Lind & van den Bos, 2002), research in the uncertainty management literature has extended the theory to other critical attitudinal, health-related, and behavioral outcomes. In this manuscript, we focus on one downstream outcome from each of these categories in order to further demonstrate the importance of justice variability. Specifically, we highlight job (dis)satisfaction, emotional exhaustion, and CWB, as these three outcomes play an important role in both the uncertainty management and stress literatures. We define "job dissatisfaction" as the unpleasant or negative emotional state resulting from an appraisal of one's job or job experiences (Locke, 1976), "emotional exhaustion" as "the feeling of lacking energy and being depleted" (Grant, Berg, & Cable, 2014: 1203), and CWB as "volitional employee behavior that harms, or at least is intended to harm, the legitimate interests of an organization" (Dalal, Lam, Weiss, Welch, & Hulin, 2009: 1052).

Uncertainty management theory has been applied to predict job dissatisfaction (e.g., Desai, Sondak, & Diekmann, 2011; Diekmann, Barsness, & Sondak, 2004), emotional exhaustion (e.g., Schumacher, Schreurs, Van Emmerik, & De Witte, 2016), and CWB (e.g., Thau, Aquino, & Wittek, 2007; Thau,

Bennett, Mitchell, & Marrs, 2009). For instance, Mayer, Thau, Workman, Van Dijke, and De Cremer (2012) posited that employees experiencing uncertainty not only pay more attention to how they are treated by their leaders, but they also are more likely to reciprocate that uncertainty with engagement in deviant behavior.

Due to the important and proximal influence that stress has on job dissatisfaction, emotional exhaustion, and CWB, the main and interactive effects of justice variability are likely to be indirectly associated with these outcomes via stress. Specifically, work stress hinders employees' abilities to attain personal and professional goals at work (LePine, Podsakoff, & LePine, 2005), thus increasing feelings of job dissatisfaction (Eatough, Chang, Miloslavic, & Johnson, 2011). Work stress also makes the workplace more demanding and depletes employee resources, which elicits feelings of emotional exhaustion (Leiter & Maslach, 1988). Finally, work stress triggers negative emotions, evokes retaliatory tendencies, and depletes self-control resources, which increase the likelihood of engagement in CWB (Meier & Spector, 2013). Consistent with these arguments, work stress has been meta-analytically linked to job dissatisfaction (e.g., Eatough et al., 2011), emotional exhaustion (e.g., Lee & Ashforth, 1996), and CWB (e.g., Hershcovis et al., 2007). As such, we propose the following:

Hypothesis 3. There are positive indirect effects of justice variability on (a) job dissatisfaction, (b) emotional exhaustion, and (c) CWB via stress.

Hypothesis 4. Justice variability moderates the indirect effects of general workplace uncertainty on (a) job dissatisfaction, (b) emotional exhaustion, and (c) CWB via stress, such that the indirect effects are weaker for employees with low justice variability and stronger for those with high justice variability.

Supervisor Self-Control as a Predictor of Justice Variability

If justice variability is, in fact, systematic and predictive of important outcomes such as stress, then it is also important to understand how such variability arises in the first place. Indeed, scholars have begun to identify antecedents of managers' enactment of average levels of justice in order to better reveal the psychology of the actor (Scott, Colquitt, & Paddock, 2009). Here, we introduce supervisor self-control as a dispositional predictor of justice variability to ascertain whether justice variability can be construed as an individual difference between managers.

"Self-control" is defined as the level of "an individual's restraint from indulging in negative action tendencies that might further complicate or damage the situation" (Brown, Westbrook, & Challagalla, 2005: 795). Self-control is thought to have developed via an evolutionary process whereby individuals needed to coexist with others and control primal and socially undesirable behaviors (Lian, Brown, Ferris, Liang, Keeping, & Morrison, 2014). There are reasons to expect that a supervisor's level of self-control will impact justice variability. For example, individuals low in self-control lack the ability to follow normative rules and to refrain from indulging in negative, impulsive action tendencies, such as angry outbursts, hurtful remarks, and aggressive behaviors (Brown et al., 2005; Tangney et al., 2004). In contrast, high self-control is characterized by "freedom from impulsivity" (Sarchione, Cuttler, Muchinsky, & Nelson-Gray, 1998: 905). Considering that individuals form their perceptions of fairness based on the degree to which managers adhere to the various rules associated with justice (Scott et al., 2009), supervisors who possess higher levels of self-control should be able to more consistently regulate their adherence to those rules. More consistent adherence and lack of impulsivity should result in less variability in fair treatment over time. Indeed, to the extent that violations of justice occur, in part, because of negative emotions experienced by managers (Scott et al., 2014), the ability to exert control over the action tendencies that accompany those emotions should allow those managers to provide more stable, consistent treatment over time.

There is some indirect evidence to support the above assertions. For example, Zabelina, Robinson, and Anicha (2007) demonstrated that individuals high in self-control were more consistent in their personality traits during their daily lives, and Layton and Muraven (2014) demonstrated that self-control was associated with greater emotional stability. Overall, based on the above, we predict the following relationship involving self-control:

Hypothesis 5. Supervisor self-control is negatively associated with justice variability.

Combining the arguments from Hypotheses 1 and 5, if supervisor self-control is a dispositional predictor

of justice variability, and uncertainty management theory suggests that stress is the central outcome of uncertainty (Lind & van den Bos, 2002), it follows that justice variability is a key mechanism by which supervisor self-control is associated with employee stress. Supervisors low in self-control should be less likely to consistently regulate their adherence to justice rules (Tangney et al., 2004), and that inconsistency should be a salient source of uncertainty for employees (Lind & van den Bos, 2002), eliciting a lack of control and feelings of stress (Van den Bos & Lind, 2002). As such, we predict the following:

Hypothesis 6. There is a negative indirect effect of supervisor self-control on stress via justice variability.

STUDY 2: METHODS

Sample and Procedure

Similar to other research assessing variability constructs (e.g., Scott et al., 2012), we conducted a multilevel experience-sampling study in the field. In exchange for extra credit, undergraduate business students at a large Midwestern university recruited full-time, working adults (i.e., working a minimum of 40 hours per week) to participate in the study. Each potential participant was initially sent an e-mail that explained the purpose and requirements of the voluntary study. This e-mail also included a link to a one-time survey that enrolled employees into the daily diary study, assessed individual differences, and requested contact information for their immediate supervisor. Supervisors were then e-mailed a survey by the researchers containing the measure of self-control. In exchange for participation, employees were entered into a random drawing for twenty $100 prizes (one entry for completion of the one-time survey and one entry for completion of each daily survey), and supervisors were entered into a separate random drawing for ten $100 prizes (one entry for completion of the short supervisor survey). A total of 150 employees completed the one-time survey and agreed to participate in the study. A total of 129 supervisors (response rate = 86.0%) completed the brief supervisor questionnaire.

The next stage of the study entailed employees completing one daily survey each working day over a three-week period. Employees were e-mailed a personalized hyperlink to the daily survey near the end of their workday and were asked to complete the survey just prior to leaving the office. The links were active for a 2-hour window surrounding the time they indicated finishing their workday in their one-time survey (1 hour prior to their average workday completion time to 1 hour after). Eight participants failed to take part in the daily study, and 14 were unable to continue participation for personal or professional reasons. Additionally, 9 of the remaining participants did not have a matching supervisor survey. Of the remaining 119 participants, we obtained a total of 1,175 daily surveys out of a possible total of 1,785, which resulted in a response rate of 65.8%.

Considering that our research question centered on supervisor justice variability, we removed all daily observations from the analysis where participants reported not interacting with their supervisor. We also excluded participants who interacted with their supervisor on fewer than 5 occasions, in order to provide enough observations for justice variability to potentially manifest. Thus, the final sample used in the analysis included 97 employees who provided 995 daily surveys (response rate = 68.4%). Our sample included employee–supervisor dyads from the tourism (9.3%), education (7.2%), real estate/construction (8.2%), government (4.1%), health care (20.6%), technology (11.3%), retail/distribution (8.2%), financial (15.5%), and manufacturing (15.5%) industries. The average employee tenure with their supervisor was 4.17 years ($SD = 4.35$ years), and the average employee tenure with their organization was 9.76 years ($SD = 9.47$ years). For employees, 54.0% of the sample was female (46.0% was male), and the average age was 40.24 years ($SD = 13.75$). For supervisors, 41.5% of the sample was female (58.5% was male), and the average age was 47.22 years ($SD = 10.93$).

Measures

Overall fairness. We measured participants' daily overall fairness using the scale developed by Colquitt et al. (2015). Each workday, participants were asked to indicate the extent to which their supervisor's actions during decision-making events were fair (1 = *to a very small extent* to 5 = *to a very large extent*). The items from this three-item scale were "Today, did your supervisor act fairly?," "Today, did your supervisor do things that were fair?," and "Today, did your supervisor behave like a fair person would?" Coefficient α for this scale, averaged across the days of data collection, was .96. Roberson, Sturman, and Simons' (2007: 585)

comparison of dispersion indices in multilevel research suggested that, when interested in modeling both mean and variance, "researchers may be better served by using standard deviation as a dispersion measure." As such, following previous research on variability constructs (e.g., Eid & Diener, 1999; Fleeson, 2001; Kernis et al., 1993; Scott et al., 2012), we operationalized justice variability as each employee's standard deviation in overall fairness over the three-week period. We then controlled for the potential confounding effects of average justice using each employee's mean level of overall fairness over the three-week period.

General workplace uncertainty. We measured general workplace uncertainty using the four-item scale developed by Colquitt and colleagues (2012). Each workday, participants were asked to indicate the extent to which they agreed with each statement (1 = *strongly disagree* to 5 = *strongly agree*). Example statements are "Today, there was a lot of uncertainty at work" and "Today, many things seemed unsettled at work." Coefficient α for this scale, averaged across the days of data collection, was .92.

