

Organizational Justice and Leadership: Expanding the Causal Framework

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*To my parents Karin and Guido,
to my husband Christoph,
and to my children Joan, Amaya and Nuno*

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Abstract

This thesis examines the relationships among managerial justice and employee attitudes, emotions and behaviors to re-conceptualize the traditional causal frameworks of the justice literature. In the first chapter, I propose that distributive fairness perceptions do not unidirectionally affect performance, but that the two are linked reciprocally. Data from two laboratory experiments support this proposition. Chapter 2 builds on this idea to argue that managers use employee performance as a heuristic for allocating procedural and informational justice, favoring those whose performance stands out positively or negatively. This is backed by findings from a field survey and two laboratory experiments. Finally, chapter 3 uses a field survey to test whether disagreement in perceptions of managerial interpersonal justice among managers and employees is associated with employee job satisfaction, intrinsic motivation, and emotional exhaustion. The results indicate that perceptual disagreement relates to lower job satisfaction and intrinsic motivation. However, higher levels of emotional exhaustion are observed only when managerial perceptions exceed those of the employee.

Resumen

Esta tesis examina las relaciones entre la justicia por parte de mánagers y las opiniones, emociones y actitudes de los empleados para re-definir los marcos tradicionales de la literatura sobre la justicia organizacional. En el primer capítulo, se propone que las percepciones de la justicia distributiva no afectan al rendimiento de los empleados unidireccionalmente, pero que ambos están relacionados recíprocamente. Los datos de dos experimentos de laboratorio apoyan esta propuesta. El capítulo 2 se apoya en esta idea para argumentar que los mánagers utilizan el rendimiento de los empleados como procedimiento heurístico para asignar justicia de procedimiento e informacional, favoreciendo a los empleados de los cuales el rendimiento destaca de manera positiva o negativa. Esto se apoya en los resultados de una encuesta de campo y en dos experimentos de laboratorio. Finalmente, el capítulo 3 usa una encuesta de campo para someter a prueba si el desacuerdo en las percepciones sobre justicia interpersonal entre mánagers y empleados está relacionado con la satisfacción de los empleados con el trabajo, la motivación intrínseca, y el agotamiento emocional. Los resultados indican que el desacuerdo en las percepciones tiene que ver con satisfacción con el trabajo y motivación intrínseca más bajas. Sin embargo, niveles más altos de agotamiento emocional son observados solo cuando las percepciones del mánager exceden a las del empleado.

Preface

This thesis focuses on a topic relevant to almost everyone in the working population: organizational justice. A large body of research in this area has demonstrated the importance of workplace justice. Employees who feel justly treated demonstrate a range of positive outcomes such as significantly higher levels of job satisfaction, organizational commitment, performance and organizational citizenship behaviors (Cohen-Charash & Spector, 2001; Colquitt, Conlon, Wesson, Porter & Ng, 2001; Colquitt, Scott, Rodell, Long, Zapata, Conlon, & Wesson, 2013). While the work to date offers important insights, it is somewhat limited in scope. For example, the extent to which the reported relationships among justice and employee outcomes are causal rather than simply correlational is largely unclear. Similarly, justice research tends to focus on the recipient of justice (typically the employee) rather than the enactor of justice (typically the manager). How managers decide whom to treat (un)justly in the first place or even how managers perceive their own justice actions themselves is not well understood. This thesis addresses these gaps by successively expanding the more traditional causal framework in the organizational justice literature.

Chapter 1 explores the causal relationship between distributive fairness perceptions and employee performance. In the organizational justice literature the characteristically positive relationship between these two variables is interpreted as an effect of fairness perceptions on performance. I develop a theoretical model arguing that instead of such a unidirectional effect, a feedback loop exists between the two variables; they affect each other reciprocally. Using two laboratory experiments coupled with instrumental variable regression, I estimate a positive *causal* effect of distributive fairness perceptions on performance which significantly differs from the ‘effect’ obtained by OLS regressions or correlations. With respect to the reciprocal effect of performance on distributive fairness perceptions, I find that performance influences the favorability of the outcomes an employee is allocated and that this outcome favorability in turn has a strong impact on employee fairness perceptions. These results imply that variables commonly treated as consequences of fairness perceptions, such as performance, may also be important antecedents of those perceptions. Further they suggest that the often cited *effect* of fairness perceptions on performance may be misestimated by correlations or OLS regressions, and that other empirical approaches

are needed to better estimate the extent to which fairness perceptions cause employee outcomes (and vice versa).

Chapter 2 (joint with Michael Bashshur) investigates how employee behavior influences managerial justice allocations. While decades of research have shown that procedural and informational justice are related to important employee work attitudes and behaviors, little is known about the antecedents of these types of justice, especially the role of employees in shaping how managers enact justice. Building on work in heuristic decision making (Gigerenzer & Goldstein, 1996; Simon, 1956; Tversky & Kahneman, 1974), social cognition (e.g. Fiske, 1980; Fiske & Taylor, 1984), and the literature on job demands (Cyert & March, 1963; Hambrick, Finkelstein, & Mooney, 2005; Janssen, 2001; Ng, Ang, & Chan, 2008), we suggest that managers use employee performance as a heuristic in deciding how to allocate procedural and informational justice and that they do so in a way that favors employees whose performance stands out positively or negatively. We propose that this effect gets stronger as managerial workload increases. Findings from two laboratory studies and a field study of 155 manager-employee dyads lend support to these arguments.

Finally, previous studies have focused on examining how *employees'* justice perceptions relate to their job attitudes and emotions, largely ignoring the role *managerial* self-perceptions may play in this process. In Chapter 3, I propose that perceptions of a manager's interpersonal justice will often differ between employees (recipients) and their managers (actors) and draw on similarity-attraction theory (Byrne, 1961; Byrne, Young, & Griffitt, 1966; Byrne, Clore, & Smeaton, 1986; Byrne, 1971a, Byrne, 1971b; Byrne, 1997), theory on self-other rating agreement (Ashford, 1989; Atwater & Yammarino, 1992; Atwater & Yammarino, 1997; Yammarino & Atwater, 1997), and work on role dynamics (Kahn, Wolfe, Quinn, Snoek, & Rosenthal, 1964; Katz & Kahn, 1966; Katz & Kahn, 1978) to argue that such disagreement matters for employees' job satisfaction, intrinsic motivation and emotional exhaustion. Using data from 237 manager-employee dyads, I apply polynomial regression and response surface analysis to explore these relationships. My findings indicate that managers evaluate their own interpersonal justice as significantly higher than do their employees. Disagreement in interpersonal justice perceptions is further associated (independent of whether manager or employee perceptions are higher) with lower levels of job

satisfaction and intrinsic motivation. Emotional exhaustion, however, is only significantly higher when the manager's justice perceptions exceed those of the employee.

Taken together, this thesis adds to the justice literature in a number of ways. First, it demonstrates the possibility that employee justice perceptions and employee 'outcomes', such as performance, are linked reciprocally and may thus spiral up or down over time. Second, it shows that appreciating the role employees play in shaping managerial (in)justice (e.g., through their behaviors) can help to better understand its antecedents. Third, it highlights the importance of also considering managerial perspectives on justice. Such a perspective can help explore why (in)justice occurs in the first place and how employees react to it.

In terms of practical implications, the results suggest that justice training for managers (e.g., Greenberg, 2006; Skarlicki & Latham, 1996; Skarlicki & Latham, 2005) should include elements raising managers' awareness of both their justice allocation mechanisms and of possible perceptual differences among themselves and their employees regarding their own justice behaviors. Likewise, formal mechanisms that allow for mutual justice feedback among managers and employees may help both parties to understand each others' behaviors and align their perceptions.

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1. THE CHICKEN AND THE EGG: AN EXAMINATION OF CAUSALITY BETWEEN DISTRIBUTIVE FAIRNESS PERCEPTIONS AND PERFORMANCE

1.1 Introduction

The relationship among employee justice perceptions and work behaviors, such as task performance, organizational citizenship behaviors (OCBs) or counterproductive work behaviors (CPWBs) has been the focus of a considerable amount of research. The fact that, in almost every case, these studies report a significant relationship (for reviews, see Cohen-Charash & Spector, 2001; Colquitt, Conlon, Wesson, Porter, & Ng, 2001) has been one of the *raison d'etres* for research on justice in the workplace. The robust relationships between justice perceptions and employee work behaviors make understanding justice perceptions both theoretically and practically important. Typically, these work behaviors are treated as *consequences* of fairness perceptions (e.g., the two major meta-analyses of organizational justice label employee behaviors such as task and contextual performance as “outcomes” of justice perceptions; Cohen-Charash & Spector, 2001; Colquitt, et al., 2001). However, this assumes that the observed correlations in this body of research reflect a *causal effect* flowing from fairness perceptions to employee behaviors. While there is some recognition in the literature (e.g., Cohen-Charash & Spector, 2001; Konovsky & Cropanzano, 1991; Staw, 1975) that this is not necessarily the case, the discussion usually stops there. This paper takes the next step to argue that, in addition to the effect of perceived fairness on work behaviors, reciprocal effects from these behaviors to fairness perceptions are likely. These reciprocal effects would imply that *feedback loops* between employee fairness perceptions and work behaviors exist.

To theoretically explore this possibility I focus on the relationship between *distributive fairness perceptions* and *task performance* to develop a framework for a feedback loop between the two variables, showing not only how distributive fairness perceptions impact employee task performance, but also how task performance can in

turn shape employees' distributive fairness perceptions. I focus on distributive justice for three reasons; 1) equity calculations (the mechanism by which distributive fairness perceptions are said to be made) explicitly include inputs, such as performance, 2) distributive (un)fairness can be cleanly manipulated in a laboratory experiment, and 3) I expect a uniform impact of performance on fairness perceptions, i.e. higher performers are expected to have higher distributive fairness perceptions, potentially resulting in a self-reinforcing feedback loop. I next describe the challenges of estimating causal effects between fairness perceptions and task performance especially in the presence of feedback loops and third variables (such as individual differences) that impact both fairness perceptions and performance. Finally, I discuss the results of two laboratory experiments which together estimate the *causal* effect of fairness perceptions on performance (applying instrumental variable regression) and demonstrate the reverse effect of performance on fairness perceptions (positioning outcome favorability as a potential mediator).

This study revisits the foundational theory of organizational justice (Adams, 1963) to reintroduce performance as an antecedent of fairness perceptions and more generally suggests that there may be new and important antecedents of fairness perceptions which the empirical literature typically treats as consequences (i.e. dependent variables). As such, this paper answers a long standing call in the literature to explore the “causal relations between perceived justice and its correlates” (Cohen-Charash & Spector, 2001, p. 309) and demonstrates the importance of thinking about justice as a process that unfolds over time rather than a series of cross-sectional snapshots (Ambrose & Cropanzano, 2005; Fortin, 2008; Loi, Yang & Diefendorff, 2009).

Before discussing the theoretical rationale for a feedback loop between fairness perceptions and performance, I begin with a brief review of other areas of the literature in which the inclusion of feedback loops enriched theory and practical applications.

1.2 The Relationship between Fairness Perceptions and Performance

1.2.1 Dynamic Relationships and Feedback Loops in the Literature

The inclusion of feedback loops between what were assumed to be dependent and independent variables has led to surprising results complementing or even reversing prior knowledge in a number of areas. For example, it is widely argued that job satisfaction affects organizational commitment. However, Saridakis, Muñoz Torres, and Tracey (2009) ignored the directional assumptions implicit in this argument and employed an instrumental variable approach and simultaneous estimation techniques to investigate causality among the two variables. Their analysis demonstrated feedback effects among job satisfaction and organizational commitment such that organizational commitment also significantly affected job satisfaction. Similarly, Schneider, Hanges, Smith, and Salvaggio (2003) investigated the causal relationships among employee attitudes and organizational financial and market performance. They analyzed lagged longitudinal data to conclude that financial and market performance actually predicted overall job satisfaction more strongly than the reverse. Aside from confirming the well-established finding that satisfaction leads to higher performance, they showed that employees who worked for successful firms were more satisfied and that the success – satisfaction link was the stronger of the two relationships. Similarly, Schmitt and Bedeian (1982) used a two-stage-least-squares approach to show a bidirectional relationship between life satisfaction and job satisfaction, lending support to spill-over models of satisfaction (to the detriment of compensatory models). Further, Glomb and Liao (2003), using a similar methodological approach, showed that group level aggression and individual level aggression reciprocally influenced one another. In a manner consistent with a social exchange explanation, aggressive behavior by an individual's work group predicted that individual's aggressive behavior, while an individual's aggressive behavior similarly predicted the level of aggression in his or her work group. Most recently, Lang, Bliese, Lang and Adler (2011) argued that organizational justice does not only impact employee depression, but that depressed workers may also be more likely to perceive actions as unfair in the first place. Applying structural equation modeling the authors analyzed lagged longitudinal data

and found that depressive symptoms negatively impacted perceptions of organizational justice, while the (traditionally assumed) opposite effect, i.e. organizational injustice making employees depressed, was not supported.

When investigating the relationship between fairness perceptions and performance, most researchers also seem to make implicit assumptions about causality. It is generally assumed that when individuals feel treated (un)fairly they adjust their performance to restore (perceived) fairness. Empirically, this relationship has been investigated in dozens of studies (for reviews, see Cohen-Charash & Spector, 2001; Colquitt et al., 2001). While a positive correlation has been established (with correlation coefficients ranging from 0.03 to 0.45 for task performance; Cohen-Charash & Spector, 2001; Colquitt et al., 2001), as I will argue next, the causal relationship of fairness perceptions to performance is not yet well understood.

1.2.2 An Effect of Distributive Fairness Perceptions on Performance

The hypothesis that employee fairness perceptions affect behavioral outcomes like task performance was originally based on Equity Theory (Adams, 1963). This early work emphasized the effects of *distributive* fairness, i.e., the fairness of work *outcomes* such as wages, bonuses, office space, etc., on behavior. In this approach, fairness perceptions are shaped by a comparison of the ratio of inputs (e.g., effort, abilities) to outcomes (e.g., salary, praise) a given employee receives, in contrast to the ratio of inputs to outcomes of a referent other. Where unfairness is perceived (in the form of either over- or undercompensation), behavior (e.g., stealing, or reducing/increasing effort) is seen as a way in which employees can restore (perceived) equity by reducing (or increasing) their inputs (e.g., Ambrose, Seabright, & Schminke, 2002; Lim, 2002). In line with this reasoning, Brockner, Greenberg, Brockner, Bortz, Davy, and Carter (1986) investigated how survivors reacted to layoffs. They argued that those survivors who perceived a layoff decision as random would feel overcompensated and increase their subsequent performance while those who perceived that decision as merit based would see no need to alter their performance. A laboratory experiment with a sample of undergraduate students lent support to these hypotheses. Greenberg and Ornstein (1983) similarly showed that participants in a laboratory setting who received a high status job title based on merit saw the title as part of their outcomes (a form of compensation), and

as a consequence still felt fairly treated and maintained their level of performance when they were required to do extra work without payment. In contrast, those who received the high status title without an explanation lowered their performance when asked to do extra, uncompensated, work.

More recently, social exchange perspectives (Blau, 1964) have been proposed as an explanation, positioning improved performance as a way to reciprocate the leader for fairness (for a summary see Colquitt, Scott, Rodell, Long, Zapata, Conlon, & Wesson, 2013). From this perspective, fairness is viewed as a way to enhance the social relationship among manager and employee and increase the employee's trust towards the manager. This in turn is suggested to induce the employee to reciprocate even when there are no immediate and concrete benefits of this behavior (e.g., Aryee, Budhwar, & Chen, 2002; Konovsky & Pugh, 1994; Masterson, Lewis, Goldman, & Taylor, 2000; Organ & Konovsky, 1989; Wayne, Shore, Bommer, & Tetrick, 2002). Wayne et al. (2002) for instance proposed that distributive justice perceptions are positively related to LMX which is in turn positively associated with employee performance ratings. Based on a field sample of supervisor-employee dyads, they found that while LMX indeed significantly related to performance ratings, it was not related to distributive justice in the first place.

Clearly, the relationship between distributive justice and employee performance has been largely empirically supported (e.g., Cohen-Charash & Spector, 2001; Colquitt et al., 2001; Colquitt et al., 2013) and possible mediators of the relationship are being increasingly explored, e.g., social exchange quality and affect (Colquitt et al., 2013), leader-member exchange (LMX) (Burton, Sablinski, & Sekiguchi, 2008), and trust (Colquitt, LePine, Piccolo, Zapata, & Rich, 2012). However, this does not represent a test of the causal effect of fairness perceptions on performance. Most studies have either measured the effect of different outcome distributions (e.g., over- versus undercompensation) rather than the effect of fairness *perceptions* themselves or have used correlations or traditional regression techniques (such as ordinary least squares) to explore the 'effect' of distributive justice perceptions on performance. Some justice researchers recognize that their results do not necessarily reflect causal effects of one variable on the other (e.g., Cohen-Charash & Spector, 2001). There remains, nevertheless, an assumption of causality in much of justice research. For example,

Cohen-Charash et al. (2001) state that “job performance...[is] considered to be [an] outcome of perceived justice” (p. 278) and Colquitt et al. (2001) explicitly label performance as an “outcome” of justice perceptions. I argue that, given the repeated finding of a relationship among fairness perceptions and workplace outcomes, it is time to determine whether these robust relationships are indeed causal.

Even though I suggest that the *causal* effect of fairness perceptions on performance may differ from the oft-reported correlations or OLS effects estimating the relationship, based on the arguments of Equity Theory and Social Exchange Theory, I, nevertheless, maintain the classic hypothesis stating that:

H1: Individual fairness perceptions have a positive causal effect on subsequent performance.

1.2.3 An Effect of Performance on Distributive Fairness Perceptions and the Role of Outcome Favorability

The effect of performance on fairness perceptions is far less theoretically or empirically developed. This is surprising given the role of performance as a potential input employees compare to their outputs (salary, raises, praise) when making distributive fairness judgments (Adams, 1963). In fact there is another reason to expect performance to impact fairness perceptions. Employee performance is likely to impact *leader behavior* towards the employee, which in turn, should affect employee fairness perceptions (e.g., Cohen-Charash & Spector, 2001; Colquitt et al., 2001; Colquitt et al., 2013). This idea of performance as an antecedent to leader behaviors remains untested in the broader justice literature, but there is evidence in other areas for this effect. For example, Lowin and Craig (1968) found that experimentally manipulated performance affected the leadership styles of supervisors such that they supervised low performers more closely, evaluated them as less responsible, had a lower opinion of their potential contributions and gave them less interpersonal consideration. Similarly, Farris and Lim (1969) manipulated the beliefs of group leaders about the performance of their groups, and showed that leaders of (what they believed to be) high performing groups were more supportive and more helpful in facilitating interaction in the group.

In this study, I argue that employees, via their performance, also influence the favorability of the outcomes leaders allocate to them and that this outcome favorability in turn impacts employees' fairness perceptions. Before going into this argument in more depth, it is important to differentiate between outcome favorability and outcome fairness. Although these two constructs are sometimes treated interchangeably in the literature, they are distinguishable from one another. In particular, a favorable outcome is defined as a positive (or non-negative) event such as a pay raise and an unfavorable outcome is defined as a negative event such as a pay cut. A fair outcome, in contrast, is one that is allocated in accordance to certain justice rules such as equity, equality or need. To borrow the example of Skitka, Winquist, & Hutchinson (2003), "a child who receives a slice of cake that is double in size that given to her siblings... [has received] a favorable outcome; however, unless this outcome was justified by adherence to a normative standard (e.g., need or merit)...this allocation is distributively unfair" (p.311). In their meta-analysis Skitka et al. (2003) show that outcome favorability and outcome fairness differentially relate to a host of behaviors and perceptions.

(a) Performance causes Outcome Favorability

Given the distinction between outcome favorability and outcome fairness, I do not expect that leaders will simply be fair to high performing employees and unfair to low performing employees, but instead that leaders will *favor* high performing employees. In fact, there are a number of reasons to expect leaders to treat high performers preferentially in terms of the allocation of outcomes. First, leaders may have deontological reasons (Scott, Colquitt, & Paddock, 2009; Long, 2011) and view such preferential treatment as a fair compensation for the employee's work. This directly relates to Adam's Equity Theory (1963) where equity – which is usually used to measure distributive justice (Scott et al., 2009) – is defined as the ratio of outputs an employee obtains in relation to his or her own inputs (e.g., performance). Deutsch (1975) has likewise argued that in settings where productivity is a main goal – as in most work situations – equity will tend to be used as the main principle of distributive justice. In line with this, Abeler, Altmann, Kube, & Wibrall (2010) found that leaders who adhered to the rule of equity when allocating earnings ex-post rated their own behavior as more fairly than did others. Meindl (1989) further gave lower- and middle-level managers the task of making recommendations on the allocation of a bonus pool

among employees. In a setting where the employees were described as having low task interdependencies, when fairness was the overall aim (rather than e.g., productivity, solidarity or positive leader-employee relations), participants were most likely (82 percent) to suggest an equitable allocation of the bonus, i.e. they considered it most fair to allocate more favorable outcomes to higher performers. Second, being fair is costly in terms of time and resources (Long 2011; Whiteside & Barclay, 2013) and can cause personal distress (Folger & Skarlicki, 2001). As such it may make sense (instrumentally) for leaders to allocate favorable outcomes preferentially to higher performing employees of whom they can expect more in return in terms of profitable ideas, higher contributions to the team performance, or a useful social network. Further, as Scott and colleagues (2009) suggest, leaders may enact (or violate) justice rules to achieve (among other things) employee compliance. It seems reasonable that this motive is also directly shaped by employee performance in that leaders may try to achieve high levels of compliance by rewarding high performers and punishing low performers. Indeed there is ample evidence that managers decide on employee outcomes such as bonus payments or promotions at least in part based on their employees' performance. In every company using a performance-based pay system the favorability of the employees' outcomes (e.g., their pay or bonuses) depends on their performance. In line with this, Perry and Zenner (2001) observed that CEO bonus payments and total compensation positively related to various performance measures. Likewise in a laboratory experiment, Abeler et al. (2010) found that higher effort levels were reciprocated with higher wages by group leaders. This evidence strongly suggests that there is a link between performance and favorability.

