

# MY COWORKERS ARE TREATED MORE FAIRLY THAN ME! A SELF-REGULATORY PERSPECTIVE ON JUSTICE SOCIAL COMPARISONS

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Social comparison processes were integral to the origins of the organizational justice literature, and are incorporated within several justice-based constructs and theories. Yet, despite this, the justice social comparison literature is theoretically underdeveloped; while the extant literature affirms that justice social comparisons influence employee outcomes, it does not explain why, when, or for whom these effects occur. We build new theory on why justice social comparison perceptions influence employee behavior (specifically, helping and instigated incivility) by viewing the phenomenon through a self-regulatory lens. Doing so enables us to identify a novel explanatory mechanism and boundary condition for these effects. In two experience sampling studies, each conducted over multiple weeks, we test our proposed mechanism—envy and self-regulatory resource depletion—against four alternative justice-based mechanisms derived from equity theory, the group engagement model, social exchange theory, and referent cognitions theory. Findings were consistent with our theorizing, verifying that our integration of self-regulation with social comparison processes offers new insights to the justice literature. Overall, our scholarship has the potential to change the conversation about social comparisons in the justice literature by revitalizing a foundational aspect of justice rarely considered in contemporary research.

Social comparison processes were integral to the inception of the justice literature. For example, social comparisons are inherent in distributive justice perceptions (i.e., comparing one's input–outcome ratio to those of others; Adams, 1965). Folger, Rosenfield, Grove, and Corkran (1979) articulated a role for social comparison in procedural justice perceptions as well, and Folger's (1986) referent cognitions theory positioned social comparison as an input into fairness judgments. Yet, 30 years later, only a handful of

studies have examined social comparison processes as a mechanism for the effects of justice (e.g., Ambrose, Kulik, & Harland, 1991; Colquitt, 2004; Du, Choi, & Hashem, 2012; Grienberger, Rutte, & van Knippenberg, 1997). To put this number in context, Colquitt et al. (2013) identified *several hundred* papers on social exchange as a mechanism for justice effects in the period 2000–2010 alone, despite the more recent integration of this theory with justice (see Masterson, Lewis, Goldman, & Taylor, 2000).

The comparatively scant attention paid to justice social comparisons implies that scholars may believe there is little left to learn about these perceptions. We disagree, and put forth the thesis that

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several key opportunities remain to better understand the interplay of justice and social comparisons. This is largely because the justice social comparison literature is theoretically underdeveloped. The few papers on this topic either test referent cognitions theory's proposition that justice comparisons affect fairness judgments (e.g., Grienberger et al., 1997), or invoke social comparison theory to interpret interactions of employee justice perceptions with perceptions of others' justice (e.g., Colquitt, 2004). Yet in neither case did scholars build or test additional theory that elucidates the psychological mechanisms responsible for linking justice social comparisons with outcomes. The result is a literature that can confidently affirm that justice social comparisons influence employee outcomes, but cannot account for *why, when, or for whom* these effects occur.

The time is thus ripe to take a fresh look at justice social comparisons. To do so, we focus on the mechanism underlying social comparison—discrepancy. Social comparison can be seen as a theory of discrepancy awareness, in that individuals are sensitive to discrepancies between themselves and others on some criterion of interest (Festinger, 1954). For example, imagine an employee, Cony, at work one day when his supervisor stops by to discuss a recent decision. The decision is timely and Cony's supervisor is polite, but the explanation is somewhat cursory and Cony is *not* asked for his opinion. The supervisor then talks to another employee, Albert, who not only receives a detailed explanation, but also *is* asked to express an opinion. If Cony were to overhear this, the resulting discrepancy may lead him to make an upward (unfavorable, or low) justice social comparison.<sup>1</sup> Should Cony subsequently act in a retaliatory manner, scholars may rightly identify this upward (hereafter, “low”) justice social comparison perception as the trigger. However, the extant justice social comparison literature is ill suited to explain why.

Theories of self-regulation provide a framework to answer this question. “Self-regulation” describes a dynamic process of how discrepancy awareness influences behavior through shifts in attention and self-control (Johnson, Chang, & Lord, 2006). Thus,

discrepancy plays a central role in self-regulation as well. Given this conceptual alignment, we use self-regulation as a lens and further its integration with the justice literature (e.g., Thau & Mitchell, 2010). This provides us with a framework to build new theory explaining the effects of justice social comparisons. To that end, theory on self-regulation, social comparison, and justice converge in suggesting negative emotion as a potential explanation for Cony's reactions to a low justice social comparison perception. Emotions are fundamental mechanisms in theory on both justice and self-regulation (Carver & Scheier, 1990; Colquitt, 2012), and are primary outcomes of social comparisons (Gerber, Wheeler, & Suls, 2018; Smith, 2000). In particular, we focus on envy (i.e., “the unpleasant emotion that can arise when we compare unfavorably with others”; Smith & Kim, 2007: 46) as the specific negative emotion Cony may have experienced, because envy is the “prototype of social comparison-based emotions” (Smith, 2000: 177) and occurs when an employee both lacks and covets something possessed or experienced by a coworker.

Envy is an unpleasant, painful, and socially undesirable emotion (Smith & Kim, 2007) that, when viewed through a self-regulation lens, is expected to deplete self-regulatory resources (e.g., Hill, DelPriore, & Vaughan, 2011). This is because employees must suppress not only the emotional manifestation of envy, as dictated by societal standards (Heider, 1958), but also its cognitive and behavioral manifestations (Smith & Kim, 2007). Such suppression requires self-control, and acts of self-control draw from and deplete an individual's finite pool of self-regulatory resources (Johnson, Muraven, Donaldson, & Lin, 2018; Kanfer & Ackerman, 1989).

Self-regulatory resource depletion therefore provides the final link to explain how justice social comparison perceptions affect subsequent behavior. Outcomes such as reduced prosocial behavior and increased deviance have previously been implicated as consequences of low justice social comparisons (e.g., Adams, 1965; Colquitt, 2004; De Cremer, van Dijke, & Mayer, 2010). Drawing from this, we focus specifically on acts of helping and instigated incivility, in alignment with prior research that has argued discretionary behaviors such as these require self-regulatory resources to either enact (in the case of helping; Johnson, Lanaj, & Barnes, 2014) or inhibit (in the case of incivility [Rosen, Koopman, Gabriel, & Johnson, 2016]). Thus, when an employee's resources are depleted from experiencing high levels of envy, we expect they will engage in fewer helping behaviors and more uncivil behaviors as a result (Johnson et al., 2018).

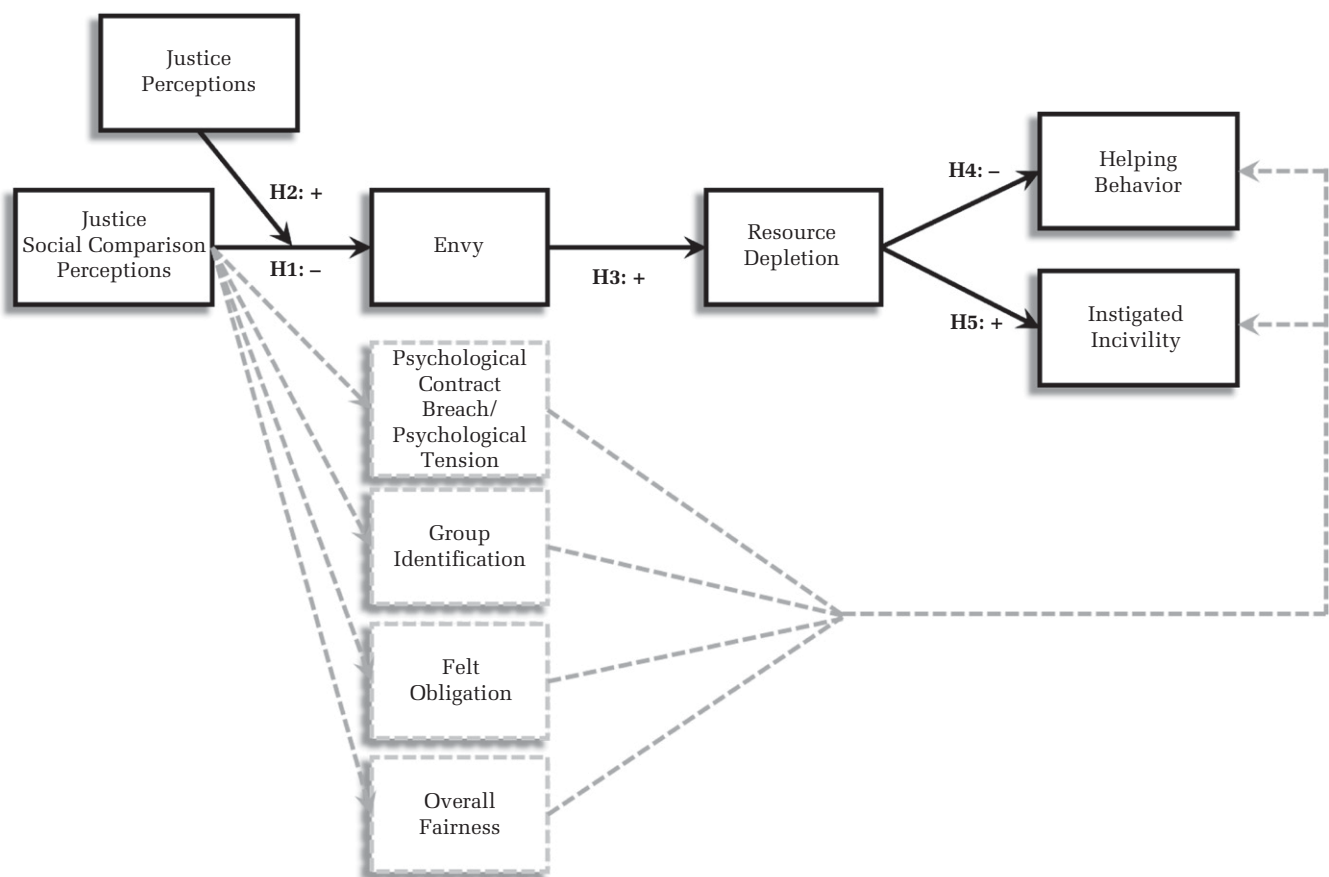
<sup>1</sup> While both upward and downward comparisons occur, upward comparisons are generally more common and impactful (Buunk & Gibbons, 2007; Mowday, 1991), and have been the focus of extant research on justice social comparison. We thus focus our theorizing on upward comparisons, a point to which we return in the Discussion.