Stress. Work stress was measured by adapting the Motowidlo, Packard, and Manning (1986) four-item scale to the daily context. Each workday, participants were asked to indicate the extent to which they agreed with each statement (1 = *strongly disagree* to 5 = *strongly agree*). Example statements are "Today, I felt a great deal of stress because of my job" and "Today, very few stressful things happened to me at work" (reverse-coded). Coefficient α for this scale, averaged across the days of data collection, was .76.

Job dissatisfaction. We measured job dissatisfaction by reverse-coding the five-item daily version of the Brayfield and Rothe (1951) job satisfaction scale (Judge, Scott, & Ilies, 2006; Scott et al., 2012). Each workday, participants were asked to indicate the extent to which they agreed with each statement (1 = *strongly disagree* to 5 = *strongly agree*). Example statements are "Today, I have felt fairly well satisfied with my job" (reverse-coded) and "Today, every minute of work has seemed like it would never end." Coefficient α for this scale, averaged across the days of data collection, was .82.

Emotional exhaustion. Emotional exhaustion was measured using the five-item Pugh, Groth, and Hennig-Thurau (2011) scale. Each workday, participants were presented with the stem "At work today, how often did you feel..." (1 = *never* to 5 = *very frequently*). Example statements are "... run down"

and "... wiped out." Coefficient α for this scale, averaged across the days of data collection, was .91.

Counterproductive work behavior. We measured CWB using the six-item Dalal and colleagues (2009) CWB toward the supervisor scale. We focused each statement on the supervisor because theory on counterproductive behaviors (e.g., Robinson & Bennett, 1997) suggests that individuals tend to target CWB at the source of perceived transgressions. Thus, in our case, because supervisors are the source of daily fair treatment, supervisors would be the likely target of employee CWB. Each workday, participants were asked to indicate the extent to which they agreed with each statement (1 = *strongly disagree* to 5 = *strongly agree*). Example statements are "Today, I behaved in an unpleasant manner toward my supervisor" and "Today, I spoke poorly about my supervisor to others." Coefficient α for this scale, averaged across the days of data collection, was .94.

Supervisor self-control. Supervisor self-control was measured using the 10-item scale developed by Tangney et al. (2004). Supervisors were asked to indicate the extent to which they agreed with each statement (1 = *strongly disagree* to 5 = *strongly agree*). Example items are "I am good at resisting temptation" and "I often act without thinking through all the alternatives" (reverse-coded). Coefficient α for this scale was .84.

Control variables. In addition to controlling for the potential confounding effects of average justice, we controlled for other variables that are theoretically linked to the relationships of interest (Carlson & Wu, 2012; Spector & Brannick, 2011). Specifically, we controlled for employee neuroticism at Level 2 using the instrument developed by Saucier (1994), and for employee daily negative affect at Level 1 using the five-item PANAS (positive affect negative affect schedule) short form developed by Mackinnon, Jorm, Christensen, Korten, Jacomb, and Rodgers (1999), because neuroticism and daily negative affect are likely to influence perceptions of fairness (Barsky & Kaplan, 2007), work stress (Kotov, Gamez, Schmidt, & Watson, 2010), and our proposed downstream outcomes (Alarcon, Eschleman, & Bowling, 2009; Berry, Ones, & Sackett, 2007; Judge, Heller, & Mount, 2002; Thoresen, Kaplan, Barsky, Warren, & de Chermont, 2003). Moreover, controlling for these two employee factors should provide evidence as to whether justice variability is simply in the eye of the beholder, or whether it reflects differences that are not just perceptual. That said, our results are qualitatively identical with or

without any of the control variables included in the model.

Analysis

Due to the multilevel nature of our data (i.e., daily events nested within individuals), we used multilevel path analysis with Mplus 7 (Muthén & Muthén, 2010) and maximum likelihood estimation with robust standard errors to test our proposed relationships. The Level 1 variables included the repeated, daily observations of employee general workplace uncertainty, stress, job dissatisfaction, emotional exhaustion, CWB, and negative affect (control variable). The Level 2 variables included the single assessments of supervisor self-control, justice variability (represented by each employee's fairness standard deviation across the three-week period), average justice (represented by each employee's fairness mean across the three-week period), and employee neuroticism (control variable). Thus, the Level 1 variables may vary within individuals (e.g., an employee may experience more general workplace uncertainty on some days and less on others) and the Level 2 variables may vary between individuals (e.g., an employee may experience greater justice variability during the three-week period than another employee).

Following the suggestions of Hofmann and Gavin (1998) and Ohly, Sonnentag, Niessen, and Zapf (2010), we centered exogenous variables measured at the daily level (Level 1) around each person's mean ("group-mean centering") and grand-mean centered individual-level variables (Level 2). For an index of variance explained, we present a pseudo-R^2 ($\sim R^2$) statistic (Snijders & Bosker, 1999). For testing mediation, we followed the recommendations of Preacher, Zyphur, and Zhang (2010) and utilized a parametric bootstrap to estimate and assess the significance of indirect effects. Specifically, we used the Bauer, Preacher, and Gil (2006) formula to capture the magnitude of the indirect effects and used a Monte Carlo simulation with 20,000 replications to construct confidence intervals around the estimated indirect effects (for comparative examples, see Koopman, Lanaj, & Scott, 2016; Lanaj, Johnson, & Barnes, 2014; Wang, Liu, Liao, Gong, Kammeyer-Mueller, & Shi, 2013). For testing moderated mediation, we extended the above procedure to test indirect effects where the magnitude of the first-stage coefficient was calculated at lower (-1 *SD*) and higher ($+1$ *SD*) values of the cross-level moderator (Koopman et al., 2016; Lanaj et al., 2014). In order to find support for moderated mediation, the confidence interval for the difference

in the conditional indirect effects must exclude zero (Preacher, Rucker, & Hayes, 2007).

STUDY 2: RESULTS AND DISCUSSION

Justice Variability

Before discussing the results of our hypothesis tests, we first provide some initial evidence for the construct of justice variability. First, we examined the amount of variance in fairness accounted for by person/supervisor (between-individual variance) and by day (within-individual variance). As shown in Table 2, the results of this analysis showed that the person/supervisor accounted for 48.0% of variance in fairness, and the day accounted for 52.0% of variance. These results suggest that assessments of overall fairness of one's supervisor do vary substantially on a daily basis.

Next, in accordance with Fleeson (2001) and Scott et al. (2012), we compared the average of each person's standard deviation in justice to the overall standard deviation in average justice over the three-week period "to determine whether individuals differed from themselves over time as much as they differed from one another at the average level" (Scott et al., 2012: 913). The results of this analysis, as shown in Table 3, revealed that the average of each person's justice variability was 0.35, and the standard deviation of average justice was 0.49. Although these findings suggest that people differ from one another in their average level of overall fairness more than they differ from themselves over time, these results are consistent with past research establishing constructs that can be viably studied in terms of variability (cf. Scott et al., 2012).

Descriptive Statistics and Correlations

The means, standard deviations, and correlations among the focal variables are reported in Table 3. Between-person correlations (aggregated for daily variables) are reported below the diagonal, within-person correlations are reported above the diagonal, and coefficient alphas are reported on the diagonal. Coefficient alphas for the experience-sampled variables were averaged across the days of data collection.

Test of Measurement Model

To examine whether the substantive constructs measured in the study were distinguishable from one another, we conducted a multilevel confirmatory

factor analysis. The results of our multilevel confirmatory factor analysis revealed that our proposed six-factor within-person model (i.e., overall fairness, uncertainty, stress, job dissatisfaction, emotional exhaustion, and CWB) and seven-factor between-person model (i.e., overall fairness, uncertainty, stress, job dissatisfaction, emotional exhaustion, CWB, and supervisor self-control) fit the data well. Specifically, the chi-squared test (χ^2) (917) = 2441.75 ($p < .01$), the comparative fit index (CFI) = .91, the root mean square error of approximation (RMSEA) = .04, the standardized root mean square residual (SRMR) (within) = .06, and the SRMR (between) = .08. Additionally, all items loaded significantly on their corresponding factor. This model fit the data better than all 15 constrained models in which any two of the six factors at the within-person level were combined, $734.62 \leq \Delta\chi^2$s ($\Delta df = 5$) $\leq$ 2699.07, and all 21 constrained models in which any two of the seven factors at the between-person level were combined, $89.69 \leq \Delta\chi^2$s ($\Delta df = 6$) $\leq$ 457.99. These results demonstrate the dimensionality and discriminant validity of our measures at both the within-person level and the between-person level.

Test of Hypotheses

The result of the multilevel path analysis testing the hypotheses is presented in Figure 2. Hypothesis 1 predicted that justice variability is positively associated with employee stress. Consistent with the results from Study 1, Hypothesis 1 was supported, as the path model results indicated that justice variability had a positive cross-level association with daily stress ($\gamma = .44$, $p < .05$) over and above average levels of justice. Justice variability explained 7.6% of the between-individual variance in daily stress.