As such, I posit that on average higher performing employees will obtain more *favorable* outcomes than their lower performing co-workers.

H2: Higher performance will be rewarded with more favorable outcomes than will lower performance.

(b) Outcome Favorability causes Fairness Perceptions

In the next step, I propose that outcome favorability directly affects employees' fairness perceptions. A general problem with predicting fairness perceptions as a result

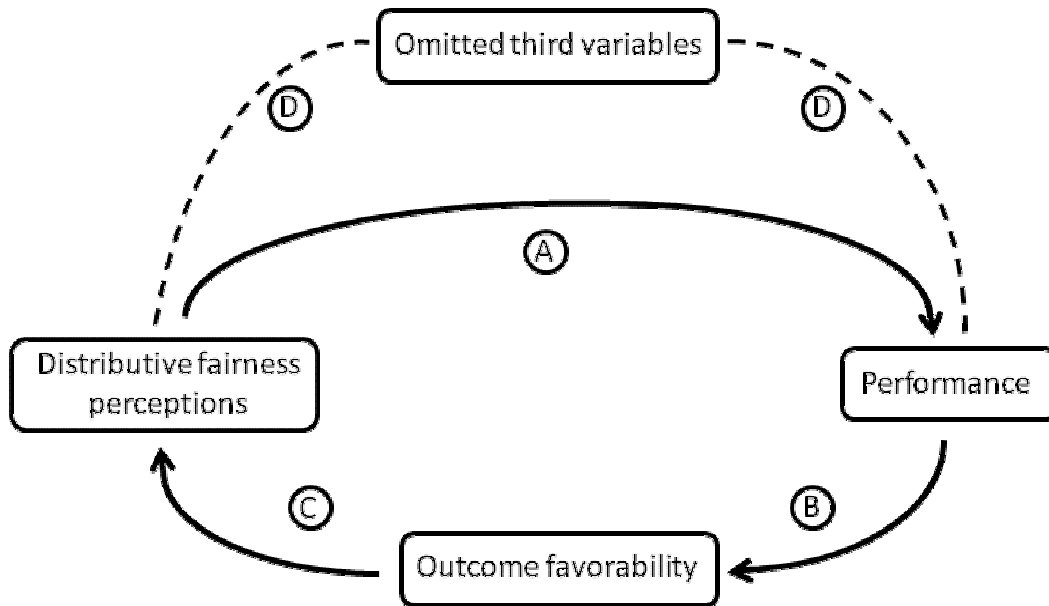
of outcome favorability is that employee self-assessments of how deserving they are of favorable outcomes are not always accurate. If individuals obtain a favorable outcome based on their high performance, they are likely to perceive this allocation as fair because it is equitable (Abeler et al., 2010). However, if individuals ‘undeservingly’ get a favorable outcome, they may also perceive it as fair. Greenberg (1983) finds that people evaluate overpayment to themselves as fairer than overpayments to others, while they perceive underpayment to themselves as less fair than underpayment to others. One explanation for this is individuals’ tendency to be overconfident in their own abilities (e.g., Camerer & Lovallo 1999; Cooper, Woo, and Dunkelberg, 1988; Larwood & Whittaker 1977; Mabe & West, 1982) or simply to be egocentric and focus on their own performance or abilities while ignoring those of others (Mattern, Burrus, & Shaw, 2010). For example, in a sample of elderly car drivers, Freund, Colgrove, Burke, and McLeod (2005), found that 65 percent of respondents judged themselves as performing better on a driving test than their peers. This endemic overconfidence or misestimation may, in the context of justice perceptions, lead employees to overestimate their performance and thus perceive a too favorable outcome as fair compensation for their work and unfavorable outcomes as unfair even when they were deservedly allocated as a result of lower performance. Adams (1963) accounted for such possibilities by emphasizing that justice judgments are based on the receiver’s *perception* of inputs and outcomes rather than the actual inputs and outcomes. As such, I argue that outcome favorability positively impacts fairness perceptions.

H3: The favorability of an outcome causes an increase in an individual’s fairness perceptions of this outcome (distributive fairness perceptions).

This hypothesis closes the proposed feedback loop which is depicted in *Figure 1*. To summarize, I expect employee fairness perceptions to impact employee performance (arrow A), employee performance to affect the favorability of the outcomes the employee will obtain (arrow B), and this favorability in turn to have a direct impact on the employee’s fairness perceptions (arrow C). Finally, the model includes ‘omitted third variables’ potentially influencing both, performance and fairness perceptions, independently. This possibility will be discussed in more detail in the analytic strategy part of the next section.

Figure 1

The model: Relationship between performance and distributive fairness perceptions



1.3 Arrow A: The Effect of Distributive Fairness Perceptions on Performance

1.3.1 Analytic Strategy

One likely reason why a causal effect of fairness perceptions on performance has yet to be estimated is because it is difficult. Generally, in order to achieve consistent estimates¹ and be able to make causal statements for analyses such as OLS regressions a major assumption must be satisfied; the explanatory variables need to be exogenous, i.e. they need to be uncorrelated with the error term (e.g., Antonakis Antonakis, Bendahan, Jacquard, & Lalive, 2010; Antonakis, Bendahan, Jacquard, & Lalive, 2014; Foster & McLanahan, 1996; Foster, 1997; Greene, 2003; Kennedy, 2003; Podsakoff, MacKenzie, & Podsakoff, 2012). If the exogeneity assumption is violated in one or more ways, e.g., due to problems of *simultaneity* and/or *omitted third variables*, we obtain inconsistent

¹ Sample estimates (such as estimated beta weights) are deemed consistent (or accurate) if as the sample size increases the estimate converges with the population parameter (e.g., Foster & McLanahan, 1996).

estimates which are not interpretable.² As Antonakis et al. (2010) summarize, “the true coefficient could be higher, lower, or even of a different sign” (p. 1088).

For the question of how distributive fairness perceptions impact employee performance we are confronted with exactly these issues. As depicted in *Figure 1*, I argue that there exists a feedback loop (i.e. *simultaneity*) between the two variables. Even though the proposed feedback loop in the model is mediated by another variable, the favorability of an employee’s outcomes, it violates the exogeneity assumption and the statistical implications are the same as in the case of a direct reverse effect, i.e., the coefficient estimate is not interpretable. Further, the presence of a range of third variables that simultaneously impact the explanatory and independent variable (in our case performance and fairness perceptions) seems possible. Such variables, e.g., personality characteristics such as negative affectivity or conscientiousness, are typically assumed to be moderators or mediators of the effect of justice perceptions on performance. Some, like negative affectivity, have, however, been shown to directly influence both fairness perceptions and performance (e.g., Irving, Coleman & Bobocel, 1999; Wanberg, Bunce, & Gavin, 1999; Kaplan, Bradley, Luchman, & Haynes, 2009). This suggests that an *omitted variable bias* exists, again potentially distorting the estimate of the relationship (e.g., Antonakis et al., 2010; Sackett, Laczko & Lippe, 2003) and rendering the coefficient of fairness perceptions non-interpretable.

Usually, the most appropriate way to circumvent these problems and obtain causal effects is to conduct a randomized experiment. If the explanatory variable (distributive fairness perceptions) can be randomized across participants by randomly assigning them to different experimental conditions (e.g., treatment and control), it by construction, becomes exogenous (Antonakis et al., 2010). The problem for studying the effects of perceptions, however, is that randomly assigning fairness *perceptions* is not possible and this solution is inappropriate. While we can choose to treat one group of participants fairly and another group unfairly, we do not have control over the resulting fairness *perceptions* of the participants in each group which may, as discussed, be systematically influenced by omitted third such as individual characteristics. *Appendix A.1* illustrates this problem in more detail using the example of negative affectivity as a

² For a more extensive discussion on the exogeneity assumption, see for instance Antonakis et al. (2010) or Antonakis et al. (2014).

third variable. This implies that if third variables exist, even if there is no feedback loop between fairness perceptions and performance or if it is controlled for by an experimental set-up (e.g., Gilliland, 1994; Williams, 1999), it is still not possible to estimate a causal effect of fairness perceptions on performance. Instead, the presence of third variables can lead to spurious correlations among fairness perceptions and performance, i.e. correlations even when there is no causal effect among the two.

To identify the causal effect of fairness perceptions on performance, it is therefore necessary to take another path. One methodology that has proven useful in overcoming problems of endogeneity (i.e. non-exogeneity) is the *instrumental variable* or ‘two-stage least-square’ regression technique (e.g., Angrist & Pischke, 2008; Antonakis et al., 2010; Antonakis et al., 2014; Greene, 2003; Kennedy, 2003; Podsakoff et al., 2012; Wooldridge, 2013), a tool which management scholars are increasingly starting to appreciate (e.g., Antonakis et al., 2010; Carpenter & Sanders, 2002; Glomb & Liao, 2003; Kammeyer-Mueller et al., 2008). The underlying idea here is to use only the *exogenous* (i.e., the ‘good’) part of the variation in the explanatory variable x_i , (the part that is uncorrelated with the error term e_i), in order to estimate its effect on the dependent variable y_i . For this, it is necessary to find another variable z_i , the so-called “instrument”, which must fulfill two conditions. First, the instrument must be *relevant*, i.e., it needs to be significantly correlated with the endogenous explanatory variable x_i ($\text{Cov}(z, x) \neq 0$). Second, the instrument z_i itself needs to be *exogenous*, i.e., uncorrelated to the error term e_i ($\text{Cov}(z, e) = 0$), e.g., it must not have a direct influence on the dependent variable y_i . How instrumental variable regression can technically be estimated is summarized in *Appendix A.2*.

Instrumental variable regression is mostly used to identify causal effects in cross-sectional field data. When aiming to analyze the impact of distributive fairness perceptions on performance, however, it is extremely difficult to find an instrument in the field that fulfills the two necessary conditions of being correlated with distributive fairness perceptions, but at the same time uncorrelated with performance. The different types of treatment an employee receives such as bonus payments, office space, voice, or personal attention which could potentially serve as an instrument for distributive fairness perceptions may also be correlated with prior performance (which in turn correlates with subsequent performance; Gilliland, 1994), and may additionally have

their own independent impact on performance; both of which disqualify them as instruments. In this paper, I will take a different path and generate an instrument for distributive fairness perceptions in a laboratory experiment. Applying instrumental variable regression to laboratory data is not common, because a randomized experiment is usually enough to eliminate problems of endogeneity and produce causal estimates in itself. As explained before, however, this is not the case when aiming at identifying the causal effect of *perceptions* on behavior.

1.3.2 Methodology

(a) Sample

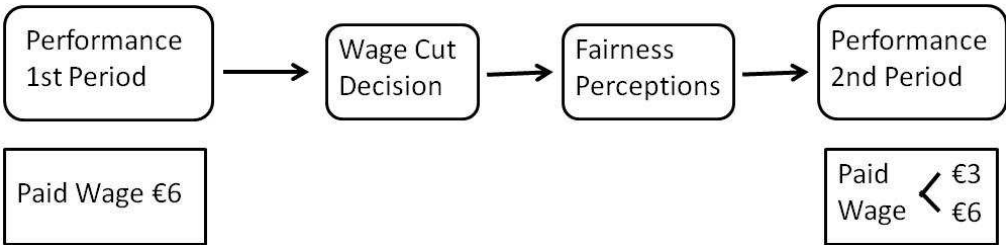
200 undergraduate students of differing disciplines at a Spanish university participated in a computer-based laboratory experiment. The participants were on average 21.4 years old and 59 percent female. 67.5 percent of them indicated to have had prior work experience (mostly in part-time jobs) of on average almost two years.

(b) Experimental Setting and Procedure

Upon arriving at the laboratory, experiment participants were placed in separate cubicles. They were guaranteed confidentiality of their behaviors during the experiment and their questionnaire responses. The experimental set-up is graphically summarized in *Figure 2*.

Figure 2

Experimental set-up



In the experiment, participants had the task of counting a specified letter (r, s, n, i, or o) in a paragraph³ and to correctly do so for as many paragraphs as possible within a five-minute time frame. This relatively simple task was chosen to make performance directly depend on the participants' effort. For each period's work, they received a fixed (i.e., performance-independent) wage that was announced *before* each period and paid out all together at the end of the experiment.

Participants performed the letter counting task twice (in period 1 and period 2). For the first period's work everyone received a wage of €6. After having finished the first period's work, participants faced an unanticipated wage cut decision. Without their knowledge, at the beginning of the experiment they were randomly assigned to one of two different kinds of 'bosses' who were simulated by a computer algorithm (this is the instrumental variable, to be discussed below). While each boss cut the wage of half of his employees, one of them did so according to performance, i.e. cutting the wages of the lower performing half of his employees (one can think of this as the 'equitable boss' because it is an equity-based decision), while the other one allocated the wage cut *inversely* according to performance, i.e. cutting the wages of the higher performing half of his employees ('inequitable boss' – the decision is made with maximum inequity). The second period wage for those participants who did not receive a wage cut remained equal to their wage in the first period (€6), while participants who received a wage cut were paid only €3 for their work in the second period.

After the participants were notified whether they would experience a wage cut or not, they indicated how fairly they perceived their *outcome* (cut or no cut) to be. Finally, participants performed the letter counting task again and filled out a questionnaire asking them for demographic information.

³ The experiment was conducted in Spanish where these five letters have a similar probability of appearing. While making participants count each of these letters in turn in differing paragraphs to make the task less monotonous, it was thus not possible for them to make meaningful guesses of appearances based on different probabilities.

(c) Measures and Operationalization

Instrumental Variable. The wage cut mechanism, i.e. the two different kinds of bosses, was specifically created as an instrument for fairness perceptions to allow the use of instrumental variable regression in order to determine the causal effect of distributive fairness perceptions on performance (*HI*). In particular, the variable ‘type of boss’ was designed to fulfill the two conditions necessary to be able to serve as an instrument; *relevance* and *exogeneity*. First, it is relevant in that being rewarded equitably or inequitably should strongly impact one’s distributive fairness perceptions. Second, it is exogenous in that it does not correlate with the other independent variables of first-period performance (as bosses were allocated randomly and independently of performance) and outcome favorability (whether a participant received a wage cut was uncorrelated to the type of boss as each boss gave a wage cut to exactly half of his employees). Further, it is not expected to have any direct, unmediated, impact on second-period performance. Instead, any effect of the type of boss on second period performance would be expected to run through fairness perceptions. Also, there is no reason to believe that the type of boss correlates with omitted third variables such as personality traits that might impact fairness perceptions and performance at the same time because the type of boss was exogenously imposed (randomly allocated).

Distributive Justice. Participants rated their distributive justice perceptions on a 7 point Likert scale (1 = Completely Unfair, 7 = Completely Fair) using the four items from Colquitt’s (2001) measure. Coefficient alpha for distributive justice perceptions was 0.91.

Favorability. Outcome favorability was defined as a binary variable taking the value of 1 if the participant received no wage cut and thus a second period wage of €6, and taking the value of 0 if the participant faced a wage cut and thus only received €3 in the second period.

Performance. Individual performance was measured in terms of the number of paragraphs for which a participant obtained a correct result (on average around 16 paragraphs within the 5 minutes).

1.3.3 Results

Descriptive statistics and correlations are summarized in *Table 1*. Before turning to the test of *Hypothesis 1*, a number of interesting results replicating common findings in the literatures on overconfidence and fairness vs. favorability bear pointing out and give me confidence that my participants were reacting in a manner similar to participants in previous studies.

In line with the distinction that Adams (1963) made between actual distributive fairness and distributive fairness *perceptions*, I found that participants were not very good at perceiving reality (in this case actual distributive justice in terms of equity and actual performance). First, my participants' fairness perceptions differed substantially from the actual level of fairness with which they were treated (in terms of equity). Participants who received a fair outcome had average fairness perceptions of 4.72 (on a scale from 1 to 7), while those receiving an unfair outcome had average fairness perceptions of 3.62 (slightly above the midpoint). But this was not only a simple tendency to rate the experience as fair. 57 percent of those who received an unfair outcome (they were over- or undercompensated) evaluated it as being fair (3.5 or above, mean fairness perceptions 4.95), but 20 percent of those receiving a 'fair' outcome, perceived it as unfair (below 3.5, mean fairness perceptions 2.43).

Second, in line with prior work on overconfident or egocentric estimations of abilities and performance (e.g., Camerer & Lovallo 1999; Cooper, Woo, & Dunkelberg 1988; Larwood & Whittaker 1977; Mabe & West, 1982), my participants were overconfident in their estimation of their own performance. In the first period 77 percent and in the second period 64 percent rated themselves as having performed above average. In fact, 46 percent (in period 1) and 43.5 percent (in period 2) of participants rated themselves as having been among the top 20 percent of performers even after having received information on their own result and the average result of all participants. Given these replications of established findings, I next turn to the test of *Hypothesis 1*.

Table 1

Descriptive statistics and correlations among major variables (n=200)

	M	SD	Correlation						
			(1.)	(2.)	(3.)	(4.)	(5.)	(6.)	
(1.) Equitable boss	0.50	0.50	1.00						
(2.) DJ Perceptions	4.17	1.74	0.32**	1.00					
(3.) Favorability	0.50	0.50	0.00	0.52**	1.00				
(4.) Performance 1 (cont.)	15.43	4.65	0.02	0.18**	0.03	1.00			
(5.) Performance 1 (binary)	16.86	5.20	0.00	0.12	0.00	0.76**	1.00		
(6.) Performance 2 (cont.)	0.50	0.50	0.17**	0.21**	0.02	0.78**	0.56**	1.00	

*p<0.05, **p<0.01

As discussed, the existence of a feedback loop and/or omitted variables would violate the exogeneity assumption of OLS regression for the main explanatory variable, fairness perceptions. As such, an instrumental variable (IV) regression was employed to obtain the *causal* effect of fairness perception on performance. As described in the experimental set-up, I used the type of boss as an instrumental variable for individual fairness perceptions. Recall that to be used as such type of boss needs to fulfill the two conditions for a good instrument:

First, type of boss must only influence second period performance through fairness perceptions, i.e., it must be exogenous. While this ‘exogeneity condition’ is not directly testable, what is testable is whether the type of boss is uncorrelated to outcome favorability and first period performance – two major variables that might also impact second period performance. In this respect, the correlation matrix in *Table 1* demonstrates that the random assignment of bosses was indeed successful as the type of boss is neither significantly correlated with outcome favorability nor with first period performance. Further, due to the random assignment of the type of boss, there is no reason to suspect that it would systematically correlate with any omitted third variables. Finally, as the type of boss is uncorrelated to outcome favorability, it should not have any direct impact (one that does not run through fairness perceptions) on second period performance.

The second condition is that ‘type of boss’ must have a direct influence on fairness perceptions, i.e. it must be relevant. This is indeed the case. The associated F-statistic which should as a rule of thumb be above 10 for a good instrument was 32.15 in this case (for details on critical values in IV-regression depending on the number of instruments see Stock, Wright, & Yogo, 2002).

Type of boss thus seems to be a good instrument for fairness perceptions and can be used to apply the instrumental variable method. The regression results of second period performance on distributive fairness perceptions are displayed in *Table 2* (in the column labeled “IV”).

I regressed second period performance on *fairness perceptions*, controlling for *favorability* and *performance at time 1* as a binary variable. The rationale behind adding performance as a binary variable is that it is as such by construction uncorrelated to the

other explanatory variables and the type of boss (compare with *Table 1*).⁴ As hypothesized, the coefficient of *fairness perceptions* was positive and significant ($t(196)=2.74, p=0.007$).⁵ This indicates that higher fairness perceptions led to higher employee performance in support of *Hypothesis 1*. More specifically, fairness perceptions which are higher by one were associated with a performance increase of 1.6 units. To put this into perspective, this corresponds to about ten percent of the average performance in the second period and 30 percent of its standard deviation.