Theories of self-regulation provide further insight into a condition that should exacerbate the harmful effects of low justice social comparison perceptions. Although a low justice social comparison is already negative, employees will likely interpret this social comparison in reference to the justice context in which the comparison occurs (Johnson et al., 2006; Lazarus, 1991). This suggests that a threatening and resource-poor context, which we operationalize as “low levels of justice perceptions” (Cropanzano, Byrne, Bobocel, & Rupp, 2001), could make the pernicious consequences of low justice social comparison perceptions even worse.

We contribute to the justice literature by highlighting an important yet underdeveloped aspect of organizational justice theory—the role of social comparison. In

so doing, we (a) build theory from a self-regulatory lens to explain the effects of justice social comparison on employee behavior and (b) identify a boundary condition for these effects. Thus, our theory explains *why*, *when*, and *for whom* justice social comparisons affect behavior (Whetten, 1989). In two experience sampling studies, each carried out over multiple weeks, we test our proposed mechanism—envy and self-regulatory resource depletion—against four alternative justice-relevant mechanisms (derived from equity theory, the group engagement model, social exchange theory, and referent cognitions theory; see Figure 1). Overall, with our theorizing, we aim to change the conversation about social comparisons in the justice literature by reinvigorating a foundational aspect of justice rarely considered in present research.

**FIGURE 1**  
**Theoretical Model of Justice Social Comparison Perceptions**



*Notes:* Gray boxes/arrows reflect constructs measured to account for four alternative mechanisms in our model. In both studies, we measured mechanisms derived from equity theory (psychological contract breach in Study 1 and psychological tension in Study 2), the group engagement model (group identification), social exchange theory (felt obligation), and referent cognitions theory (overall fairness). Though not depicted here (for clarity), we also modeled justice perceptions as moderating each of the paths from justice social comparison perceptions to the variables representing our alternative mechanisms.

## JUSTICE AND SOCIAL COMPARISONS

Social comparison was part of the inception of justice as a workplace phenomenon. These processes were so relevant that relative deprivation theory (Stouffer, Suchman, DeVinney, Star, & Williams, 1949), a precursor to theory on distributive justice, discussed social comparisons five years before Festinger (1954) even articulated his theory. Relative deprivation scholars have argued that accomplishments and outcomes are evaluated via social comparisons with others. In his theory of distributive justice, Adams (1965) similarly posited that employees judge outcome fairness via comparisons with others. Early procedural justice work also implicates social comparisons, as participants incorporated the judgments of others into their justice perceptions (Folger et al., 1979). Drawing from this, referent cognitions theory (Folger, 1986) further proposed that employees use social comparisons as an input to fairness judgments.

Over the next several decades, a small set of empirical studies were conducted on justice social comparison. Initially, scholars tested referent cognition theory's prediction about the unfairness of low justice social comparisons (e.g., Ambrose et al., 1991; Grienberger et al., 1997; Lind, Kray, & Thompson, 1998). The following decade, scholars expanded their focus to other outcomes of justice social comparison such as performance, cooperation, and job attitudes (e.g., Colquitt, 2004; De Cremer et al., 2010; Du et al., 2012; Mayer, Nishii, Schneider, & Goldstein, 2007). In both cases, scholarly interest in studying justice social comparisons soon appeared to wane. Perhaps this lack of sustained attention and focus explains why Greenberg, Ashton-James, and Ashkanasy (2007: 26) noted that "justice is a potentially fruitful area in which to develop further the role of social comparison processes." Our thesis is that there is more to learn about justice social comparison. To that end, we depart from prior justice social comparison research by applying a self-regulatory framework to build new theory on understanding *why*, *when*, and *for whom* justice social comparison perceptions are associated with downstream outcomes.

### A Self-Regulatory Perspective on Justice Social Comparisons

Festinger (1954) noted that individuals look to others for self-evaluation. Because justice is important to employees (Cropanzano et al., 2001), and is both observable and a frequent topic of conversation at work (Baer et al., 2018), employees will likely consider coworkers' justice experiences as well as

their own. Importantly, these experiences can diverge because supervisors enact justice differently across employees (e.g., Koopman, Matta, Scott, & Conlon, 2015). Thus, it is likely that employees compare their own justice experiences to those of their coworkers.

The experience of justice has self-regulatory implications that scholars have started to unpack (e.g., Thau & Mitchell, 2010). "Self-regulation" refers to a process by which individuals strive for a desired internal state by evaluating discrepancies between actual states and reference values (Johnson et al., 2006). Applied to justice social comparison, we posit that employees evaluate their level of justice relative to coworkers, and judge this evaluation against a reference standard that their own and others' treatment should be comparable. Indeed, one view of justice is as a norm for how supervisors ought to act toward all subordinates (Greenberg & Bies, 1992)—that is, prescribing a supervisor's "duty, obligations, or responsibilities" (Higgins, 1987: 321). If no discrepancy is perceived after comparing their justice experiences with coworkers, then employees' actual state aligns with the reference value and requires no further consideration. If instead employees experience comparably lower levels of justice than their coworkers, this discrepancy reveals an actual state that does not meet the reference standard. Whenever discrepancies are detected between actual states and internal referents, which signal stalled goal progress and achievement, negative emotions are elicited that capture people's attention and direct it to the problem at hand (Carver & Scheier, 1990; Higgins, 1987; Lazarus, 1991).

In particular, we focus on envy—a negative emotion highlighted by social comparison theorists (e.g., Smith & Kim, 2007)—as being likely to occur when individuals perceive a discrepancy between their current state and a desired outcome possessed by others. Envy also has existing, though less explored, connections to the justice literature. For example, although Folger (1986) did not explicitly examine envy in his referent cognitions theory, he did lay the groundwork for it. Specifically, he drew from research on counterfactual thinking by Kahneman and Tversky (1982), who explicitly identified envy as a potential outcome and labeled it a "counterfactual emotion." Counterfactual thinking is the foundation of referent cognitions, and social comparison is a type of referent cognition (Folger, 1986). Thus, while Folger did not focus explicitly on envy, his theory connects it to the justice literature. Given this, and the considerable emphasis on envy in the social

comparison literature, we investigate it as a central outcome of low justice social comparison (though employees may experience other emotions in such circumstances as well).

### Justice Social Comparison and Envy

The experience of envy is prevalent in the workplace and results in a host of negative outcomes toward others, such as victimization (Kim & Glomb, 2014) and social undermining (Duffy, Scott, Shaw, Tepper, & Aquino, 2012). Envy typically arises when an unfavorable social comparison is made in a domain of self-importance and relevance (Smith & Kim, 2007). Justice, given its relevance to multiple employee needs (Cropanzano et al., 2001), is one such domain.<sup>2</sup>

If an employee perceives lower levels of justice relative to coworkers (i.e., a low justice social comparison), this signals a discrepancy between the employee's actual state and the reference standard of comparable treatment. This discrepancy reflects a deficient environment wherein an employee's treatment falls below expectations (e.g., Tepper et al., 2018). Such a situation should elicit a negative emotional response; indeed, scholars hold that a primary function of emotions is as a source of feedback to the individual (Forgas, 1995). Given an unfavorably low social comparison as the trigger, we expect the employee to experience a social emotion such as envy, the function of which is to create awareness of potentially threatening disparities among individuals (Lange & Crusius, 2015). The experience of a low justice social comparison should leave the employee feeling unappreciated and disconnected from others (e.g., Lambert, 2011), which are precursors to feelings of envy (Smith & Kim, 2007). Moreover, justice is something that supervisors ought to enact comparably among employees, and Heider (1958) directly linked envy with disparities involving "ought" conditions. Thus, we hypothesize:

*Hypothesis 1. Justice social comparison perceptions are negatively associated with envy, in that lower justice social comparisons will lead to higher levels of envy.*

<sup>2</sup> This point differentiates our work from prior research. We theorize about envy as caused by an unfavorable justice social comparison (i.e., envy is endogenous to the justice social comparison). In contrast, prior research has focused on how the fairness of some event exacerbates envy's negative effects (Cohen-Charash & Mueller, 2007; Khan, Quratulain, & Bell, 2014), thereby positioning envy as exogenous to the effects of justice.