In addition to the direct effect of justice variability on stress, Hypothesis 2 posited that justice variability moderates the relationship between employee general workplace uncertainty and stress, such that the positive association is weaker for employees with low justice variability and stronger for those with high justice variability. The path model results indicated that daily general workplace uncertainty had a positive association with daily stress ($\gamma = .24$, $p < .01$). Additionally, there was significant variance in the Level 1 relationship, which provided support for examining cross-level moderators (variance estimate = .10, $p < .01$). Providing support for Hypothesis 2, justice variability moderated the within-individual slopes between

daily general workplace uncertainty and stress ($\gamma = .37$, $p < .01$). To explore the form of this cross-level interaction, we plotted the relationship at conditional values of justice variability (+1 and -1 *SD*; Cohen, Cohen, West, & Aiken, 2003). Figure 3 presents the plot of this interaction, and shows that, as predicted, the daily relationship between employee general workplace uncertainty and stress was weaker for employees with low justice variability and stronger for those with high justice variability.[8] Justice variability explained 13.6% of variance in the within-individual slopes between

---

[8] We also conducted four additional analyses to further probe these relationships. First, we conducted an exploratory analysis to test the three-way interaction between uncertainty, average justice, and justice variability. As suggested by two anonymous reviewers, it could be that the effects of justice variability are contingent on the level of justice and vice versa. The results of this analysis showed no support for a three-way interaction between uncertainty, average justice, and justice variability. Moreover, there was no support for a two-way interaction between average justice and justice variability. Second, we modeled the effects of justice variability without controlling for average justice and vice versa to test the robustness of the modeled relationships. The results of these analyses were qualitatively identical to the results presented in Figure 2. Third, we explored dyadic tenure as a moderator of the effects of justice variability (both of the direct effect on stress and the interactive effect between uncertainty and justice variability on stress), because high variability in justice evaluations may be expected early in an employee's tenure and not later in tenure (leading to stronger variability effects later in the supervisor–employee relationship). No significant interactive effects emerged with dyadic tenure, and all of the modeled relationships held controlling for dyadic tenure. Finally, as suggested by an anonymous reviewer, we conducted additional analyses to examine the potential of reverse causality. Because the degrees of freedom in the reverse causal model do not differ from the degrees of freedom in our final model, we followed Kline's (2011) recommendation to use the Akaike information criterion (AIC) and the Bayesian information criterion (BIC) when comparing non-nested models (for similar examples testing reverse causality, see Jin, Seo, & Shapiro, 2016; Ou, Tsui, Kinicki, Waldman, Xiao, & Song, 2014). When comparing such models, smaller AIC and BIC values are preferred because the model with the smallest AIC and BIC is "the one most likely to replicate" (Kline, 2011: 220). The results of these comparisons showed that the hypothesized model (AIC = 5581.89, BIC = 5836.68) had lower AIC and BIC than the reverse causal model (AIC = 7568.80, BIC = 7818.69), demonstrating that the hypothesized model provided superior fit to the data (in comparison to the reverse causal model).

TABLE 2
Variance Components of Null Models for Daily Variables

Variable	Within-Individual Variance (ρ^2)	Between-Individual Variance (τ_{00})	Percentage of Variability Within-Individual
Daily Overall Fairness	.23**	.22**	52.0%
Daily Uncertainty	.38**	.34**	53.1%
Daily Stress	.30**	.26**	53.4%
Daily Job Dissatisfaction	.14**	.22**	39.5%
Daily Emotional Exhaustion	.23**	.27**	45.9%
Daily CWB[a]	.16**	.14**	53.5%

Notes: ρ^2 = within-individual variance in the dependent variable; τ_{00} = between-individual variance in the dependent variable. Percentage of variability within individual was computed as $\rho^2/(\rho^2 + \tau_{00})$.

[a] CWB = counterproductive work behavior.

** $p < .01$

daily employee general workplace uncertainty and stress.

Hypothesis 3 predicted that employee stress mediates the positive indirect relationship between justice variability and (a) job dissatisfaction, (b) emotional exhaustion, and (c) CWB. Hypothesis 3a was supported, as daily stress was significantly related to job dissatisfaction ($\gamma = .13$, $p < .01$) and the 95% confidence interval (CI) for the indirect effect excluded zero (indirect effect = .056, 95% CI [.008, .120]). Consistent with Hypothesis 3b, daily stress was significantly related to emotional exhaustion ($\gamma = .14$, $p < .01$) and the indirect effect CI excluded zero (indirect effect = .059, 95% CI [.008, .126]).

Hypothesis 3c was not supported as daily stress was not significantly related to CWB ($\gamma = .04$, *ns*) and the indirect effect CI included zero (indirect effect = .018, 95% CI [−.015, .063]). Daily stress explained 11.4% and 3.7% of the within-individual variance in daily job dissatisfaction and daily emotional exhaustion, respectively.

Hypothesis 4 posited that justice variability moderates the indirect relationships between general workplace uncertainty and (a) job dissatisfaction, (b) emotional exhaustion, and (c) CWB via stress, such that the positive relationship is weaker for employees with low justice variability and stronger for those with high justice variability. When predicting

TABLE 3
Descriptive Statistics and Correlations for the Study Variables

|	Variable	Mean	SD	1	2	3	4	5	6	7	8	9	10
1.	Average Justice	4.33	0.49	—									
2.	Justice Variability	0.35	0.28	−.30**	—								
3.	Supervisor Self-Control	3.82	0.61	.19	−.36**	(.84)							
4.	Neuroticism	2.16	0.56	−.11	.00	.07	(.81)						
5.	Daily Uncertainty	2.16	0.62	−.48**	.25*	−.24*	.17	(.92)	.35**	.23**	.15**	.08	.16**
6.	Daily Stress	2.44	0.55	−.45**	.33**	−.13	.31**	.64**	(.76)	.24**	.17**	.04	.16**
7.	Daily Job Dissatisfaction	2.06	0.49	−.44**	.15	−.15	.34**	.44**	.46**	(.82)	.28**	.10*	.15**
8.	Daily Emotional Exhaustion	1.81	0.55	−.27**	.14	.03	.37**	.37**	.50**	.45**	(.91)	.04	.19**
9.	Daily CWB[a]	1.42	0.40	−.45**	.04	−.21*	.14	.27**	.16	.32**	.21*	(.94)	.06
10.	Daily Negative Affect	1.14	0.20	−.19	.11	−.15	.37**	.32**	.33**	.39**	.49**	.19	(.74)

Notes: Between-person correlations (aggregated for experience-sampled variables) are reported below the diagonal and within-person correlations are reported above the diagonal. For the between-person level of analysis, $n = 97$; for the within-person level of analysis, $n = 995$. Coefficient alphas for the experience-sampled variables were averaged across the days of data collection.

[a] CWB = counterproductive work behavior.

* $p < .05$

** $p < .01$

FIGURE 2
Multilevel Path Analyses Results
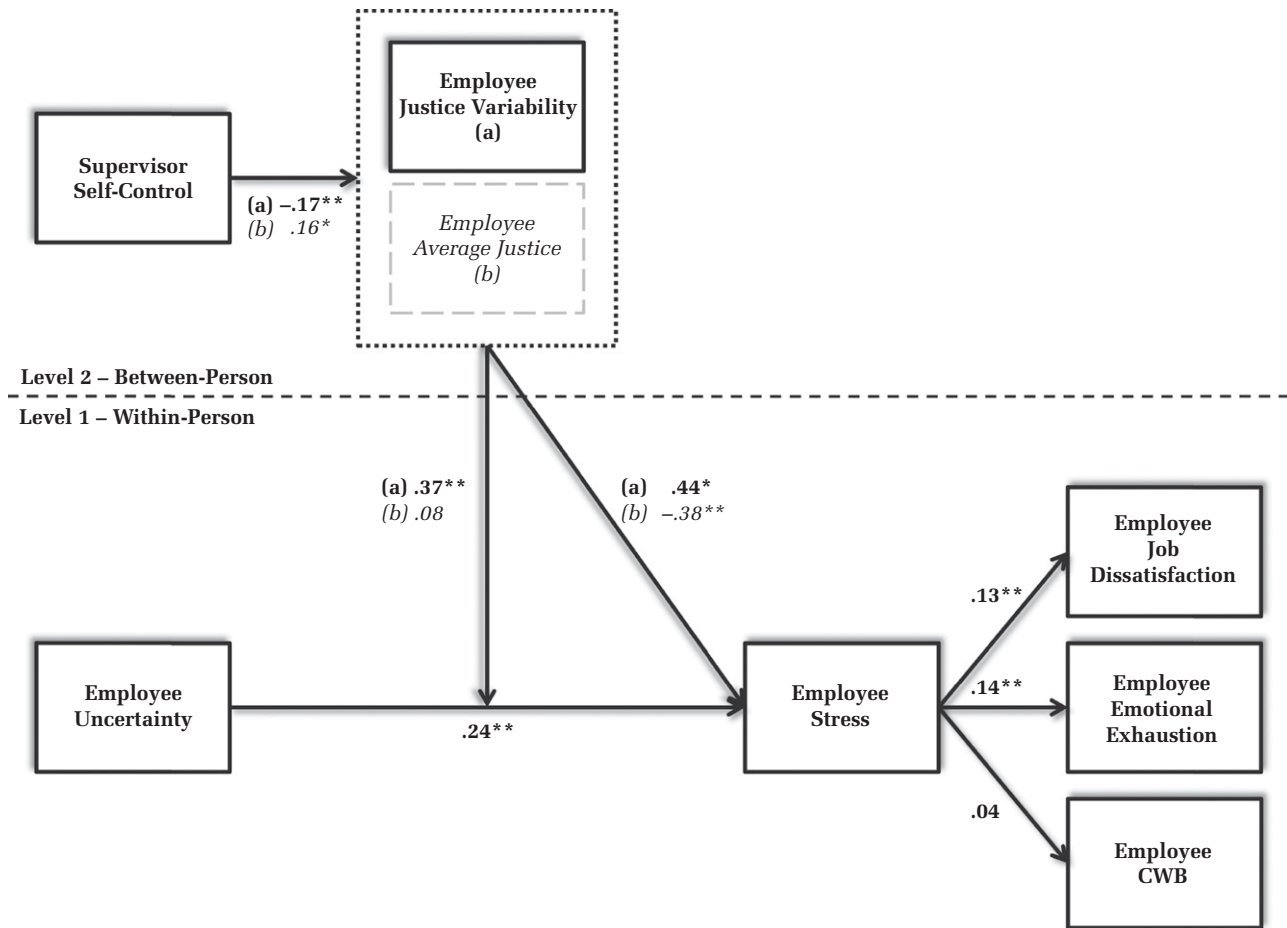
Notes: For the between-person level of analysis, *n* = 97; for the within-person level of analysis, *n* = 995. For clarity, control variables aside from average justice are not pictured (i.e., Level 2 neuroticism was controlled for on all Level 1 and Level 2 endogenous variables, and Level 1 negative affect was controlled for on all endogenous Level 1 variables).