Table 2

Results of IV and OLS regression analysis for second period performance

Variable	IV	OLS
Fairness Perceptions	1.60** (0.58)	0.56** (0.18)
Favorability	-2.76* (1.26)	-0.85 (0.64)
Performance 1 (binary)	5.12** (0.72)	5.57** (0.61)
Constant	9.01** (1.77)	12.19** (0.82)
n	200	200
Root MSE	4.53	4.26
R ²		0.33
Prob > F	0.00	0.00

* $p<0.05$, ** $p<0.01$; Robust standard errors are reported in parentheses.

Next, the same regression was estimated using the more traditionally applied OLS regression technique (“OLS”, *Table 2*). Comparing the two regressions, we can observe that the causal effect of fairness perceptions on performance estimated by instrumental

⁴ When performance was included as a continuous variable instead, the regression results are very similar and the conclusions remain the same.

⁵ Note that the coefficient for fairness perceptions does not change as a function of the number of control variables included (i.e. only controlling for fairness perceptions yields exactly the same estimate). This confirms that the instrument is uncorrelated to the other explanatory variables in the regressions. When estimating the effect of fairness perceptions, favorability, and performance at time 1 on performance at time 2 using a typical OLS regression the estimate for the effect of fairness perceptions and its significance vary widely as a function of the model chosen (the other variables included).

variable regression was substantially larger than the corresponding coefficient estimated by OLS regression. This indicates that estimating the effect by correlations or OLS regressions would potentially have led to a substantially biased result, in this case an underestimation of the true effect of fairness perceptions on performance. The difference in effect size between the OLS and the IV regression (*Table 2*) suggests that, in addition to the proposed feedback loop (which was controlled for by the experimental design), there might either indeed be omitted third variables impacting both fairness perceptions and performance simultaneously, or another channel through which performance impacts fairness perceptions, potentially leading to a biased effect for the OLS regression. To statistically test for this bias, I conducted a Wu-Hausman F-test which yielded a significant result ($F(195)=4.30$, $p<.05$) implying that caution is warranted when estimating the causal effect of distributive fairness perceptions on performance with techniques like OLS regressions or correlation analysis. These approaches will not necessarily reflect causal effects – even when controlling for feedback loops as in some experimental set-ups. In non-experimental data, the bias is likely even more substantial.

1.4 Arrow B: The Effect of Performance on Outcome Favorability

In my model, I next proposed that the favorability of the outcome an individual receives mediates the reverse effect of performance on distributive justice perceptions. As a first step, I explore whether performance indeed affects outcome favorability. To do so I conducted a separate laboratory experiment.

1.4.1 Methodology

(a) Sample

43 management students from a large university in Singapore participated in a laboratory experiment. Participants were assured of confidentiality and their behavior was recorded in a way that it could not be linked back to the person. On average, participants were 21.5 years old and 67.4 percent female. All students had prior work

experience with on average 11 months. 93 percent of participants indicated that they had held some kind of leadership position, e.g., in a company, in national service (military, police, rescue services) or in a sports team.

(b) Experimental Set-Up

Participants were placed in cubicles that prevented them from observing each other's actions during the experiment. In the instructions they were told that they would be taking the role of either a leader or an employee, with each leader supervising a group of three employees. In reality, however, the employees were simulated by a computer so that all participants were in the role of a leader. As a leader they had two main tasks. The first was to solve calculations for one minute during which they thought their employees would be working on an independent task. The second task was to then observe their employees' performance and distribute 100 monetary units among them. They were told that the experimental monetary units had a specific exchange rate to real money and would later be paid out to the participants in the role of employees, i.e. the leaders believed that the other participants' earnings would directly depend upon their allocation decisions. The leaders themselves were paid a fixed amount of 20 Singapore Dollar (about 16.2 USD) for their work. After the end of the experiment all participants were debriefed.

(c) Measures and Operationalization

Performance. Performance was simulated by a computer program in such a way that the low performer achieved a performance of 19, the middle performer 24, and the high performer 29.

Favorability. Outcome favorability was measured in terms of the quantity of money the leader allocated to each employee.

1.4.2 Results

In line with previous research (e.g., Abeler et al., 2010; Perry & Zenner, 2001), results show that experimental participants in the role of group leaders allocated money

dependent on each group members' performance supporting *Hypothesis 2*. On average they allocated 24.7 monetary units to the low performer, 33.5 to the middle performer and 41.8 to the high performer. As such, leaders allocated significantly less to the low than to the middle performer ($t(42)=11.41, p<.01$), and significantly less to the middle than the high performer ($t(42)=9.70, p<.01$). While better performers received more favorable outcomes, participants did not allocate earnings in line with an equitable allocation, but significantly undercompensated the low performer (compared to equity; $t(42)=-2.85, p<.01$) and overcompensated the high performer (compared to equity; $t(42)=2.41, p<.05$).

1.5 Arrow C: The Effect of Outcome Favorability on Distributive Fairness Perceptions

1.5.1 Methodology

The third link (arrow C), i.e. the effect of outcome favorability on distributive fairness perceptions, is testable with the data from my first experiment. Recall that in this experiment participants performed for two periods and for the second period randomly received an outcome that was either favorable (maintaining the same wage as in the first period) or unfavorable (receiving a wage cut after the first period).

1.5.2 Results

Average distributive fairness perceptions by outcome favorability and performance are depicted in *Table 3*. For ease of interpretation, performance is dichotomized in the table, in a way that participants who performed below average compared to other participants with the same type of boss are defined as 'low performers', while people who performed above average are labeled 'high performers'.

Table 3

Distributive fairness perceptions by outcome favorability and performance

		Outcome		
		<i>No wage cut</i> <i>(favorable)</i>	<i>Wage cut</i> <i>(unfavorable)</i>	<i>Average</i>
Performance	<i>High</i>	5.84	2.92	4.38
	<i>Low</i>	4.32	3.60	3.96
<i>Average</i>		5.08	3.26	4.17

Note: Grey areas denote fair outcomes in terms of a high performer obtaining a favorable outcome or a low performer obtaining an unfavorable outcome.

Table 3 shows that participants who got a more favorable outcome had on average higher subsequent fairness perceptions (5.08 vs. 3.26). To test this empirically, an OLS-regression of fairness perceptions on outcome favorability was estimated controlling for an outcome's fairness (the kind of boss) and the participant's first period performance. Note that this is identical to the first stage used for the instrumental variable regression when testing arrow A. *Table 4* displays the results. We can see that outcome favorability had a strong and significant positive impact on the participants' fairness perceptions in support of *Hypothesis 3*. On average, obtaining a favorable outcome increased fairness perceptions by 1.81 (on the 1-7 scale). Note that when interpreting this regression, we can in fact talk of a causal effect as outcome favorability was randomized.

The results indicate that outcome fairness also had a highly significant positive effect on fairness perceptions. It is, however, noteworthy that the coefficient of outcome *favorability* was significantly higher than the one of outcome *fairness* ($F(196)=6.79$, $p<.01$), indicating that in certain contexts outcome favorability may be more important than actual outcome fairness in predicting fairness perceptions. As we can observe in *Table 3*, the well-known finding that overcompensation inequity (average fairness perceptions of 4.32) was perceived as fairer than undercompensation inequity (2.92) (e.g., Greenberg, 1983; Sweeney, 1990) was also replicated in these data. My participants even judged an unfavorable, but fair outcome as less fair (3.60)

than a favorable, but unfair one (4.32). Graphically, fairness perceptions by outcome fairness and outcome favorability are contrasted in *Figure 3*.

Table 4

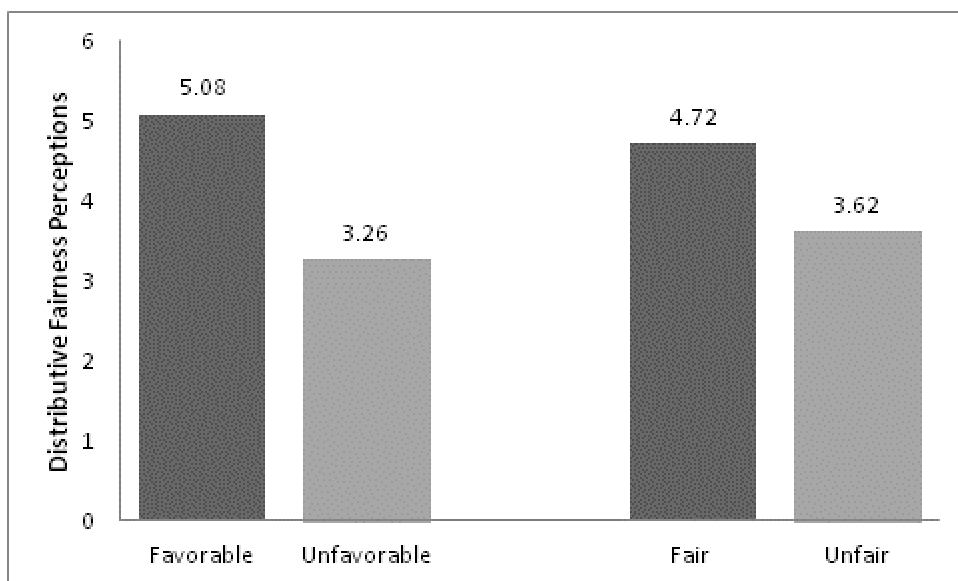
Results of OLS regression analysis for fairness perceptions

Variable	
Favorable outcome (no cut)	1.81** (0.19)
Fair outcome (equitable boss)	1.09** (0.19)
Performance 1	0.06** (0.02)
Constant	1.77** (0.34)
n	200
Adjusted R-squared	0.39
Root MSE	1.36
Prob > F	0.00

*p<0.05, **p<0.01; Robust standard errors are reported in parentheses.

Figure 3

Distributive fairness perceptions by outcome favorability and outcome fairness



Note: Favorable versus unfavorable: $t(198)=8.66$, $p<.01$; fair versus unfair: $t(198)=4.69$, $p<.01$.

1.6 Discussion

1.6.1 Summary

This study aimed at broadening our perspective on the relationship between distributive fairness perceptions and employee performance. I developed a dynamic model suggesting a feedback loop between the two variables. Besides the traditionally suggested positive effect of individual fairness perceptions on performance dating back to Adams (1963), I argued for an additional reciprocal effect of performance on fairness perceptions mediated by outcome favorability. Further, it was suggested that the relationship between these two variables might be influenced by the existence of third variables impacting both, fairness perceptions and performance, at a time – an issue that is important to bear in mind when empirically analyzing the effect of one variable on the other.

To test this model, I started by exploring the causal effect of distributive fairness perceptions on performance. To this end, I conducted a laboratory experiment in which student subjects taking the role of employees performed a task across two periods. After the first period, half of the subjects experienced a wage cut which was administered either according to performance ('equitable boss' condition) or reversely according to performance ('inequitable boss' condition). Thereafter they indicated their justice perceptions and performed again. In order to obtain the causal effect of fairness perceptions on performance I then estimated an instrumental variable regression taking the type of boss as an instrument. The results confirm a significant positive causal effect in line with *Hypothesis 1*. Further, this effect significantly differed from the one obtained by OLS regression indicating that this more traditionally used technique would have underestimated the impact of fairness perceptions on task performance. Next, I explored the possible reverse effect of performance on distributive justice perceptions mediated through the favorability of the outcomes the employee obtains. This was done in two steps. In the first, a laboratory experiment in which participants acted as group leaders demonstrated that they allocated favorability (in the form of money) strongly dependent upon performance in support of *Hypothesis 2*. In the second, using the data from the first experiment (examining the effect of justice perceptions on performance) I examined the effect of outcome favorability on performance. In accordance with

Hypothesis 3 I found that employees who got a more favorable outcome had significantly higher fairness perceptions, independent of outcome fairness. Taken together, these three results strongly support the existence of a reciprocal effect between distributive fairness perceptions and performance.

1.6.2 Theoretical Implications

For justice theory, this study has several implications. By arguing for a feedback loop between fairness perceptions and employee performance, I reposition performance from being a mere outcome of fairness perceptions to also being a potential antecedent. Such a reciprocal relationship might lead to vicious or virtuous circles, i.e. to dynamics that reinforce themselves such that over time performance and fairness perceptions spiral down for low and up for high performers. As such, I suggest that thinking about the process of justice and how it unfolds over time yields insights which are not detectable when merely considering cross-sectional snapshots, and which are important to comprehend the full scope of interrelations between fairness perceptions and employee behaviors. This also relates to recent work by Barclay and Whiteside (in press) who argue that employee aggression and leader fairness may be reciprocally linked and thus spiral over time. It also ties into the increasing work on fairness as a dependent variable, and in particular on employees' influence on leader fairness (e.g., Korsgaard, Roberson, & Rymph, 1998; Oc, Bashshur & Moore, in press; Scott, Colquitt, & Zapata-Phelan, 2007; Scott et al., 2009; Zapata, Olsen, & Martins, 2013) which suggests that there is not a one-way impact of fairness perceptions on employee outcomes, but that employees are to a certain extent also active participants in the fairness process. While my study also explores the effect of an employee behavior, performance, on fairness perceptions, I propose this to be mediated by the *favorability* of the outcomes an employee will be allocated rather than by leader *fairness* itself. As such, it further adds to justice theory by suggesting that the impact of employee behavior on employee fairness perceptions is not always mediated by (un)fair leader behaviors itself, but can also be mediated by other types of leader behaviors and the way in which these treatments are perceived by employees.

1.6.3 Empirical Implications

Empirically this paper demonstrates that correlations or OLS regressions can misestimate the effect of employee fairness perceptions on performance as they do not control for feedback loops or third variables. In this study that would have led to an underestimation of the effect and thus of the role fairness perceptions play in impacting performance. The main empirical implication of this study is thus that when there is a feedback loop between fairness perception and one of its correlates or when there are third variables influencing both, OLS regressions and correlations do not reflect causal effects. If we are interested in exploring causality, we need to adjust our empirical methods. As discussed in the methodology part of this paper, instrumental variable regression is one possibility for avoiding confounding influences even in cross-sectional data (e.g., Antonakis et al., 2010; Antonakis et al., 2014, Kennedy, 2003; Podsakoff et al., 2012) and in cases where experiments are not able to do so. While such methods may be more complex to apply, they substantially increase our understanding of organizational justice by getting a clearer picture of how employee behaviors and attitudes are dynamically linked to employee fairness perceptions.

1.6.4 Practical Implications

Practically speaking this study suggests that it is especially important to be aware of the potential threat of employee fairness perceptions and performance turning into a negative spiral over time. Higher performers would continually improve while leaving the lower performers behind, in effect creating an increasingly divergent work force in terms of fairness perceptions and performance.

While justice trainings for leaders have been successful in increasing employees' fairness perceptions in different contexts (e.g., Greenberg, 2006; Skarlicki & Latham, 1996; Skarlicki & Latham, 2005), this study suggests that there might be another useful way to raise employees' fairness judgments: training the subordinates. In particular, my results indicate that the reciprocal effect from performance on employee fairness perceptions might be driven by employees' self-serving fairness judgments (see also e.g., Greenberg, 1983) of the outcomes they obtain. Making employees aware of such biases could therefore increase their fairness perceptions and reduce an otherwise negative effect on their performance.

1.6.5 Limitations

The experimental approach adopted in this paper was powerful in that it allowed outcomes to be allocated randomly and made it possible to use an instrumental variable in the laboratory in order to estimate a *causal* effect of distributive fairness perceptions on performance. This set-up, however, also had its limitations. First, due to the feedback loop among fairness perceptions and performance and the potential existence of omitted third variables it was methodologically not possible to test the model as a whole in one experimental set-up. Such an approach would not allow me to control for potential biases and the estimated results would therefore not have reflected causal effects – which was precisely the aim of this paper. Second, the behavior of students in a laboratory experiment may differ from the behavior of employees at their workplace. At their job, employees may, for instance, face more restrictions in adjusting their performance in response to their fairness perceptions. As for all laboratory experiments, the results can therefore only be generalized to a certain degree. Nevertheless, given the fact that the experimental results replicated several well-known findings on fairness perceptions and overconfidence, the findings presented here do have meaningful theoretical and empirical implications for research in organizational justice.

1.6.6 Suggestions for Further Research

This study suggests a rich future research agenda. First, the results indicate that there may be new and important antecedents of fairness perceptions which have until now been solely treated as consequences. While I examined employee performance here, similar reciprocal relationships may exist for OCBs, CPWBs, or employee attitudes to name just a few. Further, it will be important to understand whether such reciprocal relationships may also exist between other justice facets, such as procedural, informational, and interpersonal justice and employee behaviors. Also, as the results show, the effect of fairness perceptions on employee performance was different depending on the estimation technique used and whether third variables and feedback loops were controlled for. It would seem important to revisit other relationships among justice perceptions and outcomes variables to better estimate the effect sizes and establish causal effects. Finally, it would be important to extend this research by

examining the dynamic relationship between fairness perceptions and performance over time and assess whether (un)fairness does in fact spiral downwards (or upwards).

Appendix to Chapter 1

A.1 How Omitted Third Variables can bias the Results of a Randomized Experiment

Take the example of negative affectivity (NA), an individual difference which is hypothesized to negatively impact fairness perceptions (Irving et al., 1999; Wanberg et al. 1999). Even though random assignment can ensure that NA is balanced across ‘fair’ and ‘unfair’ treatments, it is likely that NA is *not* balanced across participants with high and low fairness *perceptions*, the two conditions in which we are actually interested. The reason is that such variables may themselves directly impact the formation of fairness perceptions such that participants in part self-select themselves into ‘high’ and ‘low’ fairness perceivers according to their level of NA (and to a certain degree independent of the ‘fair’ or ‘unfair’ treatment they had been assigned to). In other words, based on their level of NA participants will perceive the treatment as more or less fair despite the condition to which they have been assigned.

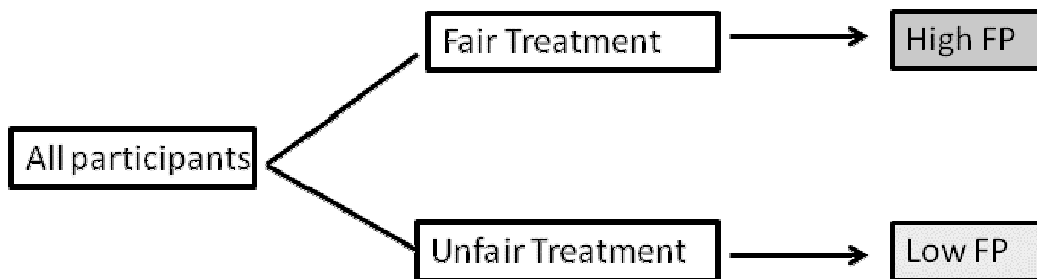
Figure A.1 displays the underlying idea graphically. Part (a) shows how we would like the ‘ideal’ experiment to work. In this case we would allocate our participants to two different conditions, ‘fair’ and ‘unfair’ treatment. If we perfectly randomize these treatments across participants, we can assume that high and low NA would be approximately equally distributed across the two treatments. All participants who are treated fairly would develop high fairness perceptions, while those who are treated unfairly would develop low fairness perceptions so that NA would remain balanced across these groups. As part (b) demonstrates, this will, however, usually not be the case. For the sake of simplicity, let us further assume that participants with low NA who receive fair treatment also *perceive* the treatment as fair and participants with high NA who receive unfair treatment also *perceive* the treatment as unfair. The problem lies in the fact that participants with high NA who received fair treatment might feel they have not been treated that fairly given that they tend to generally have lower fairness perceptions (indicated by the dashed line) (e.g., Irving et al., 1999;

Wanberg et al. 1999), while participants low on NA who have been treated unfairly may not perceive the treatment to be so unfair after all, focusing more on the positive aspects of what they have experienced (indicated by the dotted line). As a result, certain

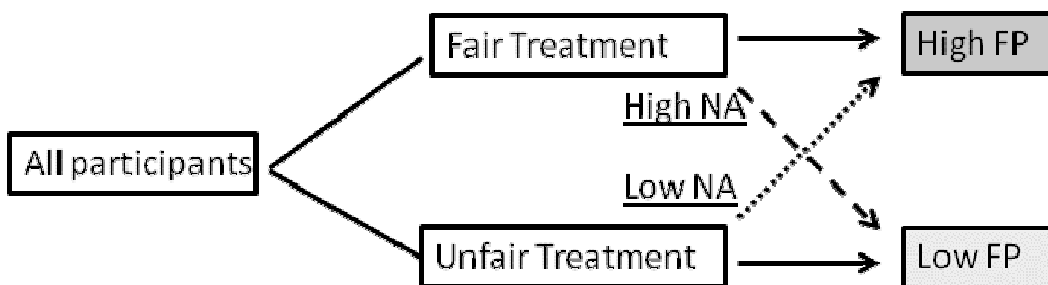
Figure A.1

Example for fairness perceptions of people with a high negative affectivity

(a) Perfect manipulation of fairness perceptions in the presence of no influencing variables



(b) Imperfect manipulation of fairness perceptions in the presence negative affectivity (NA)



variables such as NA will *not* be balanced across the conditions ‘high fairness perceptions’ and ‘low fairness perceptions’. Instead, more people low on NA will be in the ‘high fairness perceptions’ group, and more people high on NA will be in the ‘low fairness perceptions’ group. Following this line of argumentation, participants with lower fairness perceptions could thus either be participants who indeed received unfair treatment, or high NA participants who received fair treatment. Still, this is not a problem for the estimation of the effect of fairness perceptions on performance as long

as such third variables have no direct impact also on the dependent variable, in our case performance. If, however, such third variables do have a direct influence on both the explanatory variable (fairness perceptions) and the dependent variable (performance), the exogeneity assumption is violated. For our example, meta-analytic evidence indeed shows a negative relationship between NA and task performance (Kaplan et al., 2009). As such, the simultaneous negative impact of NA on both fairness perceptions and performance would lead to an overestimation of the effect of fairness perceptions on performance. Even without any *causal* relationship, the two variables would be positively correlated through the impact of negative affectivity. For other variables potentially impacting fairness perceptions (e.g., self-esteem, conscientiousness, or even how seriously a participant takes the experiment), a simultaneous effect on performance is equally plausible. In any of these cases, the estimates of fairness perceptions on performance are biased despite using random assignment to the ‘fair’ and ‘unfair’ conditions.