While we expect low justice social comparisons to be associated with envy, the strength of this relationship may differ based on the level of justice the employee perceives. To illustrate, consider Cony from our opening example. Although he perceived a moderate level of justice, his justice social comparison was quite low, given the high level of justice experienced by Albert. Contrast this with a third hypothetical employee, Madden, who did not receive a visit at all from the supervisor. Yet, suppose Madden overheard the supervisor's discussion with Cony (but not that with Albert). While the level of Madden's justice social comparison is comparable to Cony's in a relative sense, in an absolute sense, Madden likely perceives lower justice than Cony. We submit that Madden's envious reaction to this situation will be stronger than Cony's.

People are particularly attuned to environmental threats (Baumeister, Bratslavsky, Finkenauer, & Vohs, 2001). Pertaining to justice social comparison, while a disadvantage compared to coworkers is negative (Wood, 1989), the magnitude of that threat should be stronger in the context of low overall justice perceptions. Positive contexts, such as those involving higher levels of justice, are generally congruent with one's goals, have lower stakes, and reflect a more resource-rich environment (Lambert, 2011). Thus, they tend to necessitate less thought or attention (Lazarus, 1991). Even if an employee felt that coworkers experienced *more* justice, generally high levels of justice should reduce the level of threat associated with the perceived discrepancy, thus lessening the likelihood of envy. Indeed, envy is more likely when individuals lack some coveted outcome in both a relative and absolute sense (e.g., Smith & Kim, 2007).

When it comes to low levels of justice, if an employee feels that coworkers have had a similar experience, there is little reason to experience envy. Yet, if this employee perceives others as experiencing higher levels of justice, the comparison should "put in high relief what one lacks" (Smith, 2000: 179). Lower justice perceptions are indicative of a threatening context and are associated with negative emotions (Colquitt et al., 2013). Thus, this additional threat from low justice perceptions should also heighten the sense of discrepancy and goal blockage resulting from the low justice social comparison (Johnson et al., 2006; Lazarus, 1991), making the employee's relative disadvantage increasingly salient. Indeed, when justice is low, theory holds that individuals pay greater attention to the social context in the course of sensemaking about their current

circumstances (Cropanzano et al., 2001). Accordingly, we expect employees to experience envy more strongly following a low justice social comparison when their own justice perceptions are low (vs. high). Therefore, we hypothesize:

*Hypothesis 2. The negative association of justice social comparison perceptions with envy is moderated by justice perceptions, such that this relationship is stronger when justice perceptions are low (vs. high).*

### **Self-Regulatory Resource Depletion and the Behavioral Consequences of Envy**

A point of consensus among envy scholars is that experiencing envy is an aversive, uncomfortable, and even painful experience.<sup>3</sup> For an envious employee, a disadvantage relative to coworkers is bad enough. Yet, what makes the situation worse is society dictates that we must “smile at the fortune of another” (Heider, 1958: 289). That is, envious employees must suppress their feelings, lest they run afoul of normative standards. While the envy literature recognizes this point (Smith, 2000), less recognized is that those suppressive acts may require a self-regulatory process that exacts a further psychic toll on employees (Hill et al., 2011).

Self-regulation theories posit that individuals possess a finite pool of cognitive resources upon which they draw for acts of self-control (Johnson et al., 2018; Kanfer & Ackerman, 1989). Acts of self-control are necessary for employees to maintain their focus on task-related activities in the face of a variety of off-task distractions that routinely challenge this focus (Beal, Weiss, Barros, & MacDermid, 2005). The regulation of emotions is one such depleting distraction (e.g., Trougakos, Beal, Cheng, Hideg, & Zweig, 2015), which suggests that experiencing envy may require acts of self-control to suppress manifestations of this emotion. This has implications for employees’ self-regulatory resources (Johnson et al., 2018).

We mentioned already the need for resources to suppress the emotional manifestation of envy, as society demands that envy be kept covert. Yet, there

are reasons to think that envy’s resource cost is even higher, due to demands for cognitive and physical suppression as well. Regarding the former, envy may lead employees to feel a sense of inferiority (e.g., Smith, 2000) and to spend both time and resources ruminating about the implications of their disadvantage. Unfortunately, this expenditure is ultimately maladaptive, because it siphons further attention and cognitive resources away from task-related activities (Whitmer & Gotlib, 2013). Regarding the latter, envy is frequently described as being painful (Smith & Kim, 2007; Tai et al., 2012)—a point supported by neuroscientific evidence (Takahashi, Kato, Matsuura, Mobbs, Suhara, & Okubo, 2009). To this point, Higgins (1987) noted that pain avoidance and regulation require resource expenditures, which is supported by evidence linking the experience of pain to the depletion of self-regulatory resources (Christian, Eisenkraft, & Kapadia, 2015).

Overall, the experience of envy should lead employees to engage in suppressive acts to avoid their true feelings being known. Given the psychic costs of these acts, we expect envy’s effects on resource depletion to be both substantial and enduring. On this point, research has shown the effects of effortful acts on resource depletion to both manifest rapidly (Baumeister, Bratslavsky, Muraven, & Tice, 1998) as well as persist over time (Lin & Johnson, 2015). Such persistence may be particularly likely for envy, as the intensity and averseness of this emotion should make it quite salient to employees (Smith & Kim, 2007). On this basis, we hypothesize:

*Hypothesis 3. Envy is positively associated with resource depletion.*

Finally, our self-regulatory lens dovetails with the literature on justice social comparison to identify potential behavioral outcomes. Specifically, extant research suggests that low justice social comparison perceptions may have implications for both prosocial and deviant behavior (e.g., Adams, 1965; Colquitt, 2004; De Cremer et al., 2010). This aligns with recent attention to the effect of self-regulatory resources on daily discretionary behaviors. In brief, exerting self-control is integral for achieving objectives such as being helpful or avoiding destructive behavior (Barnes, Lucianetti, Bhawe, & Christian, 2015; Lanaj, Johnson, & Wang, 2016). However, to the extent that envy depletes self-regulatory resources, employees are more likely to experience breakdowns in their ability to regulate their subsequent behavior at work (Beal et al., 2005; Johnson et al., 2018). In particular, the effects of resource depletion generally manifest with behaviors that are low in intensity, somewhat ambiguous, and not formally

<sup>3</sup> Scholars differ, however, as regards whether envy is best captured as a single construct reflecting the aversiveness of the emotion (Tai, Narayanan, & McAllister, 2012) or as two constructs encapsulating separate motivational tendencies (Lange & Crusius, 2015). Our view on this debate aligns with the more parsimonious single-construct approach common in management research (e.g., Duffy et al., 2012; Puranik, Koopman, Vough, & Gamache, 2019; Tai et al., 2012).

role prescribed (Inzlicht, Schmeichel, & Macrae, 2014; Johnson et al., 2018).

Acts of self-control, such as suppressing selfish motives or adhering to social norms, can lead to a “temporary reduction in the self’s capacity or willingness to engage in volitional action” (Baumeister et al., 1998: 1253). When depleted, one such act that employees may reduce is helping behavior, as this constitutes a burden that draws regulatory resources that may otherwise be invested in one’s regular job duties (Beal et al., 2005; Johnson et al., 2018). Instead of taking on additional work that benefits others, resource-depleted employees may thus perform fewer helping behaviors to preserve what limited attentional resources they have left (Gabriel, Koopman, Rosen, & Johnson, 2018; Koopman, Lanaj, & Scott, 2016). Because helping behavior is ancillary to one’s formal in-role responsibilities, employees may be less motivated to expend their remaining resources on this behavior (Inzlicht et al., 2014). Thus, we hypothesize:

*Hypothesis 4. Resource depletion is negatively related to helping behavior.*

Another consequence of resource depletion is a lessened ability to restrain impulsive tendencies and conform to social norms (Welsh, Ellis, Christian, & Mai, 2014). Indeed, research has shown that resource depletion often manifests in unsanctioned acts such as abusive supervision (Barnes et al., 2015), deception (Welsh et al., 2014), and self-serving political acts (Gabriel et al., 2018). Overtly aggressive acts (e.g., Hershcovis & Barling, 2010) are unlikely, however. Yet acts such as instigated incivility, given its covert, innocuous, and ambiguous nature (Lim, Ilies, Koopman, Christoforou, & Arvey, 2018; Rosen et al., 2016), are possible. Because employees will likely prioritize their remaining resources to activities such as performing in-role tasks (Beal et al., 2005), higher levels of depletion may leave them with fewer resources to suppress the behaviors that characterize incivility, such as making snide remarks or rude gestures. Thus, we hypothesize:

*Hypothesis 5. Resource depletion is positively related to instigated incivility.*

Based on our above-delineated theory, we propose a mediated relationship between justice social comparisons and both helping behavior and instigated incivility. We expect justice social comparisons to influence employee behavior via the mediating effects of envy and resource depletion, such that employees with low justice social comparisons will engage in fewer helping behaviors and more uncivil behaviors. We further

expect these effects to be increasingly likely when the employee’s own justice perceptions are low (vs. high). Thus, we hypothesize:

*Hypothesis 6. Justice perceptions moderate the mediated relationship of justice social comparison perceptions, through envy and resource depletion, on (a) helping behavior and (b) instigated incivility, such that these relationships will be stronger when justice perceptions are low (vs. high).*

## OVERVIEW OF STUDIES

### Experience Sampling Design

We test our hypotheses in two daily, experience sampling studies. Because both justice (e.g., Matta, Scott, Colquitt, Koopman, & Passantino, 2017) and social comparison (Buunk & Gibbons, 2007) occur on a daily basis, we expect employees to make justice social comparisons based on their changing daily experiences. This methodology is particularly well suited for testing self-regulation theories, which posit that ever-changing actual states are continually compared against internal reference standards as part of a dynamic, iterative process that influences subsequent behavior (Johnson et al., 2006; Johnson et al., 2018). Thus, we align theory and method by taking a daily approach to testing our model.