　* *p* < .05
　** *p* < .01

job dissatisfaction, in support of Hypothesis 4a, the CI for difference in the indirect effect between low justice variability employees (indirect effect = .028, 95% CI [.013, .047]) and high justice variability employees (indirect effect = .054, 95% CI [.029, .084]) excluded zero (difference in indirect effect = .026, 95% CI [.006, .054]). When predicting emotional exhaustion, consistent with Hypothesis 4b, the CI for difference in the indirect effect between low justice variability employees (indirect effect = .023, 95% CI [.007, .044]) and high justice variability employees (indirect effect = .051, 95% CI [.024, .083]) excluded zero (difference in indirect effect = .028, 95% CI [.007, .057]). When predicting CWB, Hypothesis 4c was not supported, as the CI for the difference in the

indirect effect between low justice variability employees (indirect effect = .003, 95% CI [−.007, .018]) and high justice variability employees (indirect effect = .012, 95% CI [−.014, .040]) included zero (difference in indirect effect = .009, 95% CI [−.007, .030]).

　Turning to self-control as a predictor of justice variability, Hypotheses 5 posited that supervisor self-control is negatively associated with justice variability, and Hypothesis 6 predicted that justice variability mediates the negative indirect relationship between supervisor self-control and stress. Hypotheses 5 and 6 were supported, as supervisor self-control was negatively associated with justice variability ($\gamma = -.17$, $p < .01$), and the CI of the

FIGURE 3
Cross-Level Moderating Effect of Justice Variability on the Relation between Daily Uncertainty and Daily Stress
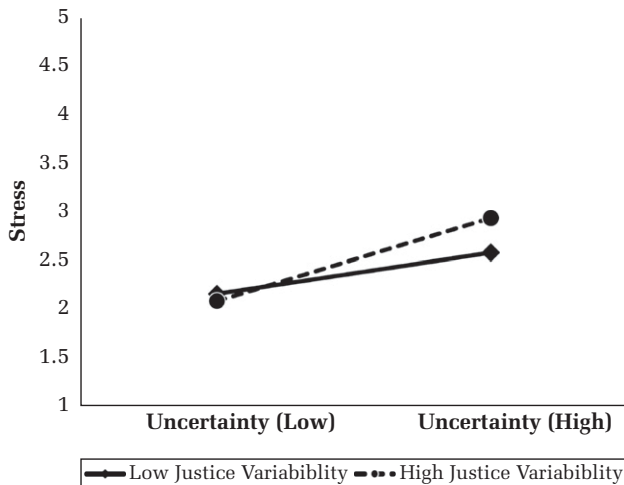
indirect effect predicting daily stress excluded zero (indirect effect = −.073, 95% CI [−.169, −.006]).

The findings of Study 2 build on and complement the results from Study 1 by demonstrating that justice variability was positively associated with daily perceptions of stress (holding average justice constant), and that justice variability exacerbated the effects of daily general workplace uncertainty on daily stress. Moreover, daily stress mediated the effects of justice variability on daily attitudinal and health-related outcomes (i.e., job dissatisfaction and emotional exhaustion). Importantly, supervisor individual differences in self-control predicted justice variability, suggesting that justice variability can be conceptualized as a relatively stable managerial difference.

Supplemental Analysis

In order to rule out alternative explanations for our justice variability results, we explored the role of other theoretically relevant distributional features that could impact our findings. Specifically, justice minimum and maximum could impact our proposed relationships because "it is the extreme experiences of unfairness and fairness that are most important in shaping behavioral reactions to fairness" (Gilliland, 2008: 271). Thus, in addition to average justice and justice variability, we also examined the effects of justice minimum and maximum, which is consistent with prior work examining distributional features

of psychological constructs (e.g., Barrick, Stewart, Neubert, & Mount, 1998). Specifically, we modeled the direct effects on stress and the moderating effects on the uncertainty to stress linkage using these distributional features.

The results of these analyses revealed that justice minimum ($\gamma = -.08$, ns) and maximum ($\gamma = .23$, ns) each did not have a significant direct effect on stress, and only justice minimum ($\gamma = -.14$, $p < .05$) moderated the uncertainty to stress linkage—justice maximum ($\gamma = .03$, ns) did not. However, suggesting that justice variability is the driver of our justice variability effects (rather than justice minimum), the moderating effect of standard deviation (i.e., justice variability) remained significant ($\gamma = .64$, $p < .01$) and the moderating effect of justice minimum was no longer significant ($\gamma = .01$, ns) when justice mean, variability, minimum, and maximum were analyzed in conjunction.

GENERAL DISCUSSION

Uncertainty and stress have become pervasive in organizational life. In a recent national survey, an increasing number of employees admitted to feeling "nervous and stressed" and "unable to control the important things in life" either "often" or "very often" (Aumann & Galinsky, 2011). The consequences of such sentiments can be severe, given the relationships between stress and employee attitudes, health, and performance (LePine et al., 2005; Podsakoff, LePine, & LePine, 2007). What would justice scholars say to address these trends? Lind and van den Bos (Lind & van den Bos, 2002; Van den Bos & Lind, 2002) would emphasize that these trends make fairness more vital; that fair treatment can not only reduce stress directly but also can reduce or mitigate the negative consequences of uncertainty for stress. They would further say that this buffering effect can occur even when the nature of the uncertainty is completely disconnected from the source of the fair treatment.

Our results offer some support for this view, though not in the way that uncertainty management theory has been applied to date. Research utilizing uncertainty management theory (and the bulk of the justice literature) has exclusively focused on average levels of justice, ignoring the way in which the average level of justice is composed. The results of our two studies, however, suggest that uncertainty management theory and the justice literature can be enhanced (and, in some cases, challenged) by incorporating the concept of justice variability. For

instance, although the justice literature typically assumes that the more justice, the better (Brockner et al., 2009; Khan et al., 2014; Van den Bos et al., 1999), our laboratory study demonstrated that variably fair treatment was more physiologically stressful than always being treated unfairly.

Interestingly, this finding emerged even though the condition in which individuals were always treated unfairly was deemed less fair (as one would expect). The fact that stress was higher in a condition deemed *fairer* by participants could well be construed as a mystery or breakdown (Alvesson & Karreman, 2007), simply because this finding does not fit with the current state of theorizing and research in the justice literature. Ironically, the answer to this mystery can be found in a theory that justice scholars have been drawing from for more than a decade. Specifically, by keying in on uncertainty management theory's tenet that individuals need predictability in their fairness judgements, we can explain why justice variability is equally (if not more) important than average justice.

In addition to replicating the linkage between justice variability and stress, holding the average level of justice constant, the results of our multilevel, experience-sampling field study showed that justice variability exacerbated the relationship between daily uncertainty and daily stress. Specifically, the uncertainty–stress linkage was weaker for employees with stable perceptions of fairness and stronger for employees with varying perceptions of fairness. When employees could count on a given fairness level (regardless of the absolute level), they were less affected by the uncertainty they experienced in a given workday. These results extend uncertainty management theory in an important way by introducing the notion that uncertainty about justice can be a key concern. Employees cannot cling to any level of fairness under conditions of uncertainty when that tether is itself uncertain. Indeed, justice variability seems to add to the uncertainty management problem, not buffer it (as past research on average justice has shown; Van den Bos, 2001; Van den Bos & Miedema, 2000).

As suggested above, one of the implications of our work is that justice variability deserves a more visible place in uncertainty management theorizing—not to mention the justice literature as a whole. Echoing recent work (Holtz & Harold, 2009; Scott et al., 2014), our results show that justice varies as much within employees as it does between employees. That variation remains a relatively uncharted territory in a literature that has largely

addressed many of its most fundamental questions (Colquitt, 2012). One important question is where that variation lives in terms of the rules that underlie justice. Scott et al.'s (2014) results suggest that interpersonal justice rules exhibit the most within-person variation, followed by informational, procedural, and distributive justice rules respectively (likely due to the varying level of discretion that supervisors have over these rules). Our decision to manipulate fairness in the lab setting using interpersonal justice rules was largely due to the initial work in this area. If additional studies replicate Scott et al.'s (2014) results, then the key to predicting justice variability may lie in first predicting variability in respectfulness and propriety, followed by predicting variability in justifications and truthfulness, and so on.

Relatedly, an interesting question raised by our research is whether the procedural justice consistency rule should be recast as a specific form of justice variability. Leventhal's (1980) procedural justice consistency rule—one of six rules typically judged to assess procedural justice—focuses on whether an actor applies allocation procedures consistently across employees and across time. As we describe in our construct definition section, although procedural consistency is extremely specific and focuses exclusively on consistency in allocation decisions, justice variability captures consistency in fair treatment generally, as well as consistency in being respectful, truthful, unbiased, and equitable (Adams, 1965; Bies & Moag, 1986; Leventhal, 1980). We view Leventhal's consistency rule as more theoretically aligned with justice variability (i.e., uncertainty in fairness) than with the other five procedural justice rules (i.e., bias suppression, accuracy, correctability, representativeness, and ethicality). That said, considering this is an introduction of the justice variability concept to the justice literature, we hope to begin a dialogue among justice scholars rather than to forward a definitive conclusion. Therefore, we hope that our paper can serve as a catalyst for future theory and research exploring where exactly procedural consistency falls within the justice nomological network.