A.2 Instrumental Variable Estimation

With an instrumental variable, the following two-step approach can be applied. In the first step, the potentially endogenous explanatory variable x_i (here fairness perceptions) is regressed on the instrument as shown in equation (1). In the second step, the dependent variable (here performance) is regressed on the instrument as displayed in equation (2).

$$1^{\text{st}} \text{ step: } \textit{FairnessPerc}_i = \pi_o + \pi_1 \textit{Instrument}_i + v_i \quad (1)$$

$$2^{\text{nd}} \text{ step: } \textit{Performance}_i = \delta_o + \delta_1 \textit{Instrument}_i + u_i \quad (2),$$

where $\textit{FairnessPerc}_i$ are person i 's fairness perceptions, π_o is the estimate of the regression's constant, $\textit{Instrument}$ is the value of the instrumental variable for person i , π_1 is the estimate of the effect of this instrument on fairness perceptions, and v_i is the equation's error term. For equation (2), $\textit{Performance}_i$ stands for person i 's performance, δ_o is the estimate of this regression's constant, δ_1 is the estimate for the instrument's effect on performance, and u_i is the equation's error term.

Dividing the coefficient δ_1 of the instrument in equation (2) by its' coefficient π_1 in equation (1), we see that the change in the instrument appears in the numerator as well as the denominator. As a consequence, the terms cancel each other out, and we are left with the causal effect of fairness perceptions on performance as shown in equation (3).⁶

$$\beta_{1,IV} = \frac{\delta_1}{\pi_1} = \frac{\Delta Performance_i}{\Delta Instrument_i} / \frac{\Delta FairnessPerc_i}{\Delta Instrument_i} = \frac{\Delta Performance_i}{\Delta FairnessPerc_i} \quad (3)$$

In this way, instrumental variable regression allows examining causal effects in the presence of potential feedback loops or omitted variables, even in cross-sectional data (Antonakis et al, 2010). The downside of instrumental variable estimation is that the consistency, i.e. the average correctness or accuracy of the estimates, comes at the cost of efficiency, i.e., the precision with which they estimate the effect. In particular, because they only use part of the variation in x_i to explain y_i , the obtained standard errors will be larger and it is harder to obtain coefficients that reach statistical significance (Antonakis et al., 2010; Antonakis et al., 2014).

⁶ Note that the standard errors would need to be corrected when performing this 2-step estimation by hand. This is automatically done when estimating instrumental variable regression by Software packages like Stata or SPSS.

2. DON'T GET CAUGHT IN THE MIDDLE: THE EFFECT OF SUBORDINATE PERFORMANCE ON PROCEDURAL AND INFORMATIONAL JUSTICE

(with Michael R. Bashshur)

2.1 Introduction

The amount of perceived justice at work relates to a range of employee attitudes and work behaviors. Subordinates who feel justly treated by their managers report higher levels of job satisfaction, organizational commitment and trust towards the organization. They have lower turnover intentions, higher task performance, higher levels of organizational citizenship behaviors, and engage less in withdrawal or counterproductive work behaviors (Cohen-Charash & Spector, 2001; Colquitt, Conlon, Wesson, Porter & Ng, 2001).

Because of this impressive list of organizationally relevant correlates, considerable effort has been directed towards understanding how justice perceptions form based on managerial (in)action. Until recently, less attention has been paid to when or how managers enact justice in the first place. This may be in part due to an assumption that, given the clear benefits of justice for organizations, managers as agents of the organization engage in just behavior as best they can and as often as possible. However, this is not always the case. In fact, both anecdotal and empirical evidence suggest that managers sometimes act with a distinct lack of justice, ignoring subordinates' concerns or ideas (Brockner, 2006) and demonstrating considerable interpersonal insensitivity (Folger & Skarlicki, 1998). Indeed our lack of knowledge about how justice unfolds in organizations and how managers enact just behaviors has been identified as a "critical gap" (Scott, Colquitt & Paddock, 2009, p. 756) in the justice literature

In this study we focus on the effect of subordinate performance on the allocation of procedural and informational justice by those with the power to do so. Procedural justice describes the justice of the procedures used to determine subordinates' outcomes.

These procedures are typically evaluated in terms of their consistency, unbiasedness, accuracy, correctability, ethicality and whether subordinates are given the possibility to voice their opinions (Leventhal, 1980; Thibault & Walker, 1975). Informational justice refers to whether adequate and timely explanations are given for the use of these procedures or for the allocated outcomes (e.g., Bies and Moag, 1986; Greenberg, 1990; Greenberg, 1993b). We focus on these two justice facets first because of their strong relationships with important organizational outcomes (e.g., organizational commitment, performance, counterproductive work behaviors, and withdrawal; Cohen-Charash & Spector, 2001; Colquitt et al. 2001), second because managers tend to have relatively high discretion in how and when they allocate them to subordinates (Scott et al., 2009), and third because they are assumed to be allocated independently of subordinate performance. While distributive justice (the justice of outcome allocations) is typically based on an equity rule (allocations match subordinates' relative inputs) that differentiates among subordinates based on their contribution (e.g., performance), procedural and informational justice rules are usually not input driven, but instead tend to emphasize equality and do not discriminate between subordinates. It is not uncommon to see procedural and informational justice assessed with items such as, "provide employees with an opportunity to express their views and opinions during decision making" or "provide adequate explanations for decision-making, outcomes and procedures" (Scott et al., 2009; p.758). This suggests an expectation that procedural and informational justice should be allocated to everyone equally, and independently of subordinate behaviors such as performance.

To the extent that the allocation of procedural and informational justice is under managerial discretion (Scott et al., 2009), given the potential benefits, it would make sense that managers be highly motivated to engage in procedurally and informationally just behavior. However, this ignores one important fact; that being just, whatever the motive, is not easy (e.g., Brockner, 2006; Folger and Skarlicki, 1998; Scott et al. 2009; Whiteside & Barclay, 2013). The job of being a manager is taxing (e.g., Cyert & March, 1963). Having to appropriately allocate procedural and informational justice in addition to other managerial job requirements can be overwhelming. We build on this premise and argue that, given the difficulty of enacting justice, managers instead prioritize justice to certain subordinates. Combining work on heuristic decision making (e.g., Gigerenzer & Goldstein, 1996; Simon, 1956; Tversky & Kahneman, 1974) and social

cognition (e.g., Fiske, 1980; Fiske & Taylor, 1984) with work on managerial job demands (e.g., Cyert & March, 1963; Hambrick, Finkelstein, & Mooney, 2005; Janssen, 2001; Ng, Ang, & Chan, 2008) we suggest that managers use subordinate performance as a heuristic to help decide how to allocate procedural and informational justice and that they do so in a way that favors subordinates whose performance is most salient – the best and the worst performers. We further suggest that this effect increases as managerial job demands go up. To test these propositions we examine the relationship among performance, procedural and informational justice in a field survey of manager-subordinate dyads, and conduct two experimental studies to examine how participants allocate voice (a key component of procedural justice) and explanations (a key component of informational justice) to subordinates who vary in their performance.

By taking this approach we contribute to research on organizational justice in three ways. First, we extend the research on *why* managers may be (un)just by arguing that beyond purely cognitive or emotional reasons, more subtle mechanisms like the use of heuristics may play an important role. Second, we add to the literature on *how* subordinates influence managerial justice by identifying a major subordinate behavior – performance – as a significant antecedent of managerial justice; contributing to the emerging literature on the role subordinates play in shaping managerial justice through their behaviors (e.g., Korsgaard, Roberson, & Rymph, 1998; Scott, Colquitt, & Zapata-Phelan, 2007; Seppälä, Lipponen, Pirttilä-Backman, & Lipsanen, 2012; Oc, Bashshur & Moore, in press). Finally, we reposition performance, which is typically used as an outcome in justice research, as both an antecedent as well as an outcome of justice and lay the groundwork for a reconceptualization of how some of the most common outcomes of justice perceptions may also work as antecedents.

2.2 Theoretical Background

2.2.1 Motives for Being Just

The impact of just behavior in the workplace can be powerful, so understanding why justice occurs in the first place is crucial (Ambrose & Schminke, 2009; Scott et al., 2009). In fact, it is only recently that the enactors of justice (usually called justice “actors” as opposed to “recipients”, e.g., Scott et al., 2009) have begun receiving

attention and their motives for being just or unjust are being probed. In this study we explore one source of motives for why managers may enact justice, their subordinates.

The literature exploring how subordinates can drive justice motives is relatively recent and evolving, however, three distinct foci are emerging; subordinate characteristics, behaviors and needs.

In terms of subordinate characteristics, Scott et al. (2007) proposed a model in which a manager's positive and negative sentiments towards their subordinate mediated the relationship between subordinate charisma and interactional justice perceptions. Based on the arguments from approach–avoidance perspectives (e.g., Gray, 1990), the authors claimed that managers would be more likely to approach charismatic subordinates and treat them with respect and openness. Their results partially supported this prediction. The more charismatic a subordinate was, the more positively their manager felt towards them and the more likely that subordinate was to report perceptions of interpersonal justice. Similarly Zapata, Olsen & Martins (2013) positioned trustworthiness as engendering felt obligation and trust in the supervisor and argued that via a social exchange process the more trustworthy a subordinate is, the more likely supervisors will reciprocate this trustworthiness by treating those subordinates justly. Indeed, results showed subordinate benevolence and integrity (two major elements of trustworthiness) led to perceptions of informational and interpersonal justice

In terms of the role subordinates' needs play in managerial justice allocations, Cornelis, Van Hiel, and De Cremer (2012) argue that leaders are more likely to act in a procedurally just manner towards followers with high belongingness needs, an effect which they show to be mediated by the leader's attraction (i.e. positive sentiments) to the subordinate or the group. Further, Cornelis, Van Hiel, De Cremer, and Mayer (2013) find that the effect of follower belongingness needs on procedurally just behavior is moderated by leaders' empathy. More empathic leaders react more strongly to their followers' needs. Finally, Hoogervorst, De Cremer and van Dijke (2013) show that leaders treat followers with high control and belongingness needs in a more procedurally just manner.

In terms of an effect of subordinate *behavior* on informational and procedural justice, Korsgaard and colleagues (1998) show that assertive subordinate behavior

increases managers' interactional justice by increasing the likelihood that managers consider their subordinates' opinions and justify their evaluations in a performance appraisal situation. Further, in a survey managers reported treating groups of high contributing subordinates with more interpersonal justice than they did other groups during a layoff process (Gilliland & Schepers, 2003).

While these studies help highlight the role subordinates play in shaping the justice they receive, they are limited to subordinate characteristics that may be somewhat ambiguous or non-obvious to managers (e.g., belongingness needs, trustworthiness) or that are not equally relevant across different kinds of jobs (e.g., assertiveness). In this study we examine the role of the one behavior that every subordinate enacts and that every manager closely tracks; performance. Over the following sections we will argue that performance is a highly salient subordinate behavior for managers and that it serves as a decisional aid in how they allocate justice to their subordinates.

2.2.2 The Difficulty of Being Just

While work is moving forward on understanding managerial justice motives in general (Scott et al., 2009; Ambrose & Schminke, 2009) and subordinates' influence on managerial justice in particular, less is known about how well managers who intend to be just, are able to act on those intentions. While managers are not always motivated to be just (e.g., Ambrose & Schminke, 2009; Brockner, 2006; Leventhal, 1980; Scott et al., 2009), when they are, they may not always find it easy to do so. Managers are often limited in the amount of discretion they have in making justice allocations (Scott et al., 2009), and even when their discretion is not limited, justice comes at a cost (e.g., Folger & Skarlicki, 2001; Gilliland & Schepers, 2003; Long, 2011; Taylor, Masterson, Renard, & Tracy, 1998; Taylor, Tracy, Renard, Harrison, & Carroll, 1995; Whiteside & Barclay, 2014).

First, there is a psychological cost to being just (Folger & Skarlicki, 1998). Managers tend to experience negative emotions and intense personal discomfort when being informationally just and communicating bad news to subordinates (one of the requirements of informational justice is the prompt and truthful communication of relevant information). Indeed sometimes, "instead of wrestling with those

uncomfortable emotions, many managers find it easier to sidestep the issue – and the people affected by it – altogether” (Brockner, 2006, p.127).

Second, justice can be costly in terms of time, effort and resources. Johnson, Lanaj & Barnes (2014) build on ego-depletion theory to show that, on a daily basis, exhibiting procedurally fair behaviors is draining for managers. Similarly, Taylor and colleagues demonstrate across two studies that managers following a more procedurally just assessment system invested far more time and effort than those following more traditional (less just) systems (Taylor et al., 1995; Taylor et al., 1998). Managers seem to be aware of these costs and view the process of being just as risky and requiring considerable professional commitment (Long, 2011; Taylor, et al., 1995; Taylor, et al., 1998; Spreitzer & Mishra, 1999).

Thus, despite the benefits of treating subordinates in a procedurally and informationally just manner, the accompanying requirements; e.g., ensuring adequate due process in decisions and the timely and accurate dissemination of information, can represent a serious burden for managers, requiring them to make difficult trade-offs. We propose that these trade-offs lead managers to neglect an effortful adherence to justice allocation rules and instead to rely on heuristic decision making when prioritizing procedural and informational justice to subordinates

2.2.3 Subordinate Performance as a Heuristic

Heuristics are mental short-cuts used to make decisions “under limited time and knowledge” (Gigerenzer & Goldstein, 1996, p.5). While such heuristics have often been critically viewed as yielding suboptimal decision outcomes (e.g., Tversky & Kahneman, 1974; Kahneman, Slovic, & Tversky, 1982), as early as 1956 Simon formulated the view that while people *satisfice* rather than *optimize* when taking decisions heuristically, the real world is in fact characterized by properties that allow for such simplified choice mechanisms (Simon, 1956). Gigerenzer and Goldstein (1996) support this view and show empirically that in some contexts reasoning the “fast and frugal” (or heuristically based) way can match or even outperform more complicated (and ‘rational’) choice mechanisms.

One prominent heuristic introduced by Tversky and Kahneman (1974) is the *availability* heuristic. The more easily people bring an event to mind the higher they estimate the probability of such an event occurring. One determinant of how available an event is, is its *saliency* (Tversky & Kahneman, 1974). Whether of behavioral rules, individuals, events, or feelings, saliency has repeatedly been shown to impact decision-making and behavior (e.g., Chaiken & Eagly, 1983; Pallak, 1983; Samuelson & Allison, 1994; Siemer & Reizenstein, 1998; van den Bos, 2001). As Taylor and Fiske (1978) note, “individuals frequently respond with little thought to the most salient stimuli in their environment” (p. 252).

In the justice literature the role of saliency in shaping how justly people behave or how they react to perceived (in)justice has been largely ignored. There are only two exceptions. The work of Samuelson and Allison (1994) showed that people are more likely to divide resources according to an equality rule the more salient this rule is made to them, while van den Bos (2001) demonstrated that individuals react more strongly to perceived procedural (in)justice when uncertainty is made more salient to them.

In this study we suggest that the saliency of the subordinates themselves impacts managerial justice and that this saliency largely depends on subordinate performance. Based on the arguments of Social Cognition Theory (Fiske & Taylor, 1984) that behavior differing from what we know or expect is particularly salient, we propose that extreme performance (both good and bad) increases a subordinate’s saliency. Individuals tend to pay the most attention to people or events in the tail ends of a distribution. They pay significantly more attention to extreme personal attributes than they do to more average ones (Fiske, 1980), they evaluate extreme probabilities as more informative than moderate probabilities (Keren & Teigen, 2001), and when describing verbal probabilities, such as the “possibility” or “certainty” of an event, people focus on the tails of the distribution (even when it is bell-shaped; Juanchich, Teigen, and Gourden, 2013). Extreme performers by their very nature are in the tails of the performance distribution. As a result they should also be more salient to their managers. Based on this argumentation and the empirical finding that managers give priority to those stakeholders who are most salient (Agle, Mitchell, & Sonnenfeld, 1999; Mitchell, Agle, & Wood, 1997) and the limited evidence that saliency is related to justice allocation (Samuelson & Allison, 1994), we propose that performance will drive the

way in which managers allocate informational and procedural justice to their subordinates.

The idea that subordinate performance should drive leader behaviors has garnered some attention in the leadership literature. For example, rather than making sophisticated attributions about followers' performance (see Martinko, Harvey, & Douglas, 2007) when doing performance evaluations, leaders appear to take cognitive short-cuts and make their evaluations primarily based on the most salient cues, such as performance itself (Ashkanasy & Gallois, 1994). Subordinate performance predicts managers' contingent punishment behavior (Podsakoff, Bommer, Podsakoff, & MacKenzie, 2006) and the severity of poor performance is a stronger predictor of the disciplinary action chosen by a manager than is the managers' attributions for that poor performance (Trahan & Steiner, 1994). These results hint at a heuristic-like process underpinning how managers evaluate and respond to subordinate performance.

In this study we argue that subordinate performance likewise predicts managers' procedural and informational justice behaviors. Because, as specified earlier, the fairness of procedural and informational behaviors are also subject to managers' cost-benefit tradeoff and tend to be measured against an equality rule we predict similar effects for both such that:

Hypothesis 1: Managers will favor subordinates whose performance stands out a) positively (high performers) or b) negatively (low performers) when allocating procedural justice.

Hypothesis 2: Managers will favor subordinates whose performance stands out a) positively (high performers) or b) negatively (low performers) when allocating informational justice.

2.2.4 Managerial Job Demands as a Moderator

While job demands have been defined quantitatively, e.g., in terms of work load and time pressure, as well as qualitatively, e.g., with respect to role ambiguity, (e.g., Janssen, 2001; Hambrick et al., 2005), we follow the majority of researchers in the field (e.g., Dwyer & Ganster, 1991; Hambrick et al., 2005; Janssen, 2001, Karasek, 1979) to

concentrate on quantitative job demands. More specifically, we will focus on task challenges, i.e. the complexity of the task a manager faces, rather than performance challenges or executive aspirations (Hambrick et al., 2005).

Cyert and March suggested as early as 1963 that managers tend to be overloaded by the complexity of their job demands and may be unable to assess all stimuli relevant to the decisions facing them. Managers under high job demands take mental shortcuts and “engage in limited search” (Hambrick et al., 2005, p.478) when making decisions. They process a smaller portion of the relevant facts and focus their attention narrowly on the most relevant stimuli for their task (Ng et al., 2008). We proposed that the trade-offs of being just leads managers to use subordinate performance as a heuristic for allocating justice in a way that favors those who are most salient (who stand out positively or negatively in terms of their performance). Given that effort reduction (e.g., Shah & Oppenheimer, 2008; Simon, 1956; Simon, 1990) and time saving (e.g., Pachur & Hertwig, 2006; Rieskamp & Hoffrage, 2008; Simon, 1956; Simon, 1990) are central explanations for heuristic use we expect that as job demands increase the use of subordinate performance as a heuristic for allocating procedural and informational justice will also increase. This is summarized in the following hypothesis:

Hypothesis 3: When job demands are higher, managers will favor subordinates whose performance stands out positively or negatively when allocating procedural and informational justice more so than when job demands are lower.

In order to test these hypotheses we conducted three studies – one field survey to examine the relationship between subordinate performance and justice allocation in a sample of managers and their subordinates and two laboratory experiments to unpack these effects. In these studies our aim is to establish whether: 1) contrary to what the justice rules for procedural and informational justice would suggest, there is an effect of subordinate performance on procedural and informational justice such that extreme performers are favored and 2) whether job demands moderate this effect.