In Study 1, we sent surveys at the beginning and end of each workday. Justice social comparison perceptions, justice perceptions, and envy were assessed in the end-of-day survey. Resource depletion was assessed the following morning (thus, the relationship between envy and depletion is modeled across days). Helping and instigated incivility were assessed that afternoon. In Study 2, we sent surveys in the middle and end of each workday. Justice social comparison perceptions, justice perceptions, envy, and resource depletion were assessed in the midday survey. Helping and instigated incivility were assessed in the end-of-day survey.

In both studies, we rule out four alternative explanations for the negative effects of low justice social comparison perceptions on helping and instigated incivility. For different reasons, each would similarly predict low justice social comparison perceptions to result in lower levels of helping and higher levels of instigated incivility. According to equity theory, low justice social comparison perceptions may signal inequity in an employee’s treatment relative to co-workers, thereby increasing tension and the desire to alter the unbalanced situation (Adams, 1965). The group engagement model posits employees use justice

social comparison perceptions to assess their relative standing. Low levels of these perceptions may lead employees to feel disconnected from their group, thereby reducing motivation to work toward the group's success (Blader & Tyler, 2009). Social exchange views justice as a resource given by supervisors and in respect to which employees are obliged to reciprocate (often toward coworkers). Low justice social comparison perceptions may therefore lessen feelings of obligation. Finally, referent cognitions theory sees justice social comparison perceptions as one of several inputs into fairness assessments (Folger, 1986). Low justice social comparison perceptions may thus reduce global fairness evaluations.

### Latent Justice Operationalization

A distinction in the justice literature involves the use of indirect measures, which focus on adherence to various justice rules (e.g., equity, correctability, truthfulness, or respect), or direct measures, which capture the resulting sense of fairness from adherence to justice rules (Colquitt, 2012). Because evaluations of justice rule adherence are more descriptive in nature, relative to perceptions of fairness, we felt they would be a more effective basis for social comparison (Festinger, 1954). Thus, we modified the rule-based measure from Colquitt (2001) to use in our study. Despite measuring the dimensions separately, existing theory is insufficient to develop strong logic for differences either in the mechanism or strength of one justice dimension compared to others (Mayer et al., 2007). Plus, any such differences are not germane to our research question. Thus, we adopted an alternative approach recommended for situations where there is no reason to distinguish among the dimensions (Colquitt, 2012). That is, we operationalize justice and justice social comparison as an aggregate construct consisting of the following constituent justice dimensions: distributive, procedural, informational, and interpersonal (for a recent example, see Koopman, Scott, Matta, Conlon, & Dennerlein, 2019).

## STUDY 1: METHOD

### Sample and Procedure

In exchange for extra credit, students in a business course at a U.S. Midwestern university provided contact information for a full-time employee interested in participating in the study. We sent participants two surveys per day at the beginning and end of each day for 15 workdays. Initially, 223 individuals enrolled in the study, of whom 210 (95%) completed

at least one full day of surveys. However, we had several criteria for inclusion in our final sample. In order that they could have an opportunity to observe and experience justice, participants must have interacted with both their supervisor and coworkers. We removed cases for participants who did not meet this criterion, leaving 146 participants (70%).<sup>4</sup> Second, we required that participants have at least four days of data, leaving us with 109 participants (75%). Finally, the relationship between envy and resource depletion was modeled across days, so we modified the prior criterion to require surveys be completed four times on successive days (e.g., surveys completed on a Monday and Tuesday were a valid case, but surveys completed on a Monday and Wednesday were not). Our final sample comprised 96 individuals (680 cases). Participants worked full time in various positions (e.g., forecast analyst, mechanical engineer, plumber, and veterinary assistant). They averaged 41.9 years of age ( $SD = 13.8$ ), worked 42.6 hours per week ( $SD = 7.9$ ), and spent 25.6 hours ( $SD = 14.2$ ) interacting with coworkers. Participants primarily identified as Caucasian (75%) and female (55%).

### Measures

**Justice social comparison perceptions.** We measured justice social comparison using the end-of-day survey, with three items per dimension. Each item was preceded by the stem, "Today, compared to my coworkers, my supervisor. . .," and employees responded to the following items. Regarding distributive justice: "... distributed outcomes based on the effort I have put into my work," "... distributed outcomes that are appropriate, based on the work that I have completed," and "... distributed outcomes that are justified, based on my performance." For procedural justice: "... gave me the opportunity to express my views and feelings about a work decision or action," "... gave me the opportunity to exert influence over a work decision or action," and "... gave me the opportunity to appeal a work decision or action." Pertaining to informational justice: "... was candid in communications with me," "... was thorough when explaining procedures to me,"

<sup>4</sup> Many individuals were either high in their organizational hierarchies, were self-employed, had infrequent contact with their supervisor or coworkers (e.g., working alone, working at home, traveling for work, etc.), or simply had bad timing for the study (e.g., supervisor was out of the office or they were traveling for work or on vacation).

and "... was timely when communicating details to me." In relation to interpersonal justice: "... treated me in a polite manner," "... treated me with respect," and "... refrained from making improper remarks or comments to me."

To capture employee assessments of discrepancy with regard to justice, we used an approach recently applied in several other studies of social comparison (e.g., Reh, Troster, & Van Quaquebeke, 2018). Each item contained a blank for participants to fill in using the appropriate anchor (e.g., "Distributed \_\_\_\_ outcomes based on the effort I have put into my work"). We used the anchors 1 = "far less," 2 = "less," 3 = "equal," 4 = "more," and 5 = "far more." Coefficient alphas were .97, .95, .87, and .96 for distributive, procedural, informational, and interpersonal justice social comparisons, respectively, and .95 for the aggregated justice comparison measure.

**Justice perceptions.** We measured justice perceptions with the end-of-day survey using the same items as above, except that the stem preceding each item was "Today, my supervisor..." We used the anchors from Colquitt (2001) (i.e., 1 = "to a very small extent" to 5 = "to a very large extent"). Coefficient alphas were .99, .96, .95, and .98 for distributive, procedural, informational, and interpersonal justice, respectively. Coefficient alpha for the aggregated measure was .96.

**Envy.** We measured envy ( $\alpha = .97$ ) with the end-of-day survey with four items from Duffy et al. (2012). An example item is "Right now, I feel resentment that other employees have it better than I do." We used the anchors 1 = "strongly disagree" and 5 = "strongly agree."

**Resource depletion.** We measured resource depletion ( $\alpha = .96$ ) with the beginning-of-day survey using five items validated by Johnson et al. (2014). We used the anchors 1 = "very slightly or not at all" and 5 = "very much." An example item is "Right now, I feel drained."

**Helping behavior.** We measured helping behavior ( $\alpha = .94$ ) with the end-of-day survey using six items adapted from Settoon and Mossholder (2002). Employees reported their helping, with the stem "Today, I..." preceding each item. An example item is "... took on extra responsibilities in order to help a coworker." We used the anchors 1 = "not at all" to 5 = "frequently."

**Instigated incivility.** We measured instigated incivility ( $\alpha = .94$ ) through the end-of-day survey with three items used by Rosen et al. (2016), and using the same item stem and anchors as with helping behavior. An example item is "... put a coworker down or acted condescendingly."

**Alternative mediating mechanisms.** We also included measures on the end-of-day survey to operationalize the aforementioned alternative explanations. For equity theory, we measured *psychological contract breach*<sup>5</sup> with three items (e.g., "I feel that almost all of the promises made by my employer have been kept";  $\alpha = .99$ ) from Robinson and Morrison (2000) to evaluate employee perceptions of an aversive, unbalanced situation. For group engagement, we measured *group identification* with three items (e.g., "If someone had criticized my workgroup, it would have felt like a personal insult";  $\alpha = .85$ ) from Mael and Ashforth (1992) to evaluate how employees perceived their connection with others. For social exchange, we measured *felt obligation* with three items (e.g., "I felt a personal obligation to do whatever I could to help one or more coworkers achieve their goals";  $\alpha = .94$ ) from Eisenberger, Armeli, Rexwinkel, Lynch, and Rhoades (2001) to assess whether employees felt obliged to exert effort on behalf of coworkers. For referent cognitions theory, we measured *overall fairness* with three items (e.g., "My supervisor treated me fairly";  $\alpha = .99$ ) adapted from Ambrose and Schminke (2009) to evaluate assessments of supervisor fairness.

## Analytic Approach

We analyzed our model with multilevel path analysis in Mplus 7.11 (Muthén & Muthén, 2015), using group-mean centering for predictors, random slopes for hypothesized paths, and fixed effects for controls (e.g., Lanaj, Kim, Koopman, & Matta, 2018). Table 1 (upper pane) shows the partitioning of within and between variance for the variables. We calculated the within-individual product of justice social comparison perceptions and justice perceptions to test for moderation. We modeled justice social comparison perceptions as a predictor of envy with justice perceptions as a moderator. Envy was modeled as a predictor of resource depletion, and resource depletion

<sup>5</sup> A reviewer expressed concern as to whether perceptions of psychological contract breach adequately captures the imbalance, tension, and injustice associated with perceiving inequity (Adams, 1965). We believe that there are theoretical reasons to think it does. In her seminal article, Rousseau (1989: 128) explicitly noted that injustice and inequity are associated with perceptions of contract breach. Moreover, contract breach perceptions prompt employees to scale back effort in order "to rebalance" their situation (Deng, Coyle-Shapiro, & Yang, 2018: 572) and "to make attempts at restoring equity [balance] in the relationship" (Kickul & Lester, 2001: 192).