Our results for supervisor self-control begin to address an additional important query regarding justice variability—the factors that predict it. In general, justice scholars have paid more attention to the outcomes associated with justice than to why supervisors choose to act fairly in the first place (Colquitt, 2012; Scott et al., 2009). The studies that have examined antecedents of supervisor justice

have tended to focus on contextual variables, such as organizational structure (Schminke, Ambrose, & Cropanzano, 2000) or employee characteristics (Korsgaard, Roberson, & Rymph, 1998; Scott, Colquitt, & Zapata-Phelan, 2007; Zapata, Olsen, & Martins, 2013). One exception was a study by Mayer, Nishii, Schneider, and Goldstein (2007), which attempted to link the Big Five dimensions of personality to supervisor justice climate. The effect sizes uncovered in that study tended to be quite small, suggesting more value in pursuing narrow traits that are uniquely relevant to supervisor justice. After all, personality traits tend to be more predictive when they more explicitly correspond to the behavior of interest (e.g., Judge, Rodell, Klinger, Simon, & Crawford, 2013).

Self-control could be an exemplar of a narrow trait relevant to supervisor justice variability. Our results suggest that supervisors who have self-discipline, who think before they act, and who are skilled at concentrating tend to demonstrate less variability in justice. These results could point to the fact that consistently maintaining the same level of fairness can be hard. Some supervisors may not be able to maintain the same level of politeness and respect every day (i.e., on both good and bad days). Others may not be able preserve the same level of thoroughness and reason in explaining decisions every day. Still others may not be organized enough in notes, records, and observations to be able to employ the same level of accuracy, bias suppression, and consistency in procedures every day. Even if all of those actions occur, others may not be diligent enough to provide the same level of equity in allocating outcomes over time, given the temptation to minimize variations (and the accompanying complaints). Supervisors who had self-control appeared to do those things consistently, on a daily basis.

As studies of justice variability progress, one profitable direction could be weaving in contextual variables that other scholars have used to predict supervisory justice. For example, Schminke et al. (2000) showed that average justice tended to be lower in organizations with a centralized organizational structure. It may be that structural characteristics like centralization and formalization also reduce justice variability. As another example, Scott et al. (2007) showed that charismatic subordinates tended to receive higher levels of average justice. It may be that other subordinate characteristics—trait moodiness perhaps—could predict variability. Supervisor self-control could play a role in these sorts of studies as well, as focus and self-discipline might

allow supervisors to "tune out" these contextual variables in an effort to offer the same stable levels of justice.

In addition to predictors of justice variability, we see several other fruitful areas for future research on justice variability. For example, researchers could examine potential moderators of the relationships between justice variability and outcomes, thus exploring questions such as which type of employees are most affected by the variability. It could be that an employee low in trust propensity will be highly influenced by justice variability because such individuals "engage in careful analysis of justice information" and are less likely to "gloss over daily or weekly fluctuations in actual fairness levels" (Colquitt, Scott, Judge, & Shaw, 2006: 114). Researchers could also explore the interactive effects of justice variability and average justice. Although our field data provided no evidence for such an effect (i.e., no statistically significant two-way or three-way interaction was present), as suggested by an anonymous reviewer, it may be that justice variability only matters when average justice is high. It could also be valuable to explore the role of temporal factors. For example, it may be that supervisors are most likely to be variable in their just treatment (and that employees are most likely to be stressed by variability) late in the day because of the depletion of self-control resources throughout the day (Muraven & Baumeister, 2000). Studies that can track justice over a longer period of time might be able to extend our work and uncover interesting temporal dynamics via the use of growth-curve modeling. Finally, research could also explore differences between justice variability and other variability constructs based on within-person fluctuations over time. As noted in our construct definition section, we view justice variability as attributable to the supervisor. However, the variability constructs based on within-person fluctuations over time in other literatures (i.e., self-esteem, personality, and emotional labor) have typically had a more internal focus. Thus, it could be that justice variability is especially problematic in comparison to other variability constructs based on within-person fluctuations over time (e.g., self-esteem) because employees may feel that there is little they can do to change their supervisor's behavior.

Limitations

Our laboratory and multilevel, experience-sampling field studies have some limitations that

should be noted. First, although using a physiological measure of stress in Study 1 and a perceptual measure of stress in Study 2 was a strength of our two-study design, we ideally would have captured physiological and perceptual measures in both studies. We chose to capture physiological stress in Study 1 because Robbins, Ford, and Tetrick's (2012: 250) recent meta-analysis recommended the use of objective measures of stress when studying the outcomes of (un)fairness, declaring that such research has been "sorely lacking." Moreover, our lab setting allowed us to objectively assess heart rate quickly before adrenomedullary hormones dissipated, which was unfeasible in our field sample. Considering the parallel findings across the two studies (i.e., justice variability is positively associated with stress), we feel as though most concerns surrounding the measurement of stress are largely mitigated.

A specific limitation to Study 1 was that, although our theorizing focused on overall perceptions of fairness (in accordance with uncertainty management theory), we only manipulated interpersonal justice rules. We chose to do so mainly because past research has demonstrated that interpersonal rules of justice vary the most over short durations (Scott et al., 2014). Therefore, they were the most relevant dimension to manipulate within repeated electronic supervisor statements over a short period of time. However, future research could extend our findings by manipulating informational, procedural, and distributive justice rules such as truthfulness, bias suppression, and equity (Adams, 1965; Greenberg, 1993; Leventhal, 1980). Another limitation of Study 1 was that our design did not allow us to test a 2 (average justice: high versus low) × 2 (justice variability: high versus low). This concern was largely mitigated for three reasons. First, we found no significant differences between the always fair and always unfair conditions, suggesting that the effects for the variably fair condition were likely driven by justice variability and not average justice. Second, the variably fair condition was more stressful than both the always fair (which was objectively and subjectively more fair) and always unfair (which was objectively and subjectively less fair) conditions, suggesting again that the effects for the variably fair condition were likely driven by justice variability and not average justice. Third, although this is a concern for Study 1, it is offset by the results of Study 2, in which we found no support for a two-way or three-way interaction between average justice and justice variability, eliminating an interaction as an alternative explanation for our results.

Turning to the specific limitations of Study 2, the Level 1 variables were collected using self-report measures, which could raise concerns about same-source bias. However, there are several factors that should assuage such concerns. First, state and trait negative affectivity—both of which are potential sources of same-source bias (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003)—were controlled in our analyses. Second, by centering the Level 1 predictors around individuals' means, we effectively removed several other potential sources of same-source bias, including social desirability and acquiescence (Podsakoff et al., 2003). Third, with a within-individual design, common rater effects, such as "yea-saying" or "nay-saying," are less of a concern than in a between-person design. For example, "yea-saying" (e.g., always rating items a "5" on a 5-point scale) and "nay-saying" (e.g., always rating items a "1" on a 5-point scale) would create artificial variance between-persons, but it would restrict variance within-persons (because the individual rates everything the same). This appears to not have been the case, given the substantial amount of within-person variance we observed. Indeed, if such rater effects were strongly operating, we would not have observed much in the way of our core construct of justice variability—particularly once state affect was partialled out. Notwithstanding the above points, we could not remove all potential sources of same-source bias. However, other sources, such as item characteristic effects and implicit theories (Podsakoff et al., 2003), are unlikely to explain our findings involving justice variability, which was based on the standard deviation.

Another limitation of Study 2 was our use of an overall fairness measure rather than one based in specific justice dimensions. The main driver for our focus on overall fairness was that our overarching theoretical framework—uncertainty management theory—theorized explicitly about overall fairness and deemphasized the distinctions among the various justice dimensions. Indeed, Lind and van den Bos (2002: 196) posited that a global impression of fair treatment "is the key to managing uncertainty." In addition to uncertainty management theory's specific focus on overall fairness, we felt that overall fairness offered a useful "first step" in introducing justice variation to the justice literature more broadly. That said, future studies should employ dimension-based measures to get a more nuanced picture of where the variability resides and whether variability in high-frequency justice dimensions (i.e., interpersonal justice) is more or less tolerated by

employees compared to variability in the low-frequency justice dimensions (i.e., distributive justice). On the one hand, it could be the case that variability in low-frequency forms of justice is less tolerated because fluctuations in outcomes such as pay have tangible, economic consequences. On the other hand, it could be the case that variability in high-frequency forms of justice is less tolerated because the behavior is perceived to be under the control of the supervisor (put simply: it is the supervisor's fault).

Implications for Practice

Our focus on justice variability points to a set of practical implications that differs from the modal justice study. Many studies conclude by pointing to the promise of justice training, given that past research has shown that supervisors can be trained to adhere to justice rules (Skarlicki & Latham, 2005). Although justice training should increase average justice, it could also inject variability in justice levels as well. The typical result of training is some initial spike in the learned behavior followed by an eventual decline, perhaps punctuated by an additional increase if a "booster session" is offered (e.g., Noe, 2012). Maintaining high levels of justice will likely require a focus that moves beyond training to employee development. Here, justice-related goals would be woven into the objectives that supervisors are often offered in annual leadership development programs. Likewise, measures of overall fairness—or justice rules—would be incorporated into the 360-degree assessments often contained in such programs. This more long-term, systemic approach would underscore that justice variability is an issue of continuing importance—not confined to an occasional training session.