2.3 Study 1

2.3.1 Procedure

Participants were recruited through a snowball sampling approach (e.g., Eddleston, Veiga, & Powell, 2006; Martins, Eddleston, & Veiga, 2002; Morgeson & Humphrey, 2006; Zapata et al., 2013). Specifically, members of an undergraduate subject pool of a large university in Singapore were asked to recruit one full-time working adult who worked at least 30 hours per week. Participants had to be fluent in English and be willing to ask their manager to fill out an online survey. We directly emailed potential participants details regarding the study (e.g., purpose, timeline) including a link to the online survey. In the online surveys we emphasized that participation was voluntary and that the answers would be anonymous and used for research purposes only. Finally, to ensure that all participants were real, we called and confirmed the identity of a random subsample of 10% of the participants.

2.3.2 Sample

A total of 268 students provided the name of eligible subordinates. Of these, 157 direct managers (58.6%) filled in the survey and worked full-time and were thus included in the analysis. 155 of these managers filled out the subordinate performance measure and the self-rated procedural and informational justice measure and thus constituted our final sample. These managers were on average 43.8 years old and 42.4 percent of them were female. On average they supervised groups of 15.2 subordinates and had supervised the rated subordinate for 5 years and 1 month. Managers worked in variety of industries, i.e. 24.5 percent in the service industry, 15.9 percent in the financial industry, 13.9 percent in manufacturing, 9.9 percent in governmental organizations, 6.0 percent in human services, 4.6 percent in transportation and 25.2 percent in others.

2.3.3 Measures

Performance. Subordinate performance was rated by the manager using the three items from Motowidlo & Van Scotter (1994) (1-5 Likert scale, where “1” = “Not at all” and “5” = “Completely”, alpha = .84).

Procedural justice. Procedural justice was measured with the four items tapping this facet from Colquitt (2001) (1-5 Likert scale, where “1” = “Not at all” and “5” = “Completely”, alpha = .88) as rated by the manager (e.g., “Do you apply the procedures consistently for this subordinate?”).

Informational justice. Informational justice was measured with the five items for this facet from Colquitt (2001) (1-5 Likert scale, where “1” = “Not at all” and “5” = “Completely”, alpha = .88) as rated by the manager (e.g., “Are you candid when communicating with this subordinate?”).

2.3.4 Results

The results of a polynomial regression of subordinate performance on the amount of procedural and informational justice managers reported allocating to their subordinate are summarized in *Table 1*. Subordinate performance is mean-centered to avoid nonessential collinearity and increase the interpretability of the results.

The regression of procedural justice on subordinate performance suggests a u-shaped relationship between the two variables in that high or low subordinate performance is associated with higher levels of procedural justice than average performance ($b_1=.16$, $p<.05$; $b_2=.10$, $p=.08$). However, while the main effect (b_1) is significant indicating that high performers receive more procedural justice in support of *Hypothesis 1a*, the quadratic term (b_2) is only marginally significant at the $p=.08$ level indicating that *Hypothesis 1b* is not fully supported. The fact that it has the expected sign, however, hints at the possibility that low performers are in fact also favored in the allocation of procedural justice and that high performers are favored even more strongly than indicated by the positive main effect. The same regression with informational justice as the dependent variable results in a strong significant u-shaped relationship,

with higher levels of justice for high and low performers ($b_1=.14, p<.05$; $b_2=.12, p<.05$), supporting *Hypotheses 2a and b*.

Table 1: Regression of procedural/informational justice on subordinate performance

Variable	Procedural Justice	Informational Justice
Subordinate Performance (b_1)	0.16* (0.06)	0.14* (0.06)
Subordinate Performance2 (b_2)	0.10 (0.06)	0.12* (0.06)
Constant (b_0)	4.08** (0.06)	4.04** (0.05)
N	152	155
R-squared	0.05	0.04
Root MSE	0.53	0.53
Prob > F	0.04	0.04

Notes: * $p<0.05$, ** $p<0.01$; Robust standard errors are reported in parentheses.

In interpreting these regressions it is important to recognize that they reflect associations between the variables rather than causal effects. In fact, much of the justice literature argues for a positive effect of procedural and informational justice on subordinate performance (although this is generally tested with correlational approaches and never estimated with a quadratic model; e.g., Cohen-Charash & Spector, 2001; Colquitt et al., 2001) which is opposite to the causal direction proposed in this study. However, if the only effect at work was that of justice driving performance then we would expect a simple linear effect in which the higher the justice allocated the higher the performance. The significant curvilinear effect we find in this study suggests that the relationship is more complex than previously assumed.

To avoid concerns inherent in the interpretation of same source, correlational data, we explored the effect of performance on procedural and informational justice in two laboratory experiments. In Study 2 we test whether performance does indeed cause differences in how justice is allocated and in Study 3 we attempt to replicate this effect and also test whether job demands moderate the effect of performance on justice.

2.4 Study 2

2.4.1 Sample

Participants were 31 undergraduate students of differing disciplines from a large Spanish university who were recruited through the online recruitment system of the research laboratory. Their average age was 21 years, 58 percent of them were female. 84 percent of them reported having an average work experience of 27 months of mostly part-time work.

2.4.2 Procedure

Upon their arrival in the laboratory, participants were seated randomly in cubicles that prevented their seeing each other and were assured anonymity with regard to all aspects of the experiment. The participants were told that they would take the role of either the manager of a group of subordinates or of a subordinate, and that they would remain within the same role throughout the experiment. In reality, however, the subordinates were simulated by a computer algorithm so that all participants took the role of managers and were exposed to the same set of subordinate behaviors.

As a manager, each participant had two tasks across conditions. The first, which served as a distractor while the simulated subordinates were said to be working on their own task, was to correctly solve as many mathematical calculations as possible within one minute. The second task was to observe their subordinates' performance and then divide 100 experimental monetary units (EMUs) amongst them. The EMUs were described as having a specific exchange rate to real money and participants were told that the money subordinates earned would be paid out at the end of the study. Participants thus believed their decisions would directly determine the subordinates' payment for the experiment, while they themselves earned €10 for participating in the experiment as a manager (about 14.4 USD).

The subordinates were simulated in a way that there was always one low, one middle, and one high performer in each group. The low performer was described as having achieved a performance of 11, the middle performer of 14, and the high performer of 17. In addition to allocating EMUs, managers had the option to allocate

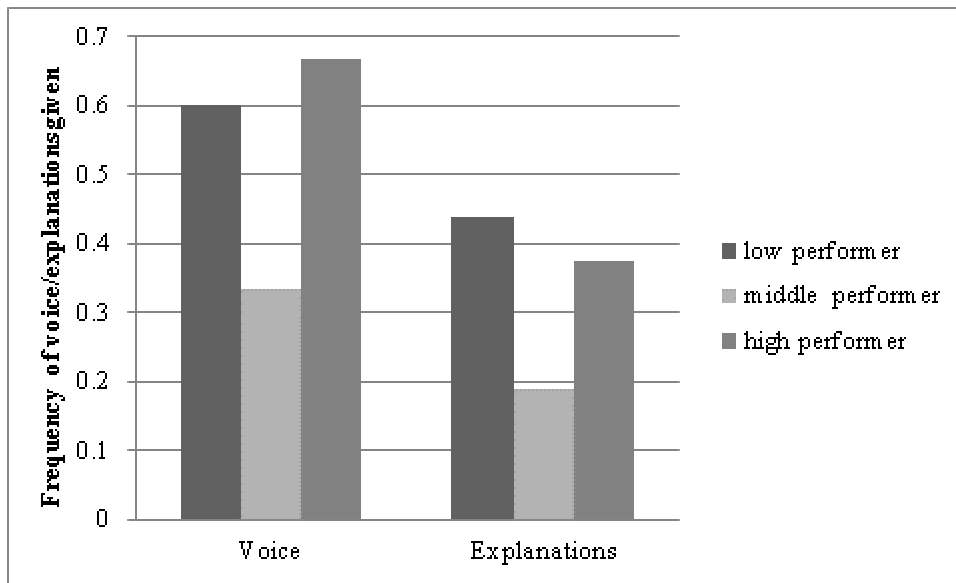
one type of justice to their subordinates in the different conditions. In condition 1, the ‘voice’ condition, they had the chance to let one or more of their subordinates suggest which share of the 100 EMUs they thought they should receive before the allocation was made, i.e. to give subordinates voice over the allocation decision (a central element of procedural justice; e.g., Folger, 1977, Thibault & Walker, 1975; Lind & Tyler, 1988; Lind, Kanfer & Earley, 1990). In order to avoid relative differences in subordinate suggestions such that one subordinate appeared greedy and another one humble, the suggestions were simulated in a way that subordinates always requested ten percent more than an equitable allocation. In condition 2, the ‘explanation’ condition, participants could not give voice to subordinates, but instead could choose to give an explanation (a central element of informational justice; e.g., Greenberg, 1993b) to one or more subordinates after having allocated the money. This design allowed us to tease apart the effect of performance on the allocation of voice and explanations. Finally, after the instructions and before the experiment started participants had to answer a computer-based questionnaire regarding the instructions of the experiment, e.g., on their tasks as a manager, the type of task their subordinates had (individual vs. group work), and the payment structure. They could only proceed to the experiment when everyone had answered all questions correctly. At the end of the experiment the participants completed a questionnaire on demographics and were paid for their participation.

2.4.3 Results

Voice. In the voice condition 60.0 percent of the participants allocated voice to the high performer, 33.3 percent to the middle performer, and 66.7 percent to the low performer. This is graphically depicted in *Figure 1*. 13.3 percent of the participants chose not to give voice to any subordinate.

Participants thus allocated significantly more voice to the high and low performers than to the middle performer ($t(14)=1.26$, $p<0.05$; $t(14)=2.65$, $p<0.01$) supporting *Hypotheses 1a* and *1b*.

Figure 1: Allocation of voice and explanations as a function performance (Study 2)



Explanations. On average 43.8 percent of the participants gave an explanation to the high performer, 18.75 percent to the middle performer and 37.5 percent to the low performer. 37.5 percent did not give any explanation. The frequencies with which each type of performer received an explanation are also depicted in *Figure 1*. Participants significantly favored the low and the high performer over the middle one ($t(14)=2.45$, $p<.05$; $t(14)=-1.87$, $p<.05$) mirroring the results from our field study and supporting *Hypotheses 2a* and *2b*.

2.5 Study 3

Study 3 was designed to replicate the results of Study 2 with a larger sample. In addition, in line with the suggestions of Hambrick and colleagues (2005) for examining job demands effects, the demands placed on participants were manipulated in order to explore whether reliance on performance becomes stronger in situations in which participants have to cope with higher job demands.

2.5.1 Sample

Participants were 181 management students recruited through an online recruitment system at a large university in Singapore. Their average age was 21.8 years

and 64 percent were female. Almost all participants (96.1 percent) reported having prior work experience with an average of about 1 year and 4 months in full or part-time jobs. Further, 86.2 percent indicated that they had already held some leadership position (e.g., in national service (military, police, rescue), in a company, as captain of a sports team, or in the organization of college events).

Participants were guaranteed confidentiality. Attention checks were placed at three different points of the experiment. All participants answered all three questions correctly. Two students indicated to have already had previous knowledge of the experiment and were thus excluded from the sample. As a result the usable sample consisted of 179 participants.

2.5.2 Procedure

The overall procedure of the experiment was identical to the one described in Study 2. In their role as managers participants earned a fixed wage of 20 Singapore Dollar (about 16.2 USD). However in this study, participant behavior was observed across three periods in order to rule out the possibility that participants might try to balance out justice over time (e.g., distribute information to different subordinates over the different rounds such that everyone received some form of information at least once). Subordinate performance was simulated in a way that each subordinate showed a slight (about 15 percent) increase in performance from each experimental period to the next (to simulate learning), but the ranking between the simulated subordinates did not change¹. The relative performance of each type (low, middle, high) of subordinate are displayed in *Table 2*. The order in which subordinates of different performance types would appear to the participant was randomized to avoid order effects. In order to manipulate the participants' job demands we varied the number of subordinates participants had to supervise. In the 'low job demands' condition, participants were told they were supervising three subordinates (as in Study 2). In the 'high job demands' conditions, they were told they were supervising a group of six subordinates. Tracking

¹ In a pilot study we contrasted increasing and decreasing performance profiles and did not find any significant difference in subsequent leader allocation behavior. As learning effects are not unusual and as we wanted to keep relative performances equal we decided in favor of an increasing performance profile.

the performance and deciding how to allocate money and voice or explanations to six instead of three subordinates should constitute a higher work load for participants.

Table 2: Simulated performances of subordinates across the three experimental periods

	3 subordinates			6 subordinates					
	low	middle	high	S1 (lowest)	S2	S3	S4	S5	S6 (highest)
<i>Period 1</i>	19	24	29	19	21	23	25	27	29
<i>Period 2</i>	22	28	33	22	24	26	29	31	33
<i>Period 3</i>	25	33	38	25	28	30	33	36	38

Study 2 therefore had four experimental conditions; conditions 1 (voice) and 3 (explanations) in which participants supervised a group of three subordinates, and conditions 2 (voice) and 4 (explanations) in which they supervised a group of six subordinates.

2.5.3 Manipulation check

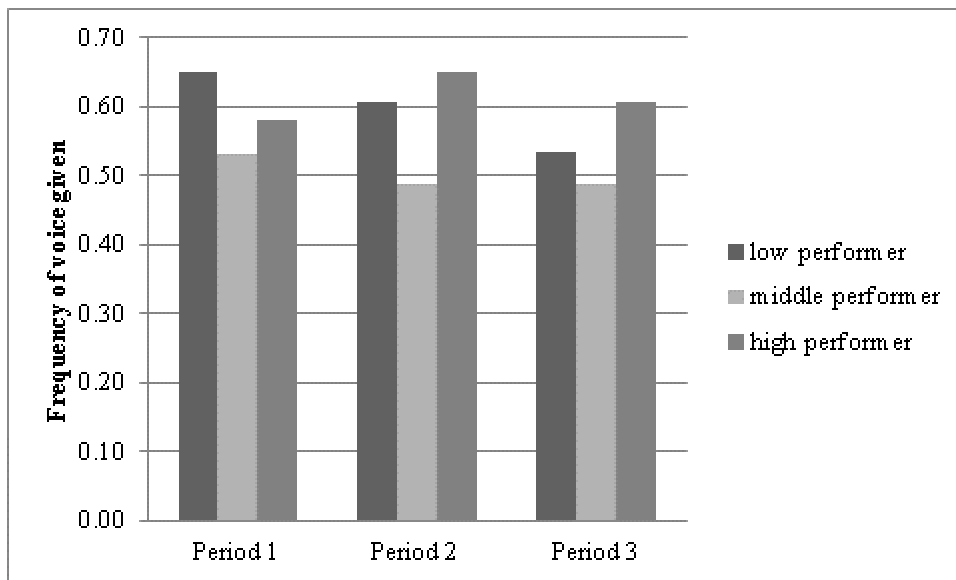
In the survey following the experiment we asked participants how each of their subordinates developed performance-wise over time. The answer options were ‘improved’, ‘worsened’, ‘stayed equal’, and ‘don’t know’. Based on the premise that as job demands go up it would be more difficult to remember individual subordinates’ performance trends, we compared the frequency of ‘don’t knows’ across the three-versus six-subordinate condition as a proxy for the relative job demands they faced.

Overall, participants did significantly worse recalling their subordinates’ performance trends in the six as compared to the three subordinate conditions (unpaired t-test; $t(177) = -4.7446$, $p < .01$). This supports the notion of higher job demands in the six subordinates conditions. Specifically, averaged across their subordinates, participants were unable to recall performance trends in 7.2 percent of the cases in the three subordinates conditions in contrast to 28.8 percent of the cases in the six subordinates condition.

2.5.4 Results

Voice. We compare voice allocations across the low job demands (three subordinates) and high job demands (six subordinates) conditions. In the *three subordinates condition* on average 61.0 percent of participants allocated voice to the high performer, 50.3 percent to the middle performer, and 60.0 percent to the low performer. This is graphically depicted per period in *Figure 2*. 12.3 percent of the participants chose not to give voice to anyone.

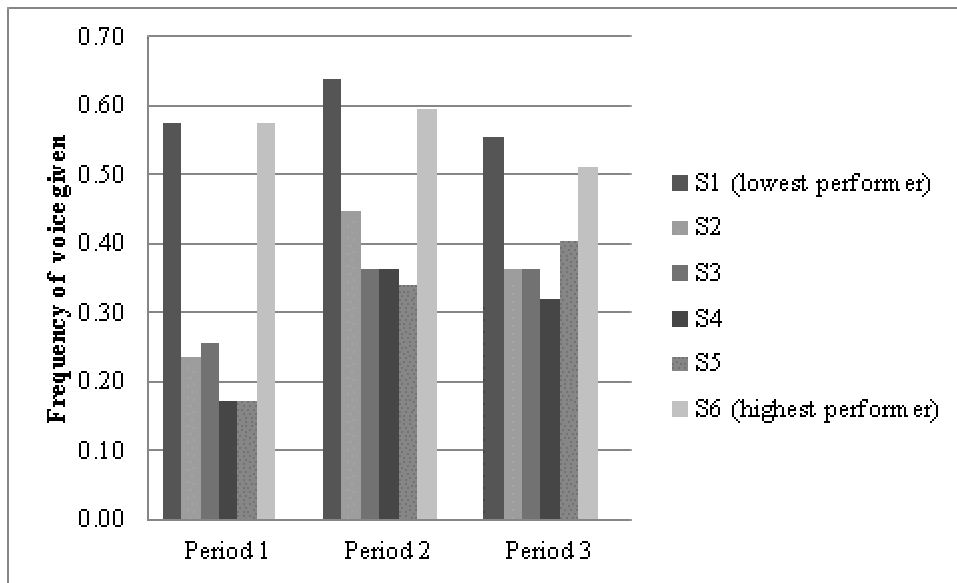
Figure 2: Allocation of voice to three subordinates as a function of performance (Study 3)



Broken down into the three periods, the high performer received significantly more voice than the middle performer only in period 2 ($t(42)=2.20$, $p<.05$), but not in period 1 ($t(42)=0.53$, $p=.31$) and period 3 ($t(42)=1.30$, $p=.10$). *Hypothesis 1a* that high performers get favored in the allocation of voice is thus only partially supported. The low performer received significantly more voice than the middle performer in none of the periods (period 1: $t(42)=1.22$, $p=.11$; period 2: $t(42)=1.53$, $p<.10$; period 3: $t(42)=0.57$, $p=.28$). *Hypothesis 1b* therefore was not supported in the low job demands condition. However, while not statistically significant the trend of allocation patterns did match the findings of the Study 2.

When job demands increased, i.e. when participants had to divide their attention amongst *six subordinates*, the pattern obtained is clearer. In this case, on average (from the lowest to the highest performer) 58.7 percent of the participants allocated voice to S1, 34.7 percent to S2, 32.7 percent to S3, 28.3 percent to S4, 30.3 percent to S5, and 56.0 percent to the highest performer S6. This is graphically summarized per period in *Figure 3*. 15.7 percent did not allocate voice to anyone.

Figure 3: Allocation of voice to six subordinates as a function of performance (Study 3)



Broken down into three periods, in the high job demands condition, the lowest and highest performing subordinates were both clearly favored in the allocation of voice – they obtained significantly more than other subordinates in all periods^{2 3}. In contrast,

² Only in period three did the highest performer get significantly more voice than the second-highest performer only on the 10%-significance level because the second highest performer also was somewhat favored. Still, however, the highest performer got significantly more voice than the third best performer in line with the general pattern ($t(42)=2.65, p<.01$).

³ Note that in the six subordinates conditions for voice and explanations we tested the allocation to each subordinate directly against the ones of the subordinate of neighboring performance as this was usually the most conservative test of our hypotheses as the difference to performers who were further away would in most cases be even stronger.

there were hardly any differences in how voice was allocated to the four ‘middle performers’.⁴ The respective statistics can be found in panel a) of *Table 3*.

Table 3: T-tests (six subordinate conditions)

a) for preferential allocation of voice

Period	S1 > S2	S2 > S3	S3 ≠ S4	S4 < S5	S5 < S6	S1 ≠ S6
Period 1	t=5.59, p=0.00	t=0.00, p=0.50	t=1.66, p=0.10	t= 0.37, p=0.65	t=4.15, p<.01	t=0.00, p=0.50
Period 2	t=3.30, p<.01	t=0.37, p=0.65	t=0.00, p=1.00	t=1.66, p=0.05	t=2.28, p<.05	t=0.47, p=0.64
Period 3	t=1.40, p=0.08	t=1.43, p=0.08	t=0.81, p=0.42	t=0.00, p=0.50	t=2.92, p<.01	t=0.57, p=0.57

Degrees of freedom = 48; S1 = lowest performing subordinate, S6 = highest performing subordinate

b) for preferential allocation of explanations

Period	S1 > S2	S2 > S3	S3 ≠ S4	S4 < S5	S5 < S6	S1 ≠ S6
Period 1	t=3.95, p<.01	t=0.57, p=0.72	t=0.57, p=0.57	t= 0.57, p=0.28	t=2.19, p<.05	t=0.42, p=0.67
Period 2	t=2.86, p<.01	t= 0.57, p=0.28	t=0.57, p=0.57	t= 0.57, p=0.28	t=3.51, p<.01	t=0.23, p=0.82
Period 3	t=1.70, p<.05	t=1.00, p=0.16	t=0.00, p=1.00	t= 0.81, p=0.21	t= 3.14, p<.01	t=1.15, p=0.26

Degrees of freedom = 48; S1 = lowest performing subordinate, S6 = highest performing subordinate

Hypotheses 1a and 1b that managers favor subordinates standing out positively or negatively when allocating voice were clearly supported in the high job demands condition. When job demands were lower the trend was as predicted, but not significant in most cases. This lends support to *Hypothesis 3* that managers favor extreme performers even more when job demands are high.