**TABLE 1**  
**Percentage of Within-Person Variance among Study 1 and Study 2 Variables**

Construct	Within-individual variance ( $e^2$ )	Between-individual variance ( $r^2$ )	% of within-individual variance
<i>Study 1</i>			
Justice Social Comparison Perceptions	.064	.049	57
Justice Perceptions	.237	.366	39
Envy	.302	.364	46
Resource Depletion	.195	.159	58
Helping Behavior	.435	.562	45
Instigated Incivility	.134	.095	62
Psychological Contract Breach	.267	.588	31
Group Identification	.286	.243	54
Felt Obligation	.240	.252	49
Overall Fairness	.321	.437	42
<i>Study 2</i>			
Justice Social Comparison Perceptions	.082	.076	52
Justice Perceptions	.388	.738	34
Envy	.219	.532	29
Resource Depletion	.300	.216	58
Helping Behavior	.505	.555	48
Instigated Incivility	.016	.002	89
Psychological Tension	.431	.421	51
Group Identification	.304	.587	34
Felt Obligation	.418	.475	47
Overall Fairness	.359	.803	31

Note: The percentage of variance within-persons was calculated as  $e^2/(e^2 + r^2)$ .

as a predictor of helping and incivility. We controlled for the alternative mechanisms by modeling justice social comparison perceptions as a predictor of each mechanism with justice perceptions as a moderator. Each mechanism was modeled as a predictor of helping and incivility, and all direct effects were included in our model.

We tested mediation and moderated mediation using a parametric bootstrap with 20,000 resamples to create bias-corrected confidence intervals for the indirect effects. We also included two additional sets of control variables in our model. First, we included prior measures of each endogenous construct, and a variable to account for the study day (Gabriel et al., 2019). Second, we controlled for cyclical variation by including a variable representing the weekday, as well as the sine and cosine of that variable. Our final model included all controls, but results and effect sizes were comparable without them.

Next, we conducted two confirmatory factor analyses (CFAs). First, we examined justice social comparison perceptions and justice perceptions to evaluate our latent justice operationalization.

We specified justice perceptions and justice social comparison perceptions as second-order factors, with the four constituent dimensions modeled as first-order factors. For each first-order factor, we modeled their respective items as indicators. The resulting models adequately fit the data ( $\chi^2 = 314$ ,  $df = 243$ , CFI = .98, RMSEA = .02, SRMR = .04), and fit better than an alternative model with a single, second-order justice factor of all eight first-order factors ( $\Delta\chi^2 = 106$ ,  $\Delta df = 1$ ,  $p < .001$ ). We then conducted a second CFA, retaining this structure for justice and adding envy, resource depletion, helping, instigated incivility, psychological contract breach, group identity, felt obligation, and overall fairness. This model adequately fit the data ( $\chi^2 = 1789$ ,  $df = 1322$ , CFI = .96, RMSEA = .02, SRMR = .04).

## STUDY 1: RESULTS

Descriptive statistics for the focal variables are included in the upper pane of Table 2, and Table 3 presents the results of our analysis. Hypothesis 1, which predicted a negative relation of justice social comparison perceptions with envy, was supported

**TABLE 2**  
**Descriptive Statistics and Correlations among Study 1 and Study 2 Variables**

Variable	Mean	SD	1	2	3	4	5	6	7	8	9
<i>Study 1</i>											
1. Justice Social Comparison Perceptions	3.07	0.25									
2. Justice Perceptions	3.58	0.49	.37*								
3. Envy	1.61	0.56	-.21*	-.25*							
4. Resource Depletion	1.36	0.45	-.12*	-.08	.03						
5. Helping Behavior	2.96	0.67	.07	.14*	.01	-.07*					
6. Instigated Incivility	1.15	0.38	-.04	-.01	.01	.09	-.12				
7. Psychological Contract Breach	3.56	0.52	.16*	.32*	-.09*	.01	.20*	-.00			
8. Group Identification	3.57	0.54	.11*	.16*	-.06	-.04	.04	-.01	.21*		
9. Felt Obligation	3.89	0.49	.06	.18*	-.09*	-.03	.03	-.01	.31*	.29*	
10. Overall Fairness	3.83	0.55	.29*	.54*	-.21*	-.08*	.05	-.08*	.29*	.14*	.13*
<i>Study 2</i>											
1. Justice Social Comparison Perceptions	3.02	0.29									
2. Justice Perceptions	3.67	0.62	.28*								
3. Envy	1.44	0.47	-.18*	-.12*							
4. Resource Depletion	1.48	0.55	-.09*	-.14*	.14*						
5. Helping Behavior	2.62	0.71	-.08*	.13*	.14*	-.05					
6. Instigated Incivility	1.03	0.13	-.12*	-.05	-.01	.07*	-.03				
7. Psychological Tension	1.49	0.66	-.18*	-.15*	.26*	.06	.08*	.02			
8. Group Identification	3.54	0.55	.02	.05	.04	-.02	-.08*	-.03	-.04		
9. Felt Obligation	3.88	0.65	.02	.14*	.05	-.06	-.04	-.08*	-.01	.43*	
10. Overall Fairness	4.14	0.60	.28*	.55*	-.14*	-.05	.12*	-.05	-.18*	.06	.06

Notes: Study 1, Level 1,  $n = 680$ ; Level 2,  $n = 96$ . Study 2, Level 1,  $n = 853$ ; Level 2,  $n = 100$ . Correlations and standard deviations represent group mean-centered relationships among the daily variables at the within-person level of analysis.

\* $p < .05$

( $\gamma = -.25, p < .05$ ).<sup>6</sup> Hypothesis 2, which predicted an interaction with justice perceptions, was also supported ( $\gamma = .56, p < .05$ ; see upper pane of Figure 2). The relationship between justice social comparisons and envy was significant at low levels of justice perceptions ( $\gamma = -.50, p < .05$ ) but not significant at high levels of justice perceptions ( $\gamma = .00, ns$ ). Hypothesis 3, which predicted a positive relation of envy with resource depletion, was supported ( $\gamma = .08, p < .05$ ). In support of Hypothesis 4, resource depletion was negatively associated with helping behavior ( $\gamma = -.12, p < .05$ ), and, in support of Hypothesis 5, resource depletion was positively associated with instigated incivility ( $\gamma = .10, p <$

.05). The variance explained in each variable was 14%, 2%, 6%, and 9%, respectively.

The moderated mediation relationship between justice social comparisons and helping (Hypothesis 6a) was supported. The conditional indirect effect was positive (0.004) and significant (95% CI [0.0007, 0.0176]) at low justice perceptions levels, but not at high levels (0.000; 95% CI [-0.0064, 0.0044]), and this difference was significant (-0.005; 95% CI [-0.0249, -0.0003]). The moderated mediation relationship between justice social comparison and instigated incivility (Hypothesis 6b) was also supported. The conditional indirect effect was negative (-0.004) and significant (95% CI [-0.0163, -0.0005]) at low justice perceptions levels, but not at high levels (0.000; 95% CI [-0.0048, 0.0055]), and this difference was significant (0.004; 95% CI [0.0004, 0.0229]).

### Supplemental Analysis

We further explored the relationship of justice social comparison perceptions with envy by investigating each justice dimension. Although this

<sup>6</sup> Two envy items contain wording implying a social comparison, creating a potential artifactual explanation for our findings. Accordingly, we reanalyzed each model three times, omitting one item, omitting the other, and omitting both. Relationships were comparable when only one item was eliminated. The interactions weakened when both items were eliminated, though this could be due to envy being less reliable (estimated with only two items).

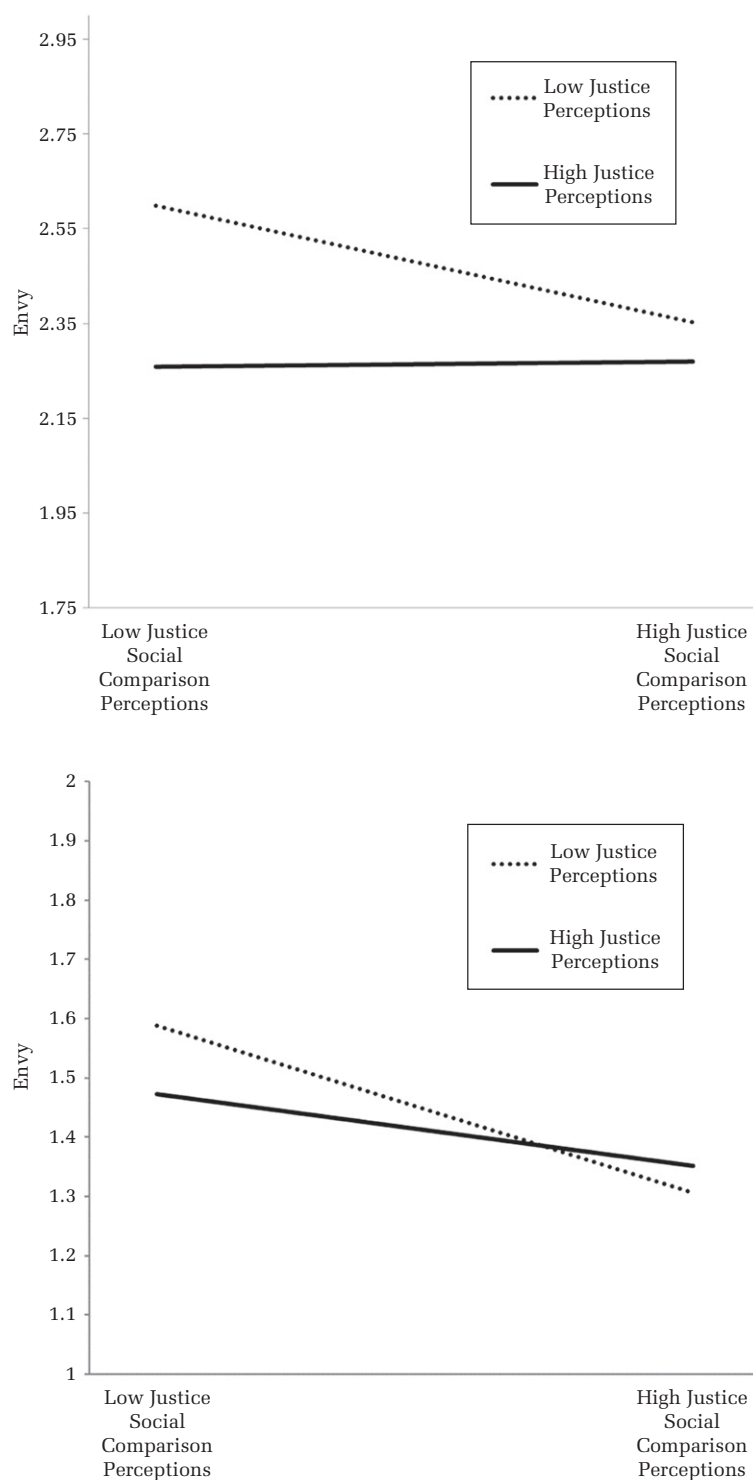
TABLE 3  
Path Analytic Results for Study 1