Our results for self-control point to a different human resource management function: selection and placement. Many organizations use personality or integrity tests to screen for traits related to self-control—or the broader personality dimension of conscientiousness. Debates about the effectiveness of such tests typically focus on their ability to successfully predict job performance (e.g., Morgeson, Campion, Dipboye, Hollenbeck, Murphy, & Schmitt, 2007). We suggest that such tests could be useful for reasons other than job performance—such as predicting justice variability. A self-control assessment could be a helpful supplement to other hiring tools when individuals are being hired (or promoted) into leadership positions. Prioritizing self-discipline, focus, and careful thinking could help deliver leaders who are not just fair some of the time, but who are instead fair almost all of the time.

REFERENCES

Adams, J. S. 1965. Inequity in social exchange. In L. Berkowitz (Ed.), *Advances in experimental social psychology*, vol. 2: 267–299. New York, NY: Academic Press.

Alarcon, G., Eschleman, K. J., & Bowling, N. A. 2009. Relationships between personality variables and burnout: A meta-analysis. *Work and Stress*, 23: 244–263.

Alvesson, M., & Karreman, D. 2007. Constructing mystery: Empirical matters in theory development. *Academy of Management Review*, 32: 1265–1281.

Ambrose, M. L., & Schminke, M. 2009. The role of overall justice judgments in organizational justice research: A test of mediation. *The Journal of Applied Psychology*, 94: 491–500.

Ambrose, M. L., Wo, X. H., & Griffith, M. D. 2015. Overall justice: Looking back and looking forward. In R. Cropanzano & M. L. Ambrose (Eds.), *The Oxford handbook of justice in the workplace*: 109–136. New York, NY: Oxford University Press.

Appelhans, B. M., & Luecken, L. J. 2006. Heart rate variability as an index of regulated emotional responding. *Review of General Psychology*, 10: 229–240.

Aumann, K., & Galinsky, E. 2011. The state of health in the American workforce: Does having an effective workplace matter? (National Study of the Changing Workplace report, 2008) (rev. September 2011) New York, NY: Families and Work Institute.

Badia, P., McBane, B., Suter, S., & Lewis, P. 1966. Preference behavior in an immediate versus variably delayed shock situation with and without a warning signal. *Journal of Experimental Psychology*, 72: 847–852.

Barrick, M. R., Stewart, G. L., Neubert, M. J., & Mount, M. K. 1998. Relating member ability and personality to work–team processes and team effectiveness. *The Journal of Applied Psychology*, 83: 377–391.

Barsky, A., & Kaplan, S. A. 2007. If you feel bad, it's unfair: A quantitative synthesis of affect and organizational justice perceptions. *The Journal of Applied Psychology*, 92: 286–295.

Bauer, D. J., Preacher, K. J., & Gil, K. M. 2006. Conceptualizing and testing random indirect effects and moderated mediation in multilevel models: New procedures and recommendations. *Psychological Methods*, 11: 142–163.

Beehr, T. A., & Newman, J. E. 1978. Job stress, employee health, and organizational effectiveness: Facet analysis, model, and literature review. *Personnel Psychology*, 31: 665–669.

Berry, C. M., Ones, D. S., & Sackett, P. R. 2007. Interpersonal deviance, organizational deviance, and their common correlates: A review and meta-analysis. *The Journal of Applied Psychology*, 92: 410–424.

Bies, R. J. 2015. Interactional justice: Looking backward, looking forward. In R. Cropanzano & M. L. Ambrose (Eds.), *The Oxford handbook of justice in the workplace*: 89–107. New York, NY: Oxford University Press.

Bies, R. J., & Moag, J. F. 1986. Interactional justice: Communication criteria of fairness. In R. J. Lewicki, B. H. Sheppard & M. H. Bazerman (Eds.), *Research on negotiations in organizations*, vol. 1: 43–55. Greenwich, CT: Jai Press.

Bordia, P., Hobman, E., Jones, E., Gallois, C., & Callan, V. J. 2004. Uncertainty during organizational change: Types, consequences, and management strategies. *Journal of Business and Psychology*, 18: 507–532.

Brayfield, A. H., & Rothe, H. F. 1951. An index of job satisfaction. *The Journal of Applied Psychology*, 35: 307–311.

Brockner, J., Wiesenfeld, B. M., & Diekmann, K. A. 2009. Towards a "fairer" conception of process fairness: Why, when, and how more may not always be better than less. *The Academy of Management Annals*, 3: 183–216.

Brown, S. P., Westbrook, R. A., & Challagalla, G. 2005. Good cope, bad cope: Adaptive and maladaptive coping strategies following a critical negative work event. *The Journal of Applied Psychology*, 90: 792–798.

Buhrmester, M., Kwang, T., & Gosling, S. D. 2011. Amazon's Mechanical Turk: A new source of inexpensive, yet high-quality, data? *Perspectives on Psychological Science*, 6: 3–5.

Carlson, K. D., & Wu, J. P. 2012. The illusion of statistical control: Control variable practice in management research. *Organizational Research Methods*, 15: 413–435.

Cohen, J., Cohen, P., West, S. G., & Aiken, L. S. 2003. *Applied multiple regression/correlation analysis for the behavioral sciences* (3rd ed.). Mahwah, NJ: Lawrence Erlbaum.

Colquitt, J. A. 2001. On the dimensionality of organizational justice: A construct validation of a measure. *The Journal of Applied Psychology*, 86: 386–400.

Colquitt, J. A. 2012. Organizational justice. In S. W. J. Kozlowski (Ed.), *The Oxford handbook of industrial/organizational psychology*, vol. 1: 526–547. New York, NY: Oxford University Press.

Colquitt, J. A., LePine, J. A., Piccolo, R. F., Zapata, C. P., & Rich, B. L. 2012. Explaining the justice-performance relationship: Trust as exchange deepener or trust as uncertainty reducer? *The Journal of Applied Psychology*, 97: 1–15.

Colquitt, J. A., Long, D. M., Rodell, J. B., & Halvorsen-Ganepola, M. D. K. 2015. Adding the "in" to justice: A qualitative and quantitative investigation of the differential effects of justice and injustice. *The Journal of Applied Psychology*, 100: 278–297.

Colquitt, J. A., & Rodell, J. B. 2015. Measuring justice and fairness. In R. Cropanzano & M. L. Ambrose (Eds.), *The Oxford handbook of justice in the workplace*: 187–202. New York, NY: Oxford University Press.

Colquitt, J. A., Scott, B. A., Judge, T. A., & Shaw, J. C. 2006. Justice and personality: Using integrative theories to derive moderators of justice effects. *Organizational Behavior and Human Decision Processes*, 100: 110–127.

Colquitt, J. A., Scott, B. A., Rodell, J. B., Long, D. M., Zapata, C. P., Conlon, D. E., & Wesson, M. J. 2013. Justice at the millennium, a decade later: A meta-analytic test of social exchange and affect-based perspectives. *The Journal of Applied Psychology*, 98: 199–236.

Cook, T. D., & Campbell, D. T. 1979. *Quasi-experimentation: Design and analysis issues for field settings*. Boston, MA: Houghton-Mifflin.

Dalal, R. S., Lam, H., Weiss, H. M., Welch, E. R., & Hulin, C. L. 2009. A within-person approach to work behavior and performance: Concurrent and lagged citizenship-counterproductivity associations, and dynamic relationships with affect and overall job performance. *Academy of Management Journal*, 52: 1051–1066.

Desai, S. D., Sondak, H., & Diekmann, K. A. 2011. When fairness neither satisfies nor motivates: The role of risk aversion and uncertainty reduction in attenuating and reversing the fair process effect. *Organizational Behavior and Human Decision Processes*, 116: 32–45.

DeShon, R. P., & Alexander, R. A. 1996. Goal setting effects on implicit and explicit learning of complex tasks. *Organizational Behavior and Human Decision Processes*, 65: 18–36.

Diekmann, K. A., Barsness, Z. I., & Sondak, H. 2004. Uncertainty, fairness perceptions, and job satisfaction: A field study. *Social Justice Research*, 17: 237–255.

Dimotakis, N., Conlon, D. E., & Ilies, R. 2012. The mind and heart (literally) of the negotiator: Personality and contextual determinants of experiential reactions and economic outcomes in negotiation. *The Journal of Applied Psychology*, 97: 183–193.

Drach-Zahavy, A., & Erez, M. 2002. Challenge versus threat effects on the goal–performance relationship. *Organizational Behavior and Human Decision Processes*, 88: 667–682.

Earley, P. C., Connolly, T., & Ekegren, G. 1989. Goals, strategy development, and task performance: Some limits on the efficacy of goal setting. *The Journal of Applied Psychology*, 74: 24–33.

Eatough, E. M., Chang, C. H., Miloslavic, S. A., & Johnson, R. E. 2011. Relationships of role stressors with

organizational citizenship behavior: A meta-analysis. *The Journal of Applied Psychology*, 96: 619–632.

Eid, M., & Diener, E. 1999. Intra-individual variability in affect: Reliability, validity, and personality correlates. *Journal of Personality and Social Psychology*, 76: 662–676.

Fleeson, W. 2001. Toward a structure- and process-integrated view of personality: Traits as density distributions of states. *Journal of Personality and Social Psychology*, 80: 1011–1027.

Fleeson, W., & Leicht, C. 2006. On delineating and integrating the study of variability and stability in personality psychology: Interpersonal trust as illustration. *Journal of Research in Personality*, 40: 5–20.

Ganster, D. C., Fox, M. L., & Dwyer, D. J. 2001. Explaining employees' health care costs: A prospective examination of stressful job demands, personal control, and physiological reactivity. *The Journal of Applied Psychology*, 86: 954–964.