When participants in both ‘voice’ conditions were asked in the post-experiment questionnaire why they chose to allocate voice the way they did, their answers indicated

⁴ Exceptions are that the second lowest performer got slightly favored in the second period, while the second-best got slightly favored in the third period.

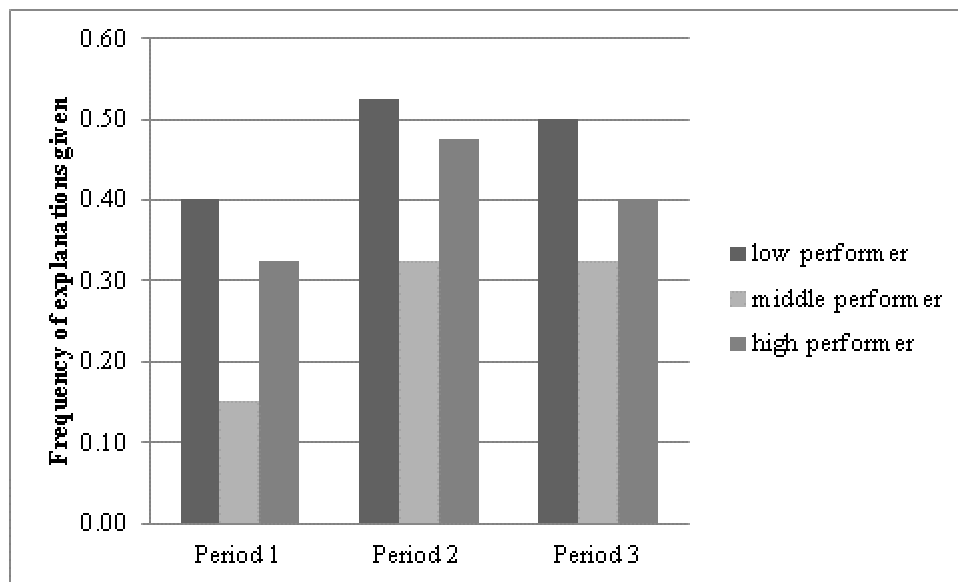
that many found it especially informative to elicit voice from subordinates who were most extreme in their performance. Examples include the following quotes:

“I wanted to know what the best thinks he/she deserves. I wanted to know how the weakest employee felt about her own performance.”

“I wanted to see how well they thought they did and how much they deserved to be compensated based on their performance. I asked employee 1 since he consistently scored the highest and paid accordingly. I used employee 2, the lowest, as a benchmark as well.”

Explanations. In the *low job demands condition* (three subordinates) on average 40.3 percent of the participants gave an explanation to the high performer, 27.0 percent to the middle performer, and 47.7 percent to the low performer. 29.3 percent of the participants did not give any explanation. *Figure 4* graphically summarizes the allocation of explanations given per period.

Figure 4: Allocation of explanations to three subordinates as a function of performance (Study 3)

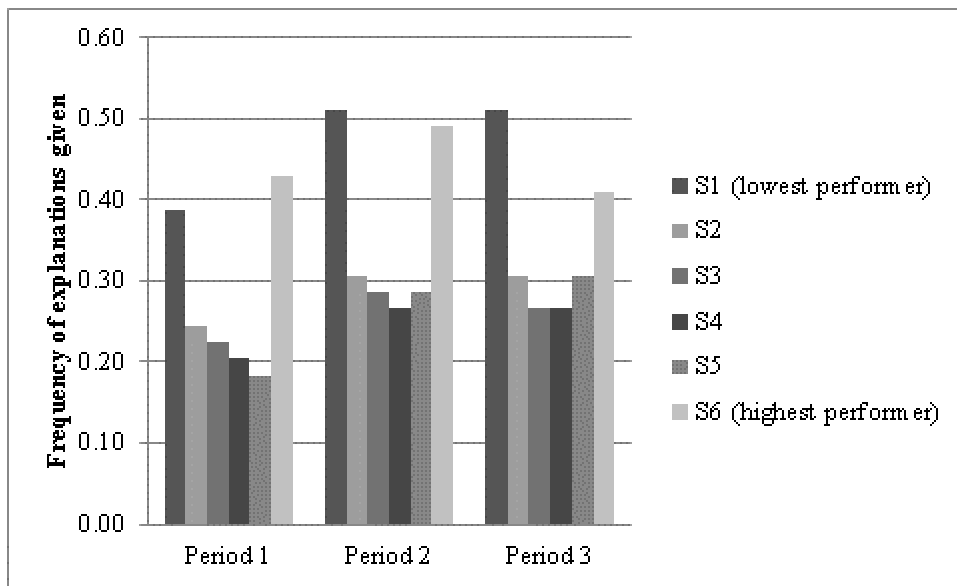


As we can observe, participants allocated significantly more explanations to the high than to the middle performer only in the first period (period 1: $t(39)=2.21$, $p<.05$; period 2: $t(39)=1.64$, $p=.05$; period 3: $t(39)=1.30$, $p=.21$). For the low job demands

condition, *Hypothesis 2a* that managers favor high performing subordinates when allocating explanations is thus only partially supported. However, participants allocated significantly more explanations to the low performer than the middle one in each period (period 1: $t(39)=2.91$, $p<.01$; period 2: $t(39)=2.45$, $p<.01$; period 3: $t(39)=2.01$, $p<.05$). *Hypothesis 2b* is thus supported in all three periods.

In the *high job demand* condition the pattern is again clearer than it is for low job demands. On average (from the lowest to the highest performer) 47.0 percent of the participants allocated an explanation to the lowest performer S1, 28.7 percent to S2, 26.0 percent to S3, 24.7 percent to S4, 26.0 percent to S5, and 44.3 percent to the highest performer S6. 29.7 percent of the participants did not allocate any explanation. *Figure 5* displays the allocation of explanations by period.

Figure 5: Allocation of explanations to 6 subordinates as a function of performance (Study 3)



The lowest and highest performers were each significantly favored over the other four subordinates in the allocation of explanations in each period in line with *Hypotheses 2a* and *2b*. The respective statistics can be found in panel b) of *Table 3*. With higher job demands, the high performer thus seems to be even more likely to preferentially allocate explanations, in line with *Hypothesis 3*. It is noteworthy that the second lowest and second highest performer did not profit from the performance-

dependent justice allocation as participants seem to fully focus their attention on the two most (positively or negatively) outstanding subordinates.

When participants in the post-experiment questionnaire were asked why they had allocated explanations the way they did, they again reported focusing primarily on those subordinates who were most extreme in their performance. Examples of such statements include:

“Firstly, I want to encourage my top performers to keep up the good work. Secondly, I want my not so good employees to understand the company's decision so that he/she will know what to strive for rather than being disappointed or even angry.”

“Trying to motivate the employee who performed the poorest, and encourage consistent good performance from the employee who performed the best. Also trying to find out from the employee who consistently performed the poorest if there was any help that the company can provide so that he or she could deal with his or her work better.”

“I was deciding on the top/worst performer to explain why I awarded them the highest/lowest amount of EMUs. Since they are on either ends of the spectrum, it would make more sense to explain why they were awarded more or less than their fellow employees”

2.6 Discussion

2.6.1 Summary

Procedural and informational justice at work have a positive impact on subordinates' work attitudes and behaviors (e.g., Cohen-Charash & Spector, 2001; Colquitt et al., 2001), but they also come at a cost for the manager (Folger & Skarlicki, 2001; Long, 2011; Whiteside & Barclay, 2013; Gilliland & Schepers, 2003; Taylor et al., 1995; Taylor et al., 1998). Drawing from work on heuristic decision making (e.g., Gigerenzer & Goldstein, 1996; Simon, 1956; Tversky & Kahneman, 1974) we argue that managers face this trade-off by prioritizing procedural and informational justice to

those subordinates who are most salient to them; those who stand out positively (high performers) or negatively (low performers) in their performance. Building on the literature on managerial job demands (e.g., Cyert & March, 1963; Janssen, 2001; Hambrick et al., 2005; Ng et al., 2008) we further argue that as job demands go up managers rely on heuristic decision making even more, increasing the effect of subordinate performance on procedural and informational justice.

To test our hypotheses we conducted a field survey with managers and two laboratory experiments with student participants. The results from the field survey suggest that there is indeed a significant u-shaped relationship between subordinate performance and informational justice in that managers allocate more informational justice to those subordinates who are at the edges of the performance spectrum, i.e. high and low performers. Further, managers allocated significantly more procedural justice to high performers, but not to low performers (who did receive more, but only at a marginally significant level, $p=0.075$). The data from the two laboratory experiments show that the effect is indeed causal in that participants in managerial roles preferentially allocated procedural and informational justice to those subordinates who stood out positively or negatively in their performance in the majority of cases (*Study 2 and 3*). Notably, this effect generalized across countries. In line with our theorizing, this effect also became more pronounced as job demands went up (*Study 3*). While we were not able to explicitly test whether employee salience is in fact the driving factor behind these results, our data does offer evidence that extreme performers were significantly more salient to group leaders. Leaders were ex-post more likely to remember the performance trend of the highest and lowest performers. In line with our argumentation, this tendency strongly increased from the low to the high work load conditions (3 employees: high < middle: $t(82)=1.92$, $p<.05$; low < middle: $t(82)=1.65$, $p=.05$; 6 employees: S1 (lowest) > S2: $t(95)=3.12$, $p<.01$; S6 (highest) < S5: $t(95)= 2.57$, $p<.01$). Finally, it is also noteworthy that those subordinates who did not stand out in their performance (those 'in the middle') did not only obtain less justice than equality would suggest, but were allocated even less than an equitable share (comparing their allocations to the ones of the top performer). In contrast, subordinates who stood out negatively in their performance tended to be strongly overcompensated compared to equality or equity.

2.6.2 Theoretical Implications

This study adds to the small, but rapidly growing literature on the ‘actor’s’ perspective on organizational justice (Ambrose & Schminke, 2009; Scott et al., 2009) and informs the work on *how* subordinates impact managerial justice (e.g., Korsgaard et al., 1998; Scott et al., 2007; Zapata et al., 2013; Seppälä et al., 2012) by suggesting a major subordinate behavior, performance, as antecedent of procedural and informational justice. In doing so, we reposition subordinate performance from a mere reaction to organizational justice (e.g., Colquitt et al., 2001; Cohen-Charash et al., 2001) to an antecedent as well, laying the groundwork for further exploration of the causal relationships between managerial justice and other subordinate behaviors which have commonly been treated only as outcomes (e.g., OCBs, CPWBs).

We introduce heuristics as a possible decision making mechanism of managers when deciding to whom to allocate justice. This extends prior justice research on *why* managers treat their subordinates (un)justly which has tended to emphasize conscious cognitive (e.g., Ambrose & Schminke, 2009; Scott et al., 2009) or emotional (e.g., Cornelis et al., 2012; Cornelis et al., 2013; Scott et al., 2007; Scott et al., 2009; Zapata et al., 2013) motives. This approach also ties into work by Ham and colleagues (Ham, van den Bos, & van Doorn, 2009; Ham & van den Bos, 2010) who argue that justice judgements can be made both consciously and unconsciously. They propose that due to the amount of information people need to attend to when making justice judgments, individuals tend to be more successful in making accurate justice judgments when the decision process takes place unconsciously. We suggest a different mechanism to cope with the challenges associated with making justice judgments or decisions on justice allocations. Rather than allowing individuals to process *more* information, we argue that the heuristic decision process leads managers to focus their attention on only *part* of the available information when making allocation decisions. Folger, Cropanzano and Goldman (2005) argue that *responses* to managerial (in)justice can occur in an “unconscious and heuristic-like fashion” (p. 222) to decrease the associated cognitive demands. Our approach suggests that there are similar automatic *antecedents* of managerial justice.

Finally, our findings also relate to the work on ‘bounded ethicality’ (Chugh, Bazerman & Banaji, 2005) which argues that the individual’s capacity to recognize

ethical conflicts is bounded by the view of the self as moral, competent, and deserving. In this study we also suggest that managers to some extent act ‘boundedly just’, not with respect to limitations in recognizing justice issues, but rather with respect to limitations in resources (e.g., time and effort) leading them to take mental short-cuts and use subordinate performance as a heuristic when allocating procedural and informational justice.

2.6.3 Directions for Further Research

Of course, this study is only a first step. There are a number of areas that may prove fruitful for further exploration. It would be interesting to test to what extent our results are transferable to other types of justice allocations such as the allocation of interpersonal justice, decision rights, or responsibilities. It is plausible that the higher the risk managers need to take when allocating justice (e.g., when allocating decision rights) the more they focus on their high performers instead of also favoring the low performers. Further, it would add to justice theory to investigate whether other subordinate behaviors that are commonly treated as outcomes of justice, such as organizational citizenship behaviors or counterproductive work behaviors may likewise also be antecedents, challenging some of the causal assumptions typically made in justice research.

Second, while we have focused on the role of subordinate performance as a *heuristic* in managers’ decision processes on how to allocate procedural and informational justice, it may additionally affect managerial justice through channels not investigated in this study. *Emotions* have in some contexts been shown to be important mediators or moderators of the effect of subordinate behaviors, characteristics or needs and managerial justice (Cornelis et al., 2012; Cornelis et al., 2013; Scott et al., 2007; Zapata et al., 2013). With regard to subordinate performance, emotions like pride or closeness to the top performers and pity or guilt towards the bottom performers could be relevant. Further, managers may have certain *strategic* reasons to favor extreme performers in the allocation of procedural and informational justice. They might preferentially allocate them to low performers who tend to get lower monetary outcomes (Abeler, Altman, Kube, & Wibral, 2010; Perry & Zenner, 2001) as a way to prevent negative subordinate reactions (e.g., Skarlicki & Folger, 1997). Likewise they

may intentionally favor high performers to reciprocate for their performance in line with a social exchange perspective (Blau, 1964) or to build a closer personal relationship to those who will potentially climb the organizational ladder in the future. While such strategic benefits of allocating justice to extreme performers were not present in the set-up of our laboratory experiments, they may serve as an underlying explanation as to why subordinate performance has come to be used as a heuristic when allocating procedural and informational justice. Indeed it may be adaptive in the sense that managers have learned to pay more attention to extreme performers' merits and needs in order to reap the maximal benefits in terms of encouraging desirable and avoiding negative subordinate behaviors (e.g., Cohen-Charash & Spector, 2001; Colquitt et al., 2001; Scott et al., 2009; Skarlicki & Folger, 1997; Long, 2011). Alternatively, due to the elevated salience of these subordinates managers may pay more attention to them and thus simply have a clearer picture of the benefits of being just to them, even though treating others as justly might in fact bring similar benefits. This would relate to the finding of Ellsberg (1961) and others (see e.g., Camerer & Weber (1992) for an early overview) that individuals prefer to bet on known probabilities rather than unknown ones that might be better, similar or worse. Finally, managers may also have deontological reasons (e.g., merit or need) for allocating procedural and informational justice primarily to subordinates who stand out positively or negatively in their performance. Studying emotional, strategic or deontological reasons for the effect of subordinate performance on managerial justice would help understand possible reasons complementing or underlying the use of subordinate performance as a heuristic in the allocation of managerial justice.

2.6.4 Practical Implications

Our results also have practical implications for managers. Subordinates actively shape the justice process (e.g., Korsgaard, et al. 1998; Scott et al., 2007; Zapata et al., 2013; Seppälä, et al. 2012). However, our findings suggest that only some subordinates benefit from this process; in our case those whose performance stands out (positively or negatively). Indeed the effect is such that performance seems to shift justice from one subordinate to another instead of increasing overall justice.

As such, it is especially important to sensitize managers to their reliance on performance as a decision criterion in the allocation of procedural and informational justice. Justice trainings have proven successful in other settings (e.g., Greenberg, 2006; Skarlicki & Latham, 1996; Skarlicki & Latham, 2005) and could easily be amended correspondingly. Making managers conscious of ‘middle’ performers and their own tendency to overlook them would be an important first step in preventing such discrimination.

2.6.5 Limitations

Besides the new insights our study offers, it also has limitations. First, with regard to the field survey, the use of a snowballing technique for data collection always entails the risk of having an unrepresentative sample. In the case of data on subordinate-manager dyads it is, for instance, more likely that subordinates who get along well with their managers (and feel treated justly) agree to participate, potentially underrepresenting those with a more problematic subordinate-manager relationship. Further, it was important for our analysis to relate subordinate performance to managerial self-evaluations of justice allocations which would also best reflect the managers’ intended justice behaviors. As subordinate performance was also rated by the managers this, however, implies possible problems due to a same source bias (Podsakoff, MacKenzie, Lee & Podsakoff, 2003). Finally, as discussed, the field data reported is correlational and does in itself not allow drawing conclusions about causal effects.

Our laboratory studies were designed to address some of these issues. We manipulated subordinate performance and the actual behavior of participants in managerial roles rather than their perceptions were observed, so we were able to discuss causality and do not have an issue with same source bias. Experimental participants were, however, students which (despite some work experience) limits the generalizability of these results.

Nevertheless our results were generally stable across the three studies, both field and laboratory. This suggests that the common refrain that justice improves an employee’s performance should perhaps be tempered by the possibility that the opposite

is also true. Performance also improves an employee's justice, just not for those caught in the middle.

3. UNFAIR AND UNAWARE: HOW DISAGREEMENT IN INTERPERSONAL JUSTICE PERCEPTIONS AMONG MANAGER AND EMPLOYEE RELATES TO JOB SATISFACTION, INTRINSIC MOTIVATION, AND EMOTIONAL EXHAUSTION

3.1 Introduction

Most managers believe they are fair, however, many employees report feeling treated unfairly by their managers (Brockner, 2006). In this paper, I examine the implications of this potential discrepancy in perceptions and propose that disagreement around the level of a manager's interpersonal justice is related to employee work attitudes and emotions.

There is a long tradition in organizational justice research studying employee responses to perceived (in)justice at work. In short, employee justice perceptions matter. Employees who report feeling justly treated display more positive job attitudes, emotions and behaviors (Cohen-Charash & Spector, 2001; Colquitt, Conlon, Wesson, Porter, & Ng, 2001; Colquitt, Scott, Rodell, Long, Zapata, Conlon, & Wesson, 2013). However, researchers are increasingly interested also in the other side of this relationship, and have begun exploring why managers behave (un)justly in the first place. In some cases, managers report that they act justly simply because it is the right thing to do (Cropanzano, Goldman, & Folger, 2003; Cropanzano & Rupp, 2002; Folger, 1998; Folger, 2001; Folger, Cropanzano & Goldman, 2005; Long, 2011). In other cases managers may purposely act (in)justly for more instrumental reasons such as motivating or punishing employees (Scott, Colquitt, & Paddock, 2009).

However, despite the voluminous body of evidence around the impact of justice perceptions on recipients of justice, and the increasing amount of work examining justice enactors' motives, hardly any work (e.g., Brockner, 2006; Zapata-Phelan, Colquitt, Scott, & Livingston, 2009) exists on how just managers actually *perceive* themselves to be and none at all exists looking at the combination of both these

perspectives. The research on perceptual disagreement suggests that this may be an oversight (e.g., Atwater & Yammarino, 1992; Atwater & Yammerino, 1997; Bass & Yammarino, 1991; Gibson, Conger, & Cooper, 2009; Godshalk & Sosik, 2000; Hatfield & Huseman, 1982; Ostroff, Shin, & Kinicki, 2005; Sosik, 2001). Situations in which managers actually believe they are acting in a just manner, while employees perceive them as being unjust or vice versa may have different antecedents and trigger different outcomes than situations where both parties assess the manager's behavior equally.

In this paper, I focus on the outcomes of such perceptual disagreement and draw on similarity-attraction theory (Byrne, 1961; Byrne, Young, & Griffitt, 1966; Byrne, Clore, & Smeaton, 1986; Byrne, 1971a, Byrne, 1971b; Byrne, 1997), theory on self-other rating agreement (Ashford, 1989; Atwater & Yammarino, 1992; Atwater & Yammarino, 1997; Yammarino & Atwater, 1997), and work on role dynamics (Kahn, Wolfe, Quinn, Snoek, & Rosenthal, 1964; Katz & Kahn, 1966; Katz & Kahn, 1978) to argue that disagreement in interpersonal justice perceptions among managers and their employees is related to unfavorable employee reactions in terms of job satisfaction, intrinsic motivation, and emotional exhaustion. I propose that disagreement is especially onerous when the manager judges his or her behavior as being interpersonally more just than does the employee, i.e. when the manager is '*unfair and unaware*'. I investigate whether this is in fact the case based on a field sample of manager-employee dyads.