	Envy (T1)	Contract Breach (T1)	Group Identification (T1)	Felt Obligation (T1)	Overall Fairness (T1)	Resource Depletion (T2)	Helping (T3)	Instigated Incivility (T3)
<b>Variables</b>								
Intercept	1.59*	3.57*	.06	3.89*	.06	1.24*	.07	1.24*
<i>Independent Variable</i>								
Justice Social Comparison Perceptions (T1)	-.25*	.00	.10	-.06	.17	.13	.11	.09
<i>Moderator &amp; Interaction</i>								
Justice Perceptions (T1)	-.19*	.32*	.05	.17*	.05	.61*	.06	.06
Interaction (T1)	.56*	-.30*	.15	-.10	.13	-.26*	.13	.06
<i>Mediators</i>								
Envy (T1)								
Resource Depletion (T2)						.08*	.04	.05
<i>Alternative Mediators</i>								
Contract Breach (T1)							-.12*	.06
Group Identification (T1)							.27*	.02
Felt Obligation (T1)							.01	.06
Overall Fairness (T1)							-.07	.03
<b>Lagged Controls</b>							-.02	-.03
Prior Envy	.00							.02
Prior Contract Breach		-.06						.03
Prior Identification			.05					.10*
Prior Felt Obligation			.09	.10	.07			.02
Prior Overall Fairness								.03
Prior Resource Depletion								.01
Prior Helping								-.03
Prior Instigated Incivility								.02
<b>Other Controls</b>								
Day of the study	-.01	.01	.01	.00	.01	.01	.01	.24*
Day of the week	-.05	.09	.17	-.17	.17	.28	.14	.00
Sine	.15	.08	.17	-.20	.16	.36*	.25	.15
Cosine	-.01	.14	.19	-.19	.20	.28	.30	.10

Notes: Level 1,  $n = 680$ ; Level 2,  $n = 96$ .

\*  $p < .05$

**FIGURE 2**  
**Study 1 (Top) and Study 2 (Bottom) Interaction of Justice Social Comparison Perceptions and Justice Perceptions Predicting Envy**



*Notes:* Simple slopes analyses across both studies confirm that the relationship between justice social comparison perceptions and envy is significant at low levels of justice perceptions (Study 1:  $\gamma = -.50$ ,  $p < .05$ ; Study 2:  $\gamma = -.53$ ,  $p < .05$ ) and not significant at high levels of justice perceptions (Study 1:  $\gamma = .00$ ,  $ns$ ; Study 2:  $\gamma = -.23$ ,  $ns$ ).

analysis underspecifies our construct and potentially misses aspects of an employee's daily experience, these results may be informative for future research on specific dimensions of justice social comparison. Neither distributive justice social comparisons ( $\gamma = -.12, p > .05$ ) nor its interaction with justice perceptions ( $\gamma = .17, p > .05$ ) significantly predicted envy. Procedural justice social comparison perceptions were not associated with envy ( $\gamma = -.09, p > .05$ ); however, the interaction was significant ( $\gamma = .20, p < .05$ ). Neither informational justice social comparison perceptions ( $\gamma = -.14, p > .05$ ) nor the interaction ( $\gamma = .13, p > .05$ ) significantly predicted envy. Interpersonal justice social comparison perceptions ( $\gamma = -.15, p < .05$ ), and the interaction ( $\gamma = .40, p < .05$ ), significantly predicted envy.

## STUDY 1: DISCUSSION

In support of our hypotheses, employees felt more envy on days during which they experienced low justice social comparison perceptions, and this relationship was stronger on days when employees also perceived low levels of justice. We also found support for the effects of our proposed mechanism (envy and resource depletion) on subsequent behavior, beyond the four alternative mechanisms. However, this study has three limitations. First, a reviewer expressed concern about our measure of inequity, and recommended that we more explicitly capture the associated tension. Second, a reviewer also noted theory does not make a strong case for the lagged (across days) relationship between envy and resource depletion. Third, while not uncommon in experience sampling research, all focal variables were collected from the same source. Accordingly, we addressed these limitations in a second study.

## STUDY 2: METHOD

### Sample and Procedure

We recruited staff members from a large U.S. Southern university. Once enrolled, participants also nominated a coworker to participate. All individuals completed surveys at the middle and end of each day for 15 workdays. Initially, 201 individuals enrolled in the study, of whom 192 (96%) completed at least one full day of surveys. We again had several criteria for inclusion in our final sample. We eliminated cases for participants who did not interact with their supervisor and/or coworkers on a given

day, leaving 181 participants (94%). Second, we again required at least four days of data, resulting in 100 participants (55%) who provided 853 cases. Participants worked full time in a variety of positions (e.g., training specialist, simulation coordinator, health promotion specialist, and IT professional). Participants averaged 37.6 years of age ( $SD = 11.6$ ), worked 41.1 hours per week ( $SD = 2.9$ ), and spent 22.3 hours ( $SD = 16.1$ ) interacting with coworkers. Participants primarily identified as Caucasian (77%) and female (77%).

### Measures

**Justice social comparison perceptions and justice perceptions.** We measured both justice social comparison perceptions and justice perceptions in the midday survey with the items and anchors used in Study 1. The only difference was that the item stem for both was "Since arriving at work today. . . ." For justice social comparison perceptions, coefficient alphas were .99, .99, .94, and .99 for distributive, procedural, informational, and interpersonal justice social comparisons, respectively, and .96 for the aggregated measure. For justice perceptions, coefficient alphas for the dimensions were, respectively, .99, .98, .98, .99, and .97 for the aggregated measure.

**Envy and resource depletion.** We measured envy ( $\alpha = .98$ ) and resource depletion ( $\alpha = .96$ ) in the midday survey with the same items, anchors, and stem as in Study 1.

**Helping behavior.** We measured helping behavior ( $\alpha = .95$ ) in the end-of-day survey, as in Study 1; however, we asked participants to report on their coworker's enactment of this behavior. The stem for this measure was "Since taking the previous survey. . . ."

**Instigated incivility.** We measured instigated incivility ( $\alpha = .58$ ) in the end-of-day survey with the same items and anchors as Study 1. We used the same stem that was used in respect of helping behavior.

**Alternative mediating mechanisms.** We operationalized our alternative explanations by including variables on the midday survey. We used the same scales as in Study 1 for the group engagement, social exchange, and referent cognitions mechanisms ( $\alpha = .88, .98$ , and .99). The equity theory mechanism was operationalized by measuring *psychological tension* using three items (e.g., "I felt tension about things my supervisor did, or did not, do";  $\alpha = .97$ ) from Matthews,

DelPriore, Acitelli, and Barnes-Farrell (2006) to evaluate employees' experienced tension from their supervisor's actions.<sup>7</sup>

### Analytic Approach

Our analytic approach was identical to that implemented in Study 1. Table 1 (lower pane) shows the variance partitioning at the within and between levels for our variables. We also conducted the same CFAs as we did in Study 1. For the first, focusing only on justice social comparison perceptions and justice perceptions, the resulting model adequately fit the data ( $\chi^2 = 399$ ,  $df = 243$ , CFI = .98, RMSEA = .03, SRMR = .04), and fit better than an alternative model with a single, second-order justice factor of all eight first-order factors ( $\Delta\chi^2 = 247$ ,  $\Delta df = 1$ ,  $p < .001$ ). For the second, with all study variables (retaining this structure for justice and adding envy, depletion, helping, incivility, psychological tension, group identity, felt obligation, and overall fairness), the model adequately fit the data ( $\chi^2 = 2,390$ ,  $df = 1,322$ , CFI = .95, RMSEA = .03, SRMR = .04).