Geisler, F. M., & Schröder-Abé, M. 2015. Is emotion suppression beneficial or harmful? It depends on self-regulatory strength. *Motivation and Emotion*, 39: 553–562.

Gilliland, S. 2008. The tails of justice: A critical examination of the dimensionality of organizational justice constructs. *Human Resource Management Review*, 18: 271–281.

Grant, A. M., Berg, J. M., & Cable, D. M. 2014. Job titles as identity badges: How self-reflective titles can reduce emotional exhaustion. *Academy of Management Journal*, 57: 1201–1225.

Greenberg, J. 1990. Organizational justice: Yesterday, today, and tomorrow. *Journal of Management*, 16: 399–432.

Greenberg, J. 1993. The social side of fairness: Interpersonal and informational classes of organizational justice. In R. Cropanzano (Ed.), *Justice in the workplace: Approaching fairness in human resource management*: 79–103. Hillsdale, NJ: Erlbaum.

Hershcovis, M. S., Turner, N., Barling, J., Arnold, K. A., Dupré, K. E., Inness, M., LeBlanc, M. M., & Sivanathan, N. 2007. Predicting workplace aggression: A meta-analysis. *The Journal of Applied Psychology*, 92: 228–238.

Hofmann, D. A., & Gavin, M. B. 1998. Centering decisions in hierarchical linear models: Implications for research in organizations. *Journal of Management*, 24: 623–641.

Holtz, B. C., & Harold, C. M. 2009. Fair today, fair tomorrow? A longitudinal investigation of overall justice perceptions. *The Journal of Applied Psychology*, 94: 1185–1199.

Ilies, R., Dimotakis, N., & De Pater, I. E. 2010. Psychological and physiological reactions to high workloads: Implications for well-being. *Personnel Psychology*, 63: 407–436.

Jin, S., Seo, M.-G., & Shapiro, D. L. 2016. Do happy leaders lead better? Affective and attitudinal antecedents of transformational leadership. *The Leadership Quarterly*, 27: 64–84.

Johnson, R. E., Lanaj, K., & Barnes, C. M. 2014. The good and bad of being fair: Effects of procedural and interpersonal justice behaviors on regulatory resources. *The Journal of Applied Psychology*, 99: 635–650.

Jones, D. A., & Skarlicki, D. P. 2013. How perceptions of fairness can change: A dynamic model of organizational justice. *Organizational Psychology Review*, 3: 138–160.

Jordan, J., Sivanathan, N., & Galinsky, A. D. 2011. Something to lose and nothing to gain: The role of stress in the interactive effect of power and stability on risk taking. *Administrative Science Quarterly*, 56: 530–558.

Judge, T. A., Heller, D., & Mount, M. K. 2002. Five-factor model of personality and job satisfaction: A meta-analysis. *The Journal of Applied Psychology*, 87: 530–541.

Judge, T. A., Rodell, J. B., Klinger, R. L., Simon, L. S., & Crawford, E. R. 2013. Hierarchical representations of the five-factor model of personality in predicting job performance: Integrating three organizing frameworks with two theoretical perspectives. *The Journal of Applied Psychology*, 98: 875–925.

Judge, T. A., Scott, B. A., & Ilies, R. 2006. Hostility, job attitudes, and workplace deviance: Test of a multilevel model. *The Journal of Applied Psychology*, 91: 126–138.

Kernis, M. H., Cornell, D. P., Sun, C. R., Berry, A., & Harlow, T. 1993. There's more to self-esteem than whether it is high or low: The importance of stability of self-esteem. *Journal of Personality and Social Psychology*, 65: 1190–1204.

Khan, A. K., Quratulain, S., & Bell, C. M. 2014. Episodic envy and counterproductive work behaviors: Is more justice always good? *Journal of Organizational Behavior*, 35: 128–144.

Kim, T. Y., & Leung, K. 2007. Forming and reacting to overall fairness: A cross-cultural comparison. *Organizational Behavior and Human Decision Processes*, 104: 83–95.

Kline, R. B. 2011. *Principles and practice of structural equation modeling* (3rd ed.). New York, NY: Guilford Press.

Koopman, J., Lanaj, K., & Scott, B. A. 2016. Integrating the bright and dark sides of OCB: A daily investigation of the benefits and costs of helping others. *Academy of Management Journal*, 59: 414–435.

Korsgaard, M. A., Roberson, L., & Rymph, R. D. 1998. What motivates fairness? The role of subordinate assertive behavior on managers' interactional fairness. *The Journal of Applied Psychology*, 83: 731–744.

Kotov, R., Gamez, W., Schmidt, F., & Watson, D. 2010. Linking "big" personality traits to anxiety, depressive,

and substance use disorders: A meta-analysis. ***Psychological Bulletin***, 136: 768–821.

Lanaj, K., Johnson, R. E., & Barnes, C. M. 2014. Beginning the workday yet already depleted? Consequences of late-night smartphone use and sleep. ***Organizational Behavior and Human Decision Processes***, 124: 11–23.

Lanzetta, J. T., & Driscoll, J. M. 1966. Preference for information about an uncertain but unavoidable outcome. ***Journal of Personality and Social Psychology***, 3: 96–102.

Layton, R. L., & Muraven, M. 2014. Self-control linked with restricted emotional extremes. ***Personality and Individual Differences***, 58: 48–53.

Lee, R. T., & Ashforth, B. E. 1996. A meta-analytic examination of the correlates of the three dimensions of job burnout. ***The Journal of Applied Psychology***, 81: 123–133.

Leiter, M. P., & Maslach, C. 1988. The impact of interpersonal environment on burnout and organizational commitment. ***Journal of Organizational Behavior***, 9: 297–308.

LePine, J. A., LePine, M. A., & Jackson, C. L. 2004. Challenge and hindrance stress: Relationships with exhaustion, motivation to learn, and learning performance. ***The Journal of Applied Psychology***, 89: 883–891.

LePine, J. A., Podsakoff, N. P., & LePine, M. A. 2005. A meta-analytic test of the challenge stressor–hindrance stressor framework: An explanation for inconsistent relationships among stressors and performance. ***Academy of Management Journal***, 48: 764–775.

Leventhal, G. S. 1980. What should be done with equity theory? New approaches to the study of fairness in social relationships. In K. Gergen, M. Greenberg & R. Willis (Eds.), ***Social exchange: Advances in theory and research***: 27–55. New York, NY: Plenum Press.

Lian, H., Brown, D., Ferris, D. L., Liang, L., Keeping, L., & Morrison, R. 2014. Abusive supervision and retaliation: A self-control framework. ***Academy of Management Journal***, 57: 116–139.

Lind, E. A. 2001. Fairness heuristic theory: Justice judgments as pivotal cognitions in organizational relations. In J. Greenberg & R. Cropanzano (Eds.), ***Advances in organizational justice***: 56–88. Stanford, CA: Stanford University Press.

Lind, E. A., & van den Bos, K. 2002. When fairness works: Toward a general theory of uncertainty management. ***Research in Organizational Behavior***, 24: 181–223.

Locke, E. A. 1976. The nature and causes of job satisfaction. In M. D. Dunnette (Ed.), ***Handbook of industrial and organizational psychology***: 1297–1343. Chicago, IL: Rand McNally.

Mackinnon, A., Jorm, A. F., Christensen, H., Korten, A. E., Jacomb, P. A., & Rodgers, B. 1999. A short form of the positive and negative affect schedule: Evaluation of factorial validity and invariance across demographic variables in a community sample. ***Personality and Individual Differences***, 27: 405–416.

Mantler, J., Matejicek, A., Matheson, K., & Anisman, H. 2005. Coping with employment uncertainty: A comparison of employed and unemployed workers. ***Journal of Occupational Health Psychology***, 10: 200–209.

Mayer, D., Nishii, L., Schneider, B., & Goldstein, H. 2007. The precursors and products of justice climates: Group leader antecedents and employee attitudinal consequences. ***Personnel Psychology***, 60: 929–963.

Mayer, D. M., Thau, S., Workman, K. M., Van Dijke, M., & De Cremer, D. 2012. Leader mistreatment, employee hostility, and deviant behaviors: Integrating self-uncertainty and thwarted needs perspectives on deviance. ***Organizational Behavior and Human Decision Processes***, 117: 24–40.

Meier, L. L., & Spector, P. E. 2013. Reciprocal effects of work stressors and counterproductive work behavior: A five-wave longitudinal study. ***The Journal of Applied Psychology***, 98: 529–539.

Morgeson, F. P., Campion, M. A., Dipboye, R. L., Hollenbeck, J. R., Murphy, K., & Schmitt, N. 2007. Reconsidering the use of personality tests in personnel selection contexts. ***Personnel Psychology***, 60: 683–729.

Motowidlo, S. J., Packard, J. S., & Manning, M. R. 1986. Occupational stress: Its causes and consequences for job performance. ***The Journal of Applied Psychology***, 71: 618–629.

Muraven, M., & Baumeister, R. F. 2000. Self-regulation and depletion of limited resources: Does self-control resemble a muscle? ***Psychological Bulletin***, 126: 247–259.

Murray, H. A. 1938. ***Explorations in personality: A clinical and experimental study of fifty men of college age***. New York, NY: Oxford University Press.

Muthén, L. K., & Muthén, B. O. 2010. ***Mplus user's guide*** (6th ed.). Los Angeles, CA: Muthén & Muthén.

Nixon, A. E., Mazzola, J. J., Bauer, J., Krueger, J. R., & Spector, P. E. 2011. Can work make you sick? A meta-analysis of the relationships between job stressors and physical symptoms. ***Work and Stress***, 25: 1–22.