In examining the impact of disagreement in justice perceptions, this paper adds to the justice literature by drawing attention to the fact that different stakeholders may perceive the level of justice enacted quite differently and that these perceptual differences matter. While there has been extensive research on how employees' justice perceptions relate to work attitudes and behaviors (Cohen-Charash & Spector, 2001; Colquitt et al., 2001; Colquitt et al., 2013), this paper is the first to consider the possibility that managerial justice self-perceptions and, in particular, *disagreement* in justice perceptions among manager and employee may incrementally explain these outcomes.

In the following section, I will first start by introducing the key variables considered in this paper, discuss why manager and employee perceptions of managerial interpersonal justice may differ and theoretically explain how I expect such perceptual

disagreement to affect employee job satisfaction, intrinsic motivation, and emotional exhaustion.

3.2 Theoretical Background

3.2.1 Perceptions of Interpersonal Justice and Employee Attitudes and Emotions

Justice is an accepted social standard (e.g., Folger, 1998; Rupp, Shao, Jones, & Liao, in press). As such, employees expect to be treated justly, evaluate whether this is the case, and react accordingly (Colquitt et al., 2001; Cohen-Charash & Spector, 2001; Colquitt et al., 2013). Likewise, managers self-assess to determine whether they have been acting justly toward their employees (Scott et al., 2009), generally desiring to be (perceived as) just (cf. Whiteside & Barclay, 2014) and feel good about their own justice-related behaviors (Scott et al., 2009). While four major types of justice have been identified in the literature (Colquitt, 2001; Colquitt et al., 2001), I will in this paper focus on *interpersonal justice* (i.e. the extent to which managers treat employees politely, with dignity, respect, and propriety) for three reasons. First, treating employees in an interpersonally just manner has been found to be positively associated with a variety of desirable work attitudes and behaviors, such as job satisfaction, trust in management, positive evaluations of supervision, positive affect, and organizational citizenship behaviors, while being negatively associated with undesirable outcomes such as negative affect and counterproductive work behaviors (e.g., Colquitt et al., 2001; Colquitt et al., 2013; Greenberg, 1993a). Second, interpersonal justice is said to be the facet of justice over which managers have the most control and discretion (Scott, Colquitt, & Paddock, 2009) and, unlike the other facets of justice, one which they can choose to enact on a daily basis as it forms part of “virtually any encounter between managers and subordinates” (Scott et al., 2007, p. 1597). Given this discretion and high base rate, employees may hold managers more accountable when they fail to act in an interpersonally just manner as such behavior “should be harder to excuse because an external scapegoat is more difficult to pinpoint” (Scott et al., 2009, p. 765). Third, interpersonal justice is one of the most intimate kinds of justice among manager and employee, evoking “hot and burning” feelings in employees who feel that it has been violated (Mikula, 1986; Bies & Tripp, 2001). Given the importance and frequency of

events containing elements of interpersonal (in)justice, when employees believe that managerial justice perceptions diverge from their own the implications may be particularly serious

To explore the relationship of perceptual disagreement to employee outcomes, I will focus on three key dependent variables; job satisfaction, intrinsic motivation and emotional exhaustion, all of which have either been theoretically argued or empirically shown to be related to interpersonal justice. Job satisfaction has been defined as “a pleasurable or positive emotional state resulting from the appraisal of one’s job or job experiences” (Locke, 1976, p. 1300). In the justice literature, employee perceptions of interpersonal justice have been frequently shown to have a significant positive relation with job satisfaction (Colquitt et al., 2001). The second outcome, intrinsic motivation, describes someone driven to do some activity “because it is inherently interesting or enjoyable” (Ryan & Deci, 2000a, p.55) rather than by external factors like punishments or rewards. While intrinsic motivation is a focus of other areas of organizational behavior and justice researchers have repeatedly highlighted plausible theoretical underpinnings such as need-motive-value theories, cognitive choice theories or self-regulation theories for a link between justice and intrinsic motivation (Colquitt & Greenberg, 2003; Cropanzano & Rupp, 2003) there remains a lack of empirical research on the topic. An exception is a recent paper by Zapata-Phelan and colleagues who argue for an effect of procedural and interpersonal justice on intrinsic motivation (Zapata-Phelan, et al., 2009). In particular, they suggest that this effect is mediated by employee emotions which in turn affect the extent to which a task is perceived as enjoyable and ultimately, intrinsic motivation. While they found support for an effect of procedural justice on intrinsic motivation, this was not the case for interpersonal justice. The third employee attitude, emotional exhaustion, describes a state in which the employee feels emotionally drained, frustrated and fatigued (e.g., Maslach, 1982; Maslach & Jackson, 1981; Gaines & Jermier, 1983). It was developed as one of the three components of job burnout (Maslach, 1982; Maslach & Jackson, 1981) and has been shown to have particularly strong relationships to job outcomes (e.g., Lee & Ashforth, 1993; Lee & Ashforth, 1996). Maslach (1976) argued early on that emotional exhaustion can stem from the stress of interpersonal contact, and interpersonal justice itself has been found to be associated with related variables such as stress (Judge & Colquitt, 2004), occupational strain (Eloviano, Kivimäki, & Helkama, 2001) and insomnia (Greenberg,

1996). More recently, Cole and colleagues argued that there should be a main effect of interpersonal justice on emotional exhaustion itself and found empirical support for this based on a field sample of military personnel and civil servants from the US Air force (Cole, Bernerth, Walter, & Holt, 2010).

In contrast to work examining the relationship between employee interpersonal justice perceptions and behavioral, emotional, and attitudinal outcomes (see, e.g., Cohen-Charash & Spector, 2001; Colquitt et al., 2001; Colquitt et al., 2013), hardly any research (Brockner, 2006; Zapata et al., 2013) has explored how just managers perceive themselves to be and no research at all exists on the role *managerial* justice perceptions may play for employee outcomes. Indeed it seems rather unlikely that there is a direct influence of managerial justice self-perceptions on employee level outcomes. However, there are theoretical reasons to believe that managerial perceptions may interact with those of their employees to predict employee outcomes. In the following sections, I will lay out where perceptual (dis)agreement among manager and employee may stem from and the theoretical rationales for a relationship of (dis)agreement and employee job satisfaction, intrinsic motivation, and emotional exhaustion.

3.2.2 Sources of Disagreement in Interpersonal Justice Perceptions

As Gibson et al. (2009) argue, forming perceptions is a way for individuals to cope with the overwhelming amount of social stimuli and focus on those that seem most relevant. While interpersonal justice perceptions are by definition composed of the individual's perceptions of whether the treatment he or she gives (manager) or receives (employee) adheres to the standards of politeness, dignity, respect, and propriety (Bies & Moag, 1986; Colquitt, 2001; Greenberg, 1993b), these perceptions may differ significantly depending on the perspective taken (e.g., the allocator versus the recipient of interpersonal justice). In fact, empirical evidence hints that managers' interpersonal justice self-evaluations will tend to exceed the evaluations of others (receivers or observers). Zapata and colleagues in a sample of manager-employee dyads report that the average managerial interpersonal justice self-ratings were higher than those given by their employees (Zapata, Olsen, & Martins, 2013, p.7). Further, Brockner (2006) asked different groups in a change management seminar to rate the extent to which they believed their manager acted in a just manner. The question most reflective of

interpersonal justice, “When managing change, I make extra efforts to treat people with dignity and respect”, was the only one for which managerial self-evaluations were significantly higher than the evaluations of that manager by all other stakeholders (the manager’s boss, peers, direct reports, and costumers).

Theoretically, there are several reasons to expect disagreement in managers’ and employees’ interpersonal justice perceptions. First, managers and employees may make different attributions or draw upon different information when making their judgments of interpersonal justice (Atwater & Yammarino, 1997; Jones & Nisbett, 1972). The actor-observer difference (Jones & Nisbett, 1972) explains that actors tend to attribute their actions to (momentary) external influences, while observers tend to attribute them to the actor’s (stable) personality traits. For actors this is especially the case if their behavior was not positive (Bradley, 1978) which for unfair managers in particular may lead to external attributions for the unjust event and a lower sense of guilt or responsibility (Scott et al., 2009). In addition, people have differential access to information when making justice judgments about their own behavior versus the behavior of others. A manager can be expected to have more knowledge about the circumstances or past experiences that drove a certain interpersonal interaction than would an employee. A justice event may not even be processed in the same way due to its differential salience to a manager as compared to his or her employee. For a manager a single interaction with one of many employees may be less salient and less heavily weighted than for the individual employee (Taylor & Fiske, 1978; Jones & Nisbett, 1972). As Church (1997) argues, if a behavior does not mean as much to the manager as it does to the employee he or she will not pay as much attention to it and may even recall it differently. Relatedly, Fortin, Nadistic, and Cugueró i Escofet (2011) empirically demonstrated that when making justice judgments about their managers versus their peers, employees drew upon different information, e.g, applied different justice norms.

Second, people have a tendency to overestimate their own characteristics, abilities, and behavioral achievements (e.g., Camerer & Lovallo, 1999; Cooper, Woo, and Dunkelberg, 1988; Epley & Whitchurch, 2008; Heidemeier & Moser, 2009; Larwood & Whittaker, 1977; Mabe & West, 1982; Svenson, 1981). They tend to think that they are better leaders than they actually are (Bass & Yammarino, 1991), that they are more pro-social than others (Sedikides, Meek, Alicke, & Taylor, 2013), and that

they start more interactions with others than the other way around (Webber, 1970). This general tendency to overestimate the positive aspects of oneself should also lead managers to overestimate their own interpersonal justice towards their employees. Overestimation may be further exacerbated because managers may incorporate their intentions to be just into their self-evaluations regardless of whether or not they acted upon those intentions (Brockner, 2006).

Based on these arguments, I hypothesize that:

Hypothesis 1: Manager perceptions of their own interpersonal justice will on average exceed employee perceptions of the manager's interpersonal justice.

3.2.3 Perceptual (Dis)agreement and the Relationship to Employee Job Satisfaction, Intrinsic Motivation and Emotional Exhaustion

The Relationship between Perceptual Disagreement and Employee Outcomes. Work on the relationship among perceptual disagreement between managers and individual employees and employee emotions, job attitudes and behaviors has a long tradition. In the early years, researchers found perceptual disagreement to be related to a range of outcomes including employee satisfaction (Baird, 1977; Greene, 1972; Hatfield & Huseman, 1982; Turban & Jones, 1988; Wexley et al., 1980), work morale (Browne & Neitzel, 1952), leader-member-exchange quality (Graen & Schiemann, 1978), employee performance (Greene, 1972; Turban & Jones, 1988; Wexley, Alexander, Greenawalt, & Couch, 1980), and employee role ambiguity (Turban and Jones, 1988). In subsequent years, Atwater and Yammarino developed their model of self-other rating agreement (Atwater & Yammarino, 1992; Atwater & Yammarino, 1997; Yammarino & Atwater, 1997) specifying four types of managerial self-raters: over-estimators, under-estimators, managers who are in negative agreement (they agree with the low perceptions of their employee), and those who are in positive agreement (they agree with the high perceptions of their employee). They suggested that organizational outcomes will be most positive when managers are in positive agreement with their employees. The implication being that, in this condition, managers understand how they are perceived by others, they set accurate goals and are realistic in their

expectations. In contrast, outcomes are expected to be poorest for over-rating managers as they are not able to correctly assess their own strengths and weaknesses, may discount criticism, and deflect blame for their own failures. Negative agreement although undesirable is expected to lead to (less) negative outcomes. While a manager in negative agreement accurately assesses the own behavior, he or she is unlikely to set self-improvement goals due to low self-esteem regarding the own abilities. Finally, underestimation is proposed to relate to mixed outcomes. Underestimators either fail to pursue achievable goals given their abilities or put in too much effort in an attempt to compensate their low self-confidence. Much of the subsequent literature on perceptual disagreement among managers and employees has built upon this model. For example, Godshalk & Sosik (2000) showed that managers who underestimate their own transformational leadership behavior were rated as having high quality mentoring relationships, while overestimators were rated as having low relationship quality.

While providing important insights on perceptual disagreement and its correlates, these studies, due to their operationalization of perceptual disagreement as simple difference scores or profile similarities (Browne & Neitzel, 1952; Graen & Schiemann, 1978; Miles, 1964; Wexley et al., 1980) or by categorizing managers into rigid groups (e.g., Godshalk & Sosik, 2000), were unable to tell us much about different levels of (dis)agreement and whether accounting for perceptual differences adds predictive power above the main effects of each party's perceptions. Only rather recently have researchers begun to capitalize on the power of using both, employee and manager perceptions, in predicting effects for perceptual disagreement by employing a polynomial regression method.

Gibson et al. (2009) for instance suggest that perceptual differences can impede employees (or teams of employees) from maximizing their performance as managers and employees are less able to gather, exchange, evaluate and act on information when they disagree in their perceptions of important team processes. Based on a field sample from the pharmaceutical and medical products industry they used polynomial regression analysis to show that disagreement in perceptions of goal accomplishment and constructive conflict among a team and its manager were related to lower team performance. In the same vein, Ostroff, Shin, and Kinicki (2005) argued that when managers and employees have similar perceptions of organizational values, more positive attitudes and behaviors are to be expected. Based on research showing that

perceptions of a situation are often more relevant to attitudes and behaviors than the situation itself (Cable & DeRue, 2002; Cable & Judge, 1997; Endler & Magnusson, 1976) they reason that “individuals’ perceptions of what behaviors are expected, valued, and rewarded in the organization are purported to be important influences on attitudes and behaviors” (Ostroff et al., 2005, p. 598). When managers and their team disagree about this, employees lack a clear idea of what is expected of them. The results from a large sample of employees and managers in the banking sector showed that disagreement in perceptions of organizational values among managers and their employees was negatively associated with employee satisfaction and commitment, and positively with turnover intentions. Further, Atwater, Ostroff, Yammarino, and Fleenor (1998) investigated how perceptual (dis)agreement regarding managerial performance related to managerial effectiveness (as rated by the manager’s supervisor) based on a large sample of manager-employee dyads. They found that effectiveness was highest when manager and employee perceptions were in agreement and high, or when managers underestimated their performance compared to the employee. In contrast, overestimating managers were rated as less effective. Most recently, Humborstad & Kuvaas (2013) drew on role dynamics theory (Katz & Kahn, 1966) to suggest that the extent to which managers and employees had similar expectations about the empowerment of employees, because of a negative effect on the degree of uncertainty employees experience at work and a positive effect on employee need satisfaction, would result in lower role ambiguity and higher intrinsic motivation. Field data from a large manufacturing company supported their reasoning in that when role expectations were in agreement and at a high level role ambiguity was low and intrinsic motivation high, while when managers’ expectations exceeded those of employees, role ambiguity was high and intrinsic motivation low. Finally, when role expectations were in agreement and low or when employees’ expectations exceeded those of the managers role ambiguity was low, but intrinsic motivation was also low.

This study extends this rich history of theoretical considerations and empirical associations between perceptual (dis)agreement among manager and employee and employee outcomes to the justice literature and examines how (dis)agreement in interpersonal justice perceptions among manager and employee relates to employee attitudes. Building on Gibson et al. (2009) and Ostroff et al. (2005), I argue that in the case of interpersonal justice, perceptual differences are likely to be particularly relevant

as both parties react to their *perceptions* of justice rather than to some kind of objective justice behavior itself in the first place. More in particular, I will suggest that *perceptual (dis)agreement* among manager and employee regarding the manager's interpersonal justice will predict three employee outcomes, job satisfaction, intrinsic motivation, and emotional exhaustion, identified earlier above and will do so beyond the main effect of employee perceptions.

Agreement in Perceptions of Interpersonal Justice. Typically in work on self-other agreement, perceptual agreement is expected and has often been found to lead to improved outcomes. In fact, as we have just seen this has been found for a variety of variables including one of the employee attitudes considered in this paper, job satisfaction. When in agreement with the manager regarding their role within the organization (Bernardin, 1979; Greene, 1972), the quality of communication with their manager (Hatfield & Huseman, 1982), behaviors necessary to receive a pay raise (Turban & Jones, 1988), or perceptions of the manager' characteristics and behaviors (Wexley et al., 1980) employees report higher levels of satisfaction.

In terms of agreement in managerial and employee perceptions of managerial interpersonal justice I propose that there are three reasons to expect a relationship to job satisfaction, intrinsic motivation, and emotional exhaustion. First, as Byrne and colleagues argue, people feel more attracted towards each other if they perceive the other as similar to themselves or if they share similar attitudes (Byrne, 1961; Byrne, Young, & Griffitt, 1966; Byrne, Clore, & Smeaton, 1986; Byrne, 1971a; Byrne, 1971b; Byrne, 1997). As managers' interactional justice behavior directly impacts the quality of the manager-employee relationship (Cohen-Charash & Spector, 2001), perceiving it in the same way may further increase attraction and positive sentiments among the two parties. The quality of a manager-employee relationship has in turn been shown to positively relate to employee job satisfaction (e.g., Graen, Novak, & Sommerkamp, 1982; Golden & Veiga, 2008; Major, Kozlowski, Chao, & Gardner, 1995; Vecchio, Griffeth, & Hom, 1986) and negatively to emotional exhaustion or job depression (e.g., Sparr & Sonnentag, 2008; Thomas & Lankau, 2009). Further, it has frequently been linked to employee performance (for an overview see e.g., Dunegan, Uhl-Bien, & Duchon, 2002), a traditional outcome of employee motivation (e.g., cf. Ryan & Deci, 2000b).

Second, perceptual agreement also reinforces employee beliefs (Byrne, 1971b; Festinger, 1957) and reduces ambiguity and uncertainty employees might otherwise experience (Hardin & Higgins, 1996; Haslam, Oakes, Turner, & McGarty, 1996; Humborstad & Kuvaas, 2013). Certainly, agreement with one's manager about the level of respect you are treated with can be expected to reduce ambiguity. Lower ambiguity has in turn been shown to be associated with higher levels of job satisfaction (e.g., Abramis, 1994; Hamner & Tosi, 1974; Jackson & Schuler, 1985; Kahn et al., 1964; Keller, 1975; Rizzo, House, & Lirtzman, 1970) and lower levels of emotional exhaustion (Von Emster & Harrison, 1998). Further, lower ambiguity might also be related to higher levels of intrinsic motivation as employees are better able to set positive achievement goals (and increase their intrinsic motivation) rather than focusing on avoidance goals (e.g., avoiding an appearance of incompetence, Elliot & Harackiewicz, 1994).

Third, Atwater and Yammarino (Atwater & Yammarino, 1992; Atwater & Yammarino, 1997; Yammarino & Atwater, 1997) suggest that those managers who are accurate at self-rating (whose self-perceptions are in agreement with others), are better at assessing their own strengths and weaknesses, more open to feedback, more realistic in the expectations they have regarding their own behavior or the recognition they receive, and can thus set themselves more accurate behavioral goals. Managers who are accurate self-raters, can thus again be expected to have more satisfied employees who are motivated to work and are less emotionally drained from having to reconcile their perspective of the manager's behavior with the manager's own perspective.

Drawing on this argumentation, I hypothesize the following:

Hypothesis 2: The more manager and employee perceptions of interpersonal justice are in agreement, the higher are the employee's (a) job satisfaction and (b) intrinsic motivation, and (c) the lower the employee's emotional exhaustion.

However, given the overall positive main effect of high interpersonal justice perceptions on employee attitudes I expect different reactions in terms of job satisfaction, intrinsic motivation and emotional exhaustion depending on whether employee and manager agree that interpersonal justice is high or low. Specifically,

when both manager and employee agree that interpersonal justice is high, the employee will experience not only the positive main effects of interpersonal justice (Colquitt et al., 2001; Colquitt et al., 2013), but additionally the positive impact of being in agreement. Further, as Atwater and Yammarino (1992, 1997) argue, when manager and employee are in positive agreement regarding the manager's behavior, this is associated with more positive managerial characteristics and behaviors than when they are in negative agreement. In particular, they expect managers who are in positive rather than negative agreement to have a higher self-esteem and higher behavioral aspiration levels, to be more likely to set themselves self-improvement goals where necessary, and to display more positive work attitudes, all of which should relate to higher levels of job satisfaction and intrinsic motivation, and lower levels of emotional exhaustion for their employees. When managers and their employees are in negative agreement the manager is still accurate in his/her self-assessment and in the position to set self-improvement goals. However, managers who are in negative agreement are also expected to display more negative work attitudes and tend to set low aspiration levels (Yammarino & Atwater, 1997) and if they are unable or unwilling to improve, the consequences for employee satisfaction, intrinsic motivation and emotional exhaustion should be negative.

Overall, I therefore predict:

Hypothesis 3: When manager and employee perceptions of interpersonal justice are in agreement and high rather than in agreement and low, employees will experience higher levels of (a) job satisfaction and (b) intrinsic motivation, and (c) lower levels of emotional exhaustion.