### STUDY 2: RESULTS

Descriptive statistics for the focal variables are included in the lower pane of Table 2, and Table 4 presents the results of our analysis. Hypothesis 1, which predicted a negative relation of justice social comparison perceptions with envy, was supported ( $\gamma = -.38$ ,  $p < .05$ ).<sup>8</sup> Hypothesis 2, which predicted an interaction with justice perceptions, was also supported ( $\gamma = .26$ ,  $p < .05$ ; see lower pane of Figure 2). The relationship between justice social comparisons and envy was significant at low levels of justice perceptions ( $\gamma = -.53$ ,  $p < .05$ ), but not significant at high levels of justice perceptions ( $\gamma = -.23$ , *ns*). Hypothesis 3, which predicted a positive relation of envy with resource depletion, was supported ( $\gamma = .20$ ,  $p < .05$ ). In support of Hypotheses 4 and 5, resource depletion was

negatively associated with helping behavior ( $\gamma = -.12$ ,  $p < .05$ ) and positively associated with instigated incivility ( $\gamma = .02$ ,  $p < .05$ ). The variance explained in each variable was 19%, 12%, 18%, and 19%, respectively.

The moderated mediation relationship between justice social comparisons and helping (Hypothesis 6a) was supported. The conditional indirect effect was positive (0.013) and significant (95% CI [0.0034, 0.0345]) at low justice perceptions levels, but not at high levels (0.005; 95% CI [-0.0016, 0.0240]), and the difference was significant (-0.006; 95% CI [-0.0161, -0.0017]). The moderated mediation relationship between justice social comparison and instigated incivility (Hypothesis 6b) was also supported. The conditional indirect effect was negative (-0.002) and significant (95% CI [-0.0056, -0.0007]) at low justice perceptions levels, but not high levels (-0.001; 95% CI [-0.0039, 0.0003]), and the difference was significant (0.001; 95% CI [0.0003, 0.0030]).

### Supplemental Analysis

We again explored the relationship of justice social comparison perceptions with envy by investigating each justice dimension, noting once more that this analysis underspecifies our construct and potentially misses aspects of an employee's daily experience. Both distributive justice social comparison perceptions ( $\gamma = -.18$ ,  $p < .05$ ) and the interaction ( $\gamma = .14$ ,  $p < .05$ ) significantly predicted envy. Procedural justice social comparison perceptions ( $\gamma = -.16$ ,  $p < .05$ ), but not the interaction ( $\gamma = .17$ ,  $p > .05$ ), were associated with envy. Neither informational justice social comparison perceptions ( $\gamma = -.20$ ,  $p > .05$ ) nor the interaction ( $\gamma = .10$ ,  $p > .05$ ) significantly predicted envy. Finally, both interpersonal justice social comparison perceptions ( $\gamma = -.07$ ,  $p < .05$ ) and the interaction ( $\gamma = .24$ ,  $p < .05$ ) significantly predicted envy.

### STUDY 2: DISCUSSION

The results of Study 2 not only replicate our prior findings, but also demonstrate both that our results are robust to different operationalizations of the equity theory mechanism as well as varied durations of the time interval between assessments of envy and resource depletion. There is a notable limitation—the low mean (1.03) and variance (.12) of our incivility measure, which resulted in a reliability lower than the typical threshold of .70. However, any

<sup>7</sup> We also measured psychological contract breach in Study 2 and reran our analyses with this measure instead of psychological tension. All results were comparable and are available upon request.

<sup>8</sup> We ran the same analyses as Study 1 wherein we investigated the envy items that exhibit content overlap with social comparison. The results of these alternative analyses were comparable to those obtained through our primary model.

TABLE 4  
Path Analytic Results for Study 2

	Envy (T1)	Tension (T1)	Group Identification (T1)	Felt Obligation (T1)	Overall Fairness (T1)	Resource Depletion (T1)	Helping (T2)	Instigated Incivility (T2)
<b>Variables</b>								
Intercept	1.43*	.04	1.48*	.07	3.54*	.08	3.90*	.07
<i>Independent Variable</i>								
Justice Social Comparison Perceptions (T1)	-.38*	.17	-.25*	.11	-.05	.08	-.14	.14
<i>Moderator &amp; Interaction</i>								
Justice Perceptions (T1)	-.03	.03	-.11*	.04	.05	.06	.16*	.05
Interaction (T1)	.26*	.07	.43*	.20	-.09	.07	-.40*	.14
<i>Mediators</i>								
Envy (T1)								
Resource Depletion (T1)						.20*	.11	.00
<i>Alternative Mediators</i>								
Tension (T1)							-.12*	.02*
Group Identification (T1)							.06	.00
Felt Obligation (T1)							-.05	-.01
Overall Fairness (T1)							-.03	-.02
<i>Lagged Controls</i>							.18*	.00
Prior Envy	.22*	.07						
Prior Tension		.04						
Prior Identification			.14					
Prior Felt Obligation				.08				
Prior Overall Fairness				.05	.01	.04		
Prior Resource Depletion						.14*	.27*	.05
Prior Helping								
Prior Instigated Incivility								.07
<i>Other Controls</i>								
Day of the study	-.01	.01	.00	.01	-.01	.01	.00	.01
Day of the week	-.12*	.05	.07	.06	-.12*	.06	.12	.01
Sine	-.16	.09	.14	.11	-.18*	.09	.18	.00
Cosine	-.06	.04	-.03	.06	-.01	.05	.03	.01

Notes: Level 1,  $n = 853$ ; Level 2,  $n = 100$ .  
\*  $p < .05$

concerns are mitigated for two reasons. First, our hypotheses were supported and our results mirror those from Study 1, in which there were no issues with the incivility measure. Second, and more importantly, recent research notes that, in some cases, due to assumptions that are routinely violated in empirical data (i.e., that items display tau equivalence, and that scores are normally distributed [McNeish, 2018]), coefficient alpha is an overly conservative estimate of internal consistency reliability. When these conditions are not met—which is the case with our measure of incivility—“Cronbach’s alpha becomes a lower-bound estimate of internal consistency rather than a true estimate” (McNeish, 2018: 415). McNeish (2018) provided tools to calculate two alternatives: omega total and Coefficient *H*. Using these, the recalculated reliability for incivility is .81 and .82, respectively. Thus, although a limitation of Study 2, the low coefficient alpha for incivility does not appear to threaten the validity of our findings.

## GENERAL DISCUSSION

Social comparison processes were critical to the origins of the justice literature. Yet, while this literature has become more “social” over time (focusing less on distributions and more on interpersonal communication and treatment; Colquitt, Greenberg, & Zapata-Phelan, 2005), research on justice social comparisons took a backseat to alternative theories such as social exchange and group engagement (e.g., Blader & Tyler, 2009; Colquitt et al., 2013). This shift in attention seems to reflect an implicit, collective consensus that little remains to be learned about justice social comparisons. We submit that this consensus is premature, and opportunities for building new theory about justice social comparison perceptions remain.

To that end, we show the potential value of using a self-regulatory framework to understand the effects of justice social comparisons. Social comparison and self-regulation share a key mechanism—discrepancy awareness—and, by drawing from self-regulation theory, we elucidate novel mechanisms—envy and resource depletion—through which justice social comparisons influence behavioral outcomes. Moreover, the self-regulation framework we rely on further helped to elucidate justice perceptions as a boundary condition on the effects of justice social comparison perceptions, as low levels of justice perceptions exacerbated the negative effects of low justice social comparison perceptions. Finally, to align with theory on the daily nature of justice and social comparison (e.g., Buunk & Gibbons, 2007; Matta et al., 2017),

we tested our theory in two daily experience sampling studies. Thus, our research brings attention to the important, but underdeveloped, nature of social comparison in justice theory and elucidates *why*, *when*, and *for whom* justice social comparisons affect employee states and behaviors.

## Implications for Theory and Practice

Our integration of self-regulation theory with justice social comparisons provides further evidence of the utility of this theory to the justice literature. Yet, despite its ability to explain employee behavior (Johnson et al., 2006)—particularly many of the behaviors often linked to justice (Colquitt et al., 2013)—justice scholars rarely draw from this perspective. We feel that now is the time for this to change. Self-control and regulatory resources have implications for important work behaviors, and, hence, developing an understanding of how justice-relevant experiences (e.g., justice social comparison perceptions) impact self-regulation processes offers a significant theory-building opportunity. Self-regulation theory can provide scholars with new insights into why and how justice affects employee behavior, and, in particular, leveraging this theory in conjunction with a within-individual approach to theory building has considerable potential.

Decades of research have produced a vast literature explaining why some employees (but not others) perceive justice and how some employees (but not others) react to justice. Most of this research, however, has examined justice as a static, between-individual condition (i.e., some individuals perceive higher levels of justice than others do). We think, however, that taking a daily, within-individual perspective to justice phenomena has much potential to build new justice theory and refine existing theory. For example, Matta et al. (2017) showed the daily, variant nature of justice, and, in so doing, refined aspects of uncertainty management theory. Johnson et al. (2014) used a within-individual lens to show that enacting procedural versus interpersonal justice behaviors has unique effects on supervisors’ self-regulation. We submit that further contributions to the justice literature can be realized through a close examination of extant theory and a willingness to consider how a different viewpoint might change our current understanding.

To that end, prior research has similarly treated justice social comparison as a static, between-individual condition (e.g., Ambrose et al., 1991; Colquitt, 2004; De Cremer et al., 2010; Grienberger

et al., 1997). That is, whether the justice social comparison was manipulated or measured, employees are seen as confined to a particular level of justice relative to coworkers, and expected to behave accordingly. As our results show, however, approximately half (52–57%) of the variance in justice social comparisons is within individuals. Thus, by calling attention to justice social comparison as a potentially dynamic daily experience, and by elucidating its self-regulatory implications, our research demonstrates that there are opportunities for future research to improve and expand the interplay of justice and social comparisons.