Noe, R. A. 2012. ***Employee training and development***. Burr Ridge, IL: McGraw-Hill/Irwin.

O'Driscoll, M. P., & Beehr, T. A. 1994. Supervisor behaviors, role stressors and uncertainty as predictors of personal outcomes for subordinates. ***Journal of Organizational Behavior***, 15: 141–155.

Ohly, S., Sonnentag, S., Niessen, C., & Zapf, D. 2010. Diary studies in organizational research. ***Journal of Personnel Psychology***, 9: 79–93.

Ou, A. Y., Tsui, A. S., Kinicki, A. J., Waldman, D. A., Xiao, Z., & Song, L. J. 2014. Humble chief executive officers' connections to top management team integration and middle managers' responses. *Administrative Science Quarterly*, 59: 34–72.

Perrewe, P. L., Zellars, K. L., Ferris, G. R., Rossi, A. M., Kacmar, C. J., & Ralston, D. A. 2004. Neutralizing job stressors: Political skill as an antidote to the dysfunctional consequences of role conflict. *Academy of Management Journal*, 47: 141–152.

Pervin, L. A. 1963. The need to predict and control under conditions of threat. *Journal of Personality*, 31: 570–587.

Podsakoff, N. P., LePine, J. A., & LePine, M. A. 2007. Differential challenge stressor–hindrance stressor relationships with job attitudes, turnover intentions, turnover, and withdrawal behavior: A meta-analysis. *The Journal of Applied Psychology*, 92: 438–454.

Podsakoff, P. M., MacKenzie, S. B., Lee, J. Y., & Podsakoff, N. P. 2003. Common method biases in behavioral research: A critical review of the literature and recommended remedies. *The Journal of Applied Psychology*, 88: 879–903.

Preacher, K. J., Rucker, D. D., & Hayes, A. F. 2007. Addressing moderated mediation hypotheses: Theory, methods, and prescriptions. *Multivariate Behavioral Research*, 42: 185–227.

Preacher, K. J., Zyphur, M. J., & Zhang, Z. 2010. A general multilevel SEM framework for assessing multilevel mediation. *Psychological Methods*, 15: 209–233.

Pugh, S. D., Groth, M., & Hennig-Thurau, T. 2011. Willing and able to fake emotions: A closer examination of the link between emotional dissonance and employee well-being. *The Journal of Applied Psychology*, 96: 377–390.

Robbins, J. M., Ford, M. T., & Tetrick, L. E. 2012. Perceived unfairness and employee health: A meta-analytic integration. *The Journal of Applied Psychology*, 97: 235–272.

Roberson, Q. M., Sturman, M. C., & Simons, T. L. 2007. Does the measure of dispersion matter in multilevel research? A comparison of the relative performance of dispersion indexes. *Organizational Research Methods*, 10: 564–588.

Robinson, S. L., & Bennett, R. J. 1997. Workplace deviance: Its definition, its manifestations, and its causes. In R. J. Lewicki, R. J. Bies & B. H. Sheppard (Eds.), *Research on negotiation in organizations*, vol. 6: 3–27. Greenwich, CT: Elsevier Science/JAI Press.

Sarchione, C. D., Cuttler, M. J., Muchinsky, P. M., & Nelson-Gray, R. O. 1998. Prediction of dysfunctional job behaviors among law enforcement officers. *The Journal of Applied Psychology*, 83: 904–912.

Saucier, G. 1994. Mini-markers: A brief version of Goldberg's unipolar big-five markers. *Journal of Personality Assessment*, 63: 506–516.

Schminke, M., Ambrose, M. L., & Cropanzano, R. S. 2000. The effect of organizational structure on perceptions of procedural fairness. *The Journal of Applied Psychology*, 85: 294–304.

Schumacher, D., Schreurs, B., Van Emmerik, H., & De Witte, H. 2016. Explaining the relation between job insecurity and employee outcomes during organizational change: A multiple group comparison. *Human Resource Management*, 55: 809–827.

Scott, B. A., Barnes, C. M., & Wagner, D. T. 2012. Chameleonic or consistent: A multilevel investigation of emotional labor variability. *Academy of Management Journal*, 55: 905–926.

Scott, B. A., Colquitt, J. A., & Paddock, E. L. 2009. An actor-focused model of justice rule adherence and violation: The role of managerial motives and discretion. *The Journal of Applied Psychology*, 94: 756–769.

Scott, B. A., Colquitt, J. A., & Zapata-Phelan, C. P. 2007. Justice as a dependent variable: Subordinate charisma as a predictor of interpersonal and informational justice perceptions. *The Journal of Applied Psychology*, 92: 1597–1609.

Scott, B. A., Garza, A., Conlon, D. E., & Kim, Y. J. 2014. Why do managers act fairly in the first place? A daily investigation of "hot" and "cold" motives and discretion. *Academy of Management Journal*, 57: 1571–1591.

Skarlicki, D. P., & Latham, G. P. 2005. How can training be used to foster organizational justice? In J. Greenberg & J. Colquitt (Eds.), *Handbook of organizational justice*: 499–522. Mahwah, NJ: Lawrence Erlbaum.

Smith, A., Weed, K., & Ramsay, G. (Executive Producers) 2005–present. *Hell's Kitchen* [Television series]. Manchester, England; New York, NY: ITV Studios; ITV Studios America.

Snijders, T. A., & Bosker, R. J. 1999. *Multilevel analysis: An introduction to basic and advanced multilevel modeling*. London, England: Sage.

Sonnentag, S., & Frese, M. 2003. Stress in organizations. In W. C. Borman, D. R. Ilgen, R. J. Klimoski (Eds.), *Comprehensive handbook of psychology*, vol. 12: Industrial and organizational psychology: 453–491. New York, NY: John Wiley & Sons, Inc.

Spector, P. E., & Brannick, M. T. 2011. Methodological urban legends: The misuse of statistical control variables. *Organizational Research Methods*, 14: 287–305.

Tangney, J. P., Baumeister, R. F., & Boone, A. L. 2004. High self-control predicts good adjustment, less pathology, better grades, and interpersonal success. *Journal of Personality*, 72: 271–324.

Thau, S., Aquino, K., & Wittek, R. 2007. An extension of uncertainty management theory to the self: The relationship between justice, social comparison orientation, and antisocial work behaviors. *The Journal of Applied Psychology*, 92: 250–258.

Thau, S., Bennett, R. J., Mitchell, M. S., & Marrs, M. B. 2009. How management style moderates the relationship between abusive supervision and workplace deviance: An uncertainty management theory perspective. *Organizational Behavior and Human Decision Processes*, 108: 79–92.

Thoresen, C. J., Kaplan, S. A., Barsky, A. P., Warren, C. R., & de Chermont, K. 2003. The affective underpinnings of job perceptions and attitudes: A meta-analytic review and integration. *Psychological Bulletin*, 129: 914–945.

van den Bos, K. 2001. Uncertainty management: The influence of uncertainty salience on reactions to perceived procedural fairness. *Journal of Personality and Social Psychology*, 80: 931–941.

van den Bos, K., Bruins, J., Wilke, H. A. M., & Dronkert, E. 1999. Sometimes unfair procedures have nice aspects: On the psychology of the fair process effect. *Journal of Personality and Social Psychology*, 77: 324–336.

van den Bos, K., & Lind, E. A. 2002. Uncertainty management by means of fairness judgments. In M. P. Zanna (Ed.), *Advances in experimental social psychology*, vol. 34: 1–60, San Diego, CA: Academic.

van den Bos, K., & Miedema, J. 2000. Toward understanding why fairness matters: The influence of mortality salience on reactions to procedural fairness. *Journal of Personality and Social Psychology*, 79: 355–366.

Wang, M., Liu, S., Liao, H., Gong, Y., Kammeyer-Mueller, J., & Shi, J. 2013. Can't get it out of my mind: Employee rumination after customer mistreatment and negative mood in the next morning. *The Journal of Applied Psychology*, 98: 989–1004.

Zabelina, D. L., Robinson, M. D., & Anicha, C. L. 2007. The psychological tradeoffs of self-control: A multi-method investigation. *Personality and Individual Differences*, 43: 463–473.

Zapata, C. P., Olsen, J. E., & Martins, L. L. 2013. Social exchange from the supervisor's perspective: Employee trustworthiness as a predictor of interpersonal and informational justice. *Organizational Behavior and Human Decision Processes*, 121: 1–12.

⸺⋀⸺

Fadel K. Matta (fmatta@uga.edu) is an assistant professor in the Department of Management at the University of Georgia's Terry College of Business. He received his PhD from Michigan State University, MBA from the University of Notre Dame, and BBA from Loyola University Chicago. His research focuses on organizational justice, leader–member exchange, and emotions in the workplace.

Brent A. Scott (scott@broad.msu.edu) is an associate professor of management at the Eli Broad College of Business at Michigan State University. He received his PhD from the University of Florida. His research interests include mood and emotion, organizational justice, and employee well-being.

Jason A. Colquitt (colq@uga.edu) is the William Harry Willson Distinguished Chair in the Department of Management at the University of Georgia's Terry College of Business. He received his PhD from Michigan State University's Eli Broad Graduate School of Management. His research interests include organizational justice, trust, team effectiveness, and personality influences on task and learning performance.

Joel Koopman (jkoopman@mays.tamu.edu) is an assistant professor of management in the Mays Business School at Texas A&M University. He received his PhD from Michigan State University. His research interests include organizational justice, employee well-being, and research methodology.

Liana G. Passantino (passantino@bus.msu.edu) is a doctoral candidate in organizational behavior and human resource management at the Eli Broad College of Business, Michigan State University. Her research interests include organizational justice, mood and emotion, and strategic human resource management.

⸺⋀⸺