For example, we focused on upward social comparisons, in alignment with the fact that most research on social comparison in general (Gerber et al., 2018), and with justice specifically (Mowday, 1991), has shown upward comparisons are common and impactful. Yet, discrepancies in an employee's justice experiences relative to those of their coworkers exist downward as well (Buunk & Gibbons, 2007), but extant findings are somewhat equivocal (Gerber et al., 2018). Indeed, an analysis with our Study 1 data reflects this. We examined sympathy, a social emotion associated with downward comparisons (Smith, 2000), and included this alongside envy in our model (i.e., an outcome of justice social comparison and predictor of resource depletion). The effects of justice social comparison predicting sympathy approached significance ( $\gamma = .32, p < .10$ ), but sympathy was not associated with resource depletion ( $\gamma = -.03, p > .10$ ). Thus, employees may react to downward justice social comparisons, but perhaps not via a resource mechanism. Instead, a self-focused view of downward comparisons could be more appropriate, which might suggest an emotion such as pity or pride (Smith, 2000). Sympathy necessitates that the employee both feels sorrow over another's misfortune and is willing to share in that misfortune (Smith, 2000). Pity or pride may allow employees to avoid any self-relevant implications of the situation.

There are other emotional mechanisms that may be relevant as well. While our theory and above discussion focus specifically on social comparison emotions (those that relate either to the self, or to the target of the comparison; Smith, 2000), that a justice social comparison occurs due to a third party (the supervisor) broadens the horizon of possible emotional responses. For example, while employees might envy a coworker due to a low justice social comparison, they may feel anger or resentment toward the supervisor who created the discrepancy.

Indeed, such emotional reactions were the focus of early theory on justice social comparisons (Adams, 1965; Folger, 1986). While our results account somewhat for such reactions (e.g., via psychological contract breach, in Study 1, or psychological tension, in Study 2), further inquiry (particularly using an experience sampling design, given the dynamic nature of emotion) would be valuable. Moreover, other previously unexplored emotions may be relevant to consider. For example, as we articulated in our theory, low justice social comparisons (especially when combined with low justice perceptions) signal a threatening, resource-poor justice context. Such a context could elicit an emotion such as anxiety (Cheng & McCarthy, 2018). We thus call for research on the emotional reactions that result from justice social comparisons.

Besides emotions, there may be other viable mechanisms that underlie the effects of justice social comparison. In addition to feeling envy, anger, or a self-focused emotion such as depression (e.g., Smith, 2000), employees may also ruminate on the situation. Rumination consumes attentional resources (e.g., Porath & Erez, 2007), so, if a low justice social comparison led to rumination, this could constitute a separate path through which justice social comparison impacts resource depletion. Although we are unaware of research that has tested this idea directly, Weber and Hagmayer (2018) conducted a training program to modify how individuals construe social comparison situations and found a decrease in reports of rumination.

There may also be value to examining in more depth the relations between justice social comparison perceptions and the variables we included to operationalize alternative mechanisms. Our primary focus was demonstrating that our hypothesized mechanism (envy and resource depletion) predict outcomes beyond these mechanisms. However, it is worthwhile to note that justice social comparison perceptions and justice perceptions interacted to predict some of the other mechanisms as well. While it is beyond the scope of our current manuscript to develop theory for these other interactions, we think this is a viable direction for future research. In particular, such a direction holds promise because these mechanisms are not commonly examined at the within-individual level of analysis, and therefore the logic for these relationships would need to be established.

It may also be valuable to examine enhancing or mitigating factors for the effects of justice social comparisons. We showed that the effects can be

influenced by a daily factor—employees' overall level of perceived justice. However, other more stable factors could also increase employee sensitivity to justice social comparisons. Buunk and Gibbons (2007) noted, for example, that some individuals have a stronger need than others to evaluate themselves via social comparisons—what they term “social comparison orientation.” Similarly, Liao and Rupp (2005) noted that some individuals are particularly attuned to justice information in their environment (i.e., justice orientation). Both reflect person-level characteristics that could potentially magnify the effects of justice social comparisons.

A final potential direction for future research involves the way in which justice social comparison has been operationalized, both by us as well as by other scholars. The common paradigm for justice social comparison studies is to examine the consequences of interacting perceptions of one's own and others' justice (or manipulations of these conditions). Our approach was different, in that, instead of assessing the justice experience of employees and the comparison other separately, employees reported their daily justice experiences relative to coworkers. Interestingly, both approaches can be likened to methods of measuring person–environment (PE) fit (Edwards, Cable, Williamson, Lambert, & Shipp, 2006). Specifically, the approach taken in most justice social comparison research is analogous to what PE fit scholars refer to as “atomistic fit,” whereas, in contrast, our approach is analogous to what PE fit scholars refer to as “molecular fit.” While there are conceptual and empirical differences between these measurement strategies (Edwards et al., 2006), that justice social comparisons have been operationalized with both methods suggests an opportunity for integration with theory on PE fit.

For example, a stream of research in this literature describes needs–supplies fit (Edwards et al., 2006). This perspective examines whether the environment provides the resources required to meet employee needs. Justice is generally considered to be a basic need (Cropanzano et al., 2001), and our social comparison theorizing implies that the level of justice received (the actual state) should be congruent to that received by coworkers (the reference standard). Viewed this way, when the relative amount of self–other justice is discrepant, then, for a given employee, it is either deficient or in excess (Tepper et al., 2018). We are unaware of social comparison research (on justice or otherwise) in which upward or downward comparisons have been articulated using a fit paradigm. However, doing so could introduce

both a novel theoretical lens through which to examine the consequences of justice social comparison as well as a novel methodological approach, through the use of polynomial regression and surface plot analysis (e.g., Matta, Scott, Koopman, & Conlon, 2015).

Our theory has practical implications as well. Research on self-serving biases suggests some individuals make attributions in a way that protects their self-esteem (e.g., Kunda, 1990). Applied to justice, perhaps some individuals typically feel others are treated more fairly in order to insulate themselves from negative self-evaluations. If so, our results could be dismissed if these relationships were being examined at a between-individual level (i.e., “You can't please everyone!”). Our theory, however, was within individual, as we examined the implications of an individual's perception that coworkers were treated more fairly on some days compared to others. Our results thus show any employee, regardless of any self-serving bias tendencies, might perceive low justice social comparisons on a given day and feel envy as a result.

Our results further demonstrate the importance for supervisors to treat employees fairly. This is often difficult for supervisors; some employees may have higher-quality relationships with their supervisor than others (Koopman et al., 2015), enacting justice may sometimes be depleting for supervisors (Johnson et al., 2014), or supervisors are sometimes too busy to be fair (Sherf, Venkataramani, & Gajendran, 2019). However, the consequences for not enacting justice, for enacting it differentially toward the same employee on different days, or for enacting it differentially for different employees are notable (Colquitt et al., 2013; Matta et al., 2017).

## Limitations

Despite strengths of our methods and analyses, there are limitations as well. First, most study variables were collected from the same source, creating common method variance concerns. This decision was made for theoretical reasons: regarding justice, the employee's perception is critical and it is unlikely that others could report on the employee's level of envy or resource depletion. It is possible to use other-reports for our behavioral outcomes, and we did this for helping in Study 2—the results of which converged with self-reported helping in Study 1. We also took other steps recommended by Gabriel et al. (2019) to remove the effects of stable response tendencies (e.g., time separation, different scale anchors, group mean-centering).

Second, a potential concern exists regarding our measurement of justice social comparison. Despite similar use in several recent examinations of social comparison (e.g., Reh et al., 2018), asking participants to assess discrepancy the way we did has limitations. As Edwards (2001: 268) noted, "Respondents do not systematically combine components when reporting their difference." That is, individuals may use a different mental calculus to evaluate the discrepancy. In a between-individual study—which compares individual responses to the sample mean—this could threaten the validity of the measure by changing the rank ordering of relationships within a sample. For within-individual analyses such as ours, however, this concern is not germane. The use of group mean-centering ensures that relationships are assessed relative to participants' own mean, not the sample mean. Thus, relationships reflect the way in which a given individual responds to some psychic process (i.e., a justice social comparison). By eliminating between-individual variance from the analysis, disparities in this process across individuals do not threaten the validity of findings (Gabriel et al., 2019). This, plus the convergence of results across two studies, should largely alleviate concerns about this approach.

A final limitation is that our effect sizes are small, which is common in within-individual research where the analysis removes a substantial amount of variance from each measure (as much as 60–70% for some variables in our studies). Plus, our mechanism consists of three stages, each of which is multiplied to calculate the indirect effect. Nevertheless, the size of our effects and confidence intervals are comparable to other similar models (e.g., Barnes et al., 2015), and even small effects have meaningful implications for theory (Prentice & Miller, 1992).

## CONCLUSION

Across two studies, we showed that justice social comparison is a within-individual phenomenon with self-regulatory implications for employees' emotions, self-control resources, and behaviors. The new theory that we built around the mechanisms and boundary conditions of justice social comparison can serve as a springboard to reinvigorate scholarly attention to this important and foundational, yet underdeveloped, component of organizational justice theory. Thus, while supervisors may have their reasons for treating different employees with different levels of justice, they should heed our findings and be aware that, in the words of Dunford, Jackson,

Boss, Tay, and Boss (2015: 319), "Your employees are watching."

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