Disagreement in Perceptions of Interpersonal Justice. While being in negative agreement is less than desirable, self-aware leaders can take action to correct their behaviors (Atwater & Yammarino, 1992). In contrast, when managers and their employees disagree in their perceptions of interpersonal justice the relationship to employee job satisfaction, intrinsic motivation and emotional exhaustion can be expected to be more negative. The disconnect between the manager and his or her employee in how they perceive interpersonal justice can lead to conflict and ambiguity in the relationship (Atwater & Yammarino, 1997). However, the magnitude of this

negative relationship is again likely to differ depending on whether manager perceptions of interpersonal justice exceed those of the employee (over-rater, 'unfair and unaware') or employee perceptions exceed those of the manager (under-rater, 'fair and unaware').

As Ashford (1989) pointed out, overestimators believe that their behavior is acceptable and fail to notice that their employees disagree with them. They can be expected to experience high efficacy and have little motivation to change their behavior. They take no corrective action when it is in fact most needed. At their most pernicious, overestimators may also discount criticism and deflect blame for their own failures (Atwater & Yammarino, 1992), increasing the likelihood of conflict with their employees (Atwater & Yammarino, 1997). Managers who not only are perceived as unjust but who also refuse to take the blame for their perceived injustice are akin to the toxic leader described by Kellerman (2004) and may themselves find it hard to work with their employees (Atwater & Yammarino, 1997), leading to especially low levels of satisfaction and motivation, and high levels of employee emotional exhaustion. Similarly, overestimating managers are more likely to have failures in communication. As Katz, Kahn and colleagues (Kahn, Wolfe, Quinn, Snoek, & Rosenthal, 1964; 1964; Katz & Kahn, 1966; Katz & Kahn, 1978) argue in their model of the role episode, manager and employee each have expectations about the other's behavior. Employees will usually expect to be treated interpersonally just (e.g., Folger, 1998; Rupp, Shao, Jones, & Liao, in press) and will expect injustice even less when they think they have performed well and lived up to the manager's expectations. The manager may in fact recognize the employee's efforts and attempt to be interpersonally just to signal approval (Scott et al., 2009). If the manager is an overestimator, he might, however, fail to do so without realizing it (unfair and unaware). This creates a miscommunication among the two parties, i.e. the manager believes s(he) is communicating approval, while being perceived as unjust and (dis)approving by the employee. This leads to uncertainty and ambiguity on the employee's part regarding the manager's expectations and subsequently, lower job satisfaction (e.g., Abramis, 1994; Hamner & Tosi, 1974; Jackson & Schuler, 1985; Kahn et al., 1964; Keller, 1975; Rizzo, House, & Lirtzman, 1970) and higher emotional stress (Gaines & Jermier, 1983; Jackson & Schuler, 1985; Kahn et al., 1964; Von Emster & Harrison, 1998).

In contrast to overestimators, underestimators (fair but unaware) believe that they are not as interpersonally just as they are actually perceived to be by others. Predicting

outcomes for underestimators is more difficult (Atwater & Yammarino, 1997). Underestimators may signal humility and modesty, but they may also suffer from an unwarranted feeling of inefficacy and a strong desire to change (Ashford, 1989). While they may be pleasant to be around and can be effective leaders (Atwater et al., 1998), they nevertheless tend to have emotional highs and lows and display low self-worth (Yammarino & Atwater, 1997). They may either fail to pursue goals or opportunities that are achievable given their abilities or put in too much effort in an attempt to overcompensate for their low self-confidence (Atwater and Yammarino, 1992) and end up actually impairing their performance (Ashford, 1989). A leader with low self-efficacy may spend too much time trying to sensitively address the needs of each employee and ensuring them that they have his/her respect rather than making effective, timely decisions. Overall however, when managers are fair and unaware, employee outcomes are not expected to be as negative as when they are unfair and unaware. Perceiving the manager's behavior as more just than does the manager certainly may create ambiguity and uncertainty for employees, but fair and unaware managers are, by definition, perceived as fair by their employees. The positive impact of having a fair manager, however, should ameliorate some of the uncertainty and ambiguity employees may experience.

Based on this, I thus hypothesize

Hypothesis 4: When manager perceptions of interpersonal justice are greater than those of the employee ('unfair and unaware') rather than when employee perceptions of interpersonal justice are greater than those of the manager ('fair and unaware'), the employees will experience lower levels of (a) job satisfaction and (b) intrinsic motivation, and (c) higher levels of emotional exhaustion.

3.3 Method

3.3.1 Procedure

Following a snowball sampling technique (e.g., Eddleston, Veiga, & Powell, 2006; Martins, Eddleston, & Veiga, 2002; Morgeson & Humphrey, 2006; Tepper, 1995;

Zapata et al., 2013), undergraduate business students were asked to recruit an employee who worked at least 30 hours per week and was fluent in English to participate in an online questionnaire. To be eligible, the employee had to consent to also recruiting his or her direct manager for participation. Potential participants, i.e. employees and their managers, were directly contacted via email and sent the link to the respective online survey. At the beginning of the survey, it was clarified that participation was voluntary and that all answers would be kept confidential and accessible only to the researchers conducting the study. Participants who had not completed the survey after one week were sent a reminder email. To match employee and manager surveys, managers were asked to name the employee they were rating, and vice versa. After data collection was completed, a random sample of 10% of the participants was called to make sure that they were real and had in fact completed the questionnaire. These random calls did not reveal any irregularities.

3.3.2 Sample

Overall, students made available the contact details of 654 employees of whom 348 direct managers consented to participate (53%). Of these manager-employee dyads, 237 responded to the interpersonal justice measures and the three dependent variables of interest and were thus included in the analysis. The managers were on average 42.7 years old and 40.9 percent of them were female. They were in charge of groups of on average 16.85 employees. The employees had an average age of 37.0 and 62.9 percent were female. They had a mean tenure of 4 years and 9 months with this manager. Of the manager-employee dyads, 25.3 percent worked in the service industry, 18.6 percent in financial industry, 12.2 percent in manufacturing, 8.9 percent in governmental organizations, 6.3 percent in human services, 4.6 percent in transportation, and 24.0 percent in others.

3.3.3 Measures

Interpersonal justice employee. The four items of Colquitt's (2001) justice scale (5 point Likert-type, where "1" = "not at all" and "5" = "completely") were used to measure employee perceptions of interpersonal justice. Items included "Has your

supervisor treated you in a polite manner?” or “Has your supervisor treated you with respect?”. Coefficient alpha for employees’ interpersonal justice perceptions was .87.

Interpersonal justice manager. The manager’s perception of his or her own interpersonal justice towards the employee was measured with the same four items of Colquitt’s (2001) justice scale (5 point Likert-type, where “1” = “not at all” and “5” = “completely”) adapted to the manager’s perspective, e.g., “Do you treat this employee in a polite manner? or “Do you treat this employee with respect?”. The reliability estimate of this scale was .93.

Job satisfaction. Job satisfaction was assessed with a three-item subscale (5 point Likert-type, where “1” = “strongly disagree” and “5” = “strongly agree”) of the Michigan Organizational Assessment Questionnaire (Cammann, Fichman, Jenkins, & Klesh, 1979; Cammann, Fichman, Jenkins, & Klesh, 1983). The items are “All in all I am satisfied with my job”, “In general, I don’t like my job” (reverse coded), and “In general, I like working here”. Coefficient alpha for job satisfaction was .83.

Intrinsic motivation. Intrinsic motivation was measured with a four-item scale (7 point Likert-type, where “1” = “strongly disagree” and “5” = “strongly agree”), developed by Grant (2008) based on the work of Ryan and Connell (1989). Following the introductory question “Why are you motivated to do your work?”, items included “Because I enjoy the work itself” or “Because I find the work engaging”. Scale reliability was .94.

Emotional exhaustion. Emotional exhaustion was measured with a six-item scale (7 point Likert-type, where “1” = “strongly disagree” and “5” = “strongly agree”) from the Maslach Burnout Inventory (Maslach & Jackson, 1981) adapted by Wharton (1993). Items were for instance “I feel emotionally drained from my work” or “I feel used up at the end of the work day”. Coefficient alpha was .91.

3.3.4 Analysis

In order to test whether and in what way (dis)agreement in interpersonal justice perceptions among manager and employee relates to the employee’s job satisfaction, intrinsic motivation, and emotional exhaustion, a hierarchical polynomial regression and

response surface analysis (Edwards & Parry, 1993; Edwards, 1994; 2001; 2002) were used. As noted before, this approach is increasingly applied in the literature to investigate the relationships among perceptual disagreement and outcomes, such as employee attitudes, emotions, and behaviors (e.g., Atwater et al., 1998; Bashshur et al., 2011; Gibson, et al., 2009; Humborstad & Kuvaas, 2013; Ostroff et al., 2005).

In particular, I estimate the relationship among (dis)agreement in interpersonal justice perceptions and the three employee outcomes using a hierarchical regression equation of the form:

$$Y = b_0 + b_1E + b_2M + b_3E^2 + b_4(E \times M) + b_5M^2 + e \quad (1)$$

where Y denotes the respective outcome (job satisfaction, intrinsic motivation, emotional exhaustion), E the employee's interpersonal justice perceptions, M the manager's interpersonal justice perceptions and e the equation's error term. In a first step, I estimate a regression of each outcome only on the two main explanatory variables, employee interpersonal justice perceptions (E) and manager interpersonal justice perceptions (M). In a second step, I further add the squared terms of both variables (E^2 and M^2) as well as the interaction term between the two ($E \times M$). A significant difference in R^2 between these two regressions suggests a nonlinear relationship between manager and employee interpersonal justice perceptions and the respective employee outcome (e.g. Atwater et al., 1998, Edwards, 2002; Gibson et al., 2009). However, further tests using a response surface approach are necessary to fully understand the nature of this relationship.

3.4 Results

The means, standard deviations, and intercorrelations of the variables are depicted in *Table 1*. To improve the interpretability of the results, manager and employee interpersonal justice perceptions were both scale-centered as suggested by Edwards (1994).

Hypothesis 1, that managerial perceptions of their own interpersonal justice would on average be higher than employees' perceptions was supported ($\mu_{\text{managers}}=4.56$, $\mu_{\text{employees}}=4.14$, $t(236) = -8.04$, $p<.01$).

Table 1

Means, Standard Deviations, and Correlations among Variables

Variable	M	SD	1	2	3	4
1. Manager perceptions of interpersonal justice	1.56	0.53				
2. Employee perceptions of interpersonal justice	1.14	0.68	0.15*			
3. Job satisfaction	3.34	1.24	0.08	0.24**		
4. Intrinsic motivation	5.10	1.16	0.09	0.08	0.68**	
5. Emotional exhaustion	3.93	0.62	-0.02	-0.17**	-0.61**	-0.52**

Note. * $p < .05$, ** $p < .01$

A combined polynomial regression analysis and response surface analysis was used to test *Hypotheses 2-4* on the relationships among (dis)agreement in interpersonal justice perceptions and employee job satisfaction, intrinsic motivation, and emotional exhaustion. The regression results are summarized in *Table 2*.

The addition of the interaction term for manager and employee interpersonal justice perceptions and the squared term of each (Model 2) to the baseline model of the main effects of manager and employee interpersonal justice perceptions (Model 1) significantly increased the variance explained for all three outcomes (job satisfaction: $\Delta R^2=0.042$, $p<.05$; intrinsic motivation: $\Delta R^2=0.077$, $p<.01$; emotional exhaustion: $\Delta R^2=0.045$, $p<.05$). This is the first indication of a relationship among perceptual (dis)agreement and the dependent variables.

However, to better understand the nature of these relationships and to explicitly test the hypotheses around an effect for perceptual (dis)agreement the response surface (Edwards & Parry, 1993; Edwards, 1994; 2001; 2002) was graphed and the slopes of the surface along the lines of agreement and disagreement were examined (see *Figures 1, 2, and 3* and *Table 3*).

To test *Hypotheses 2a-c* that perceptual agreement is associated with higher levels of job satisfaction and intrinsic motivation and lower levels of emotional exhaustion, I examined the curvature of the surface along the line of disagreement ($E = -M$) which runs from the corner at the very left (interpersonal justice perceptions of the manager are high, those of the employee low) to the corner at the very right (interpersonal justice perceptions of the employee are high, those of the manager low). The curvature of this line is depicted by $a_4 = b_3 - b_4 + b_5$, where b_3 is the coefficient for squared employee perceptions, b_4 the coefficient of the interaction term between employee and manager perceptions, and b_5 the coefficient of squared manager perceptions of interpersonal justice (e.g., Edwards & Parry, 1993). When $a_4 \neq 0$, the slope of the surface along the line of disagreement is significantly curved, either bowl-shaped, ($a_4 > 0$) or dome-shaped, ($a_4 < 0$). As we can see in *Table 3*, the curvature a_4 is significant for job satisfaction and intrinsic motivation, but not for emotional exhaustion (job satisfaction: $a_4 = -0.45$, $p < .05$; intrinsic motivation: $a_4 = -1.55$, $p < .01$; emotional exhaustion: $a_4 = 0.55$, *ns*). In line with *Hypotheses 2a* and *2b*, the negative sign of a_4

Table 2

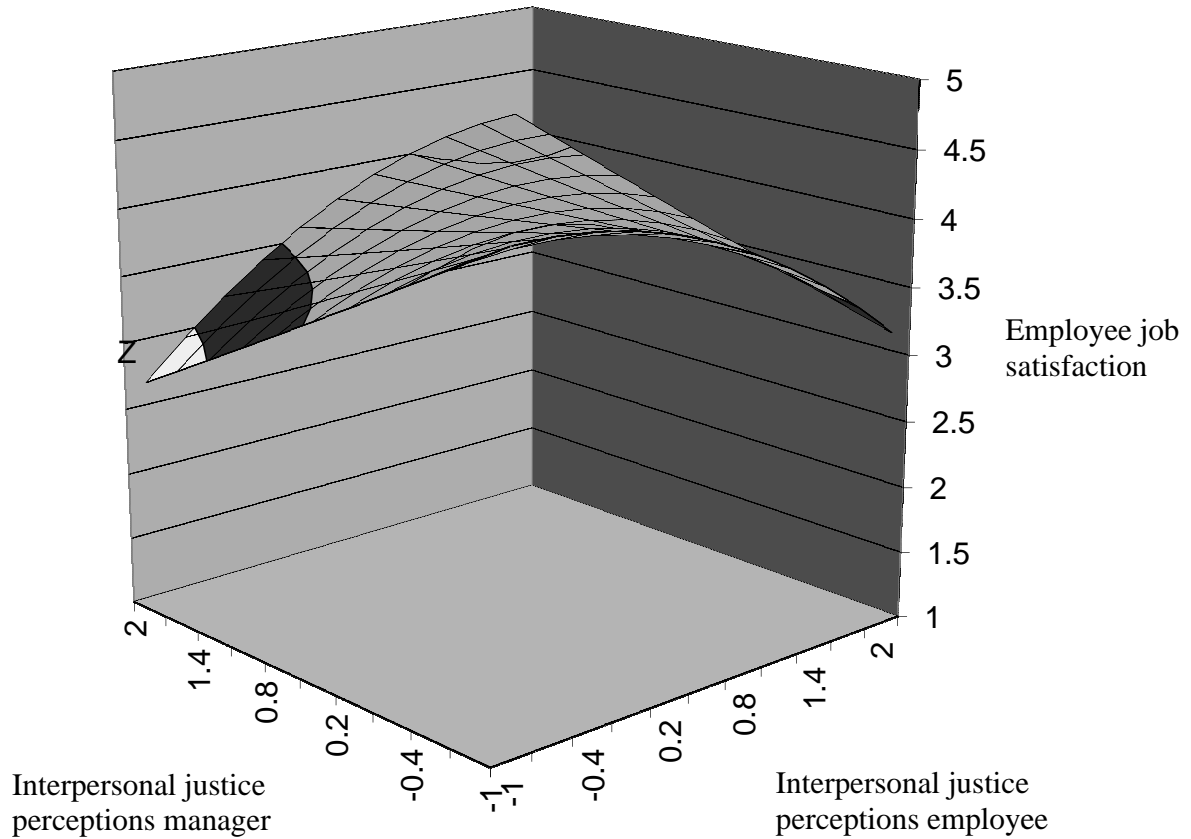
Polynomial Regression Results for Job Satisfaction, Intrinsic Motivation, and Emotional Exhaustion

Variable	Job satisfaction		Intrinsic Motivation		Emotional Exhaustion	
	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2
Contant	3.62**	4.04**	4.68**	5.18**	3.66**	2.52**
Employee perception (b1)	0.21**	0.04	0.12	-0.62	-0.32**	-0.18
Manager perception (b2)	0.05	-0.29	0.18	0.52	0.03	1.42
Employee perception squared (b3)		-0.15*		-0.27*		0.34*
Employee perception x Manager perception (b4)		0.31**		0.83**		-0.52*
Manager perception squared (b5)		0.01		-0.45		-0.31
R^2	0.057	0.099	0.014	0.091	0.030	0.075
Adjusted R^2	0.049	0.080	0.005	0.071	0.022	0.055
ΔR^2 between model 1 and model 2		0.042*		0.077**		0.045*

Note. * $p < .05$, ** $p < .01$

Figure 1

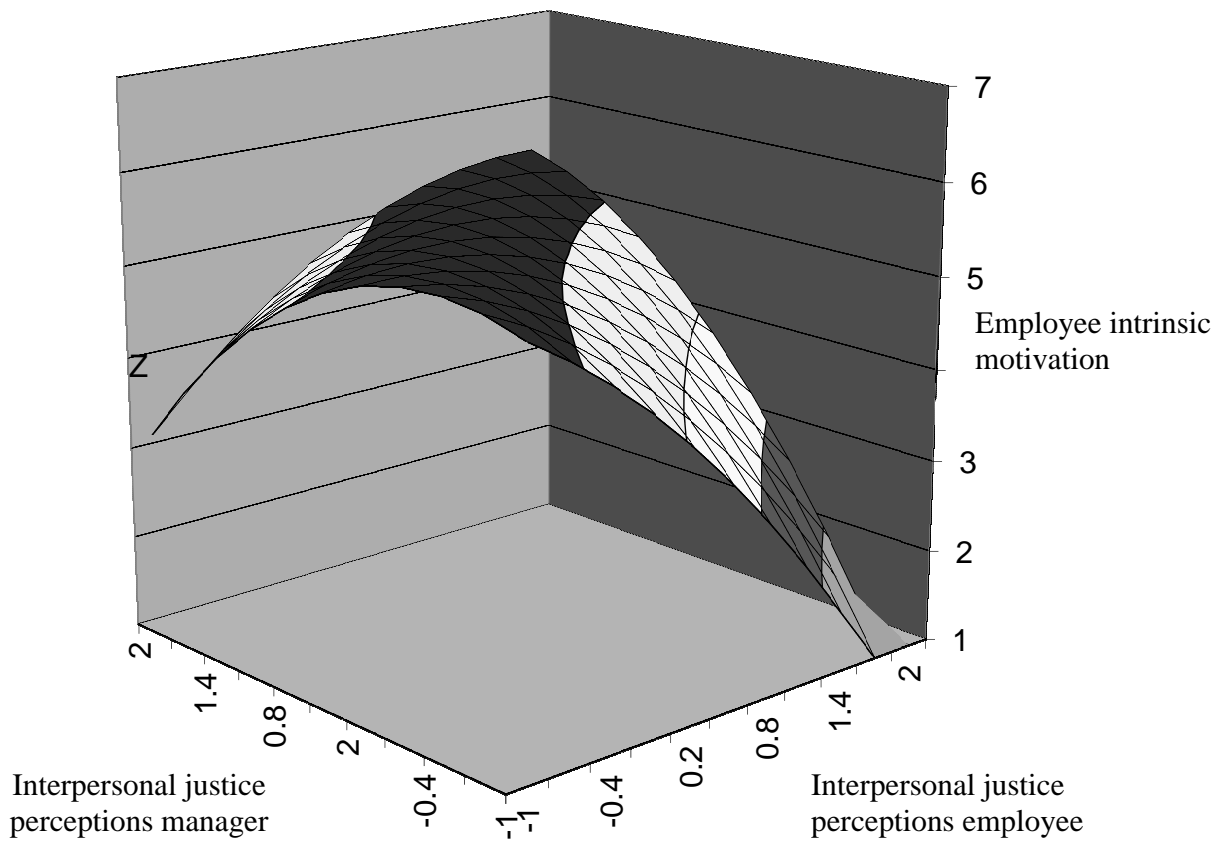
(Dis)agreement in interpersonal justice perceptions among manager and employee and employee job satisfaction



for the former two indicates a dome-shaped curvature of the line of disagreement, i.e. levels of job satisfaction and intrinsic motivation are higher the more employee and manager interpersonal justice perceptions are in agreement. While the curvature is not significant for emotional exhaustion, it is noteworthy that the coefficient itself is sizable and positive which would, in accordance with *Hypothesis 2c*, indicate emotional exhaustion to be lower the more manager and employee perceptions of interpersonal justice are in agreement.

Figure 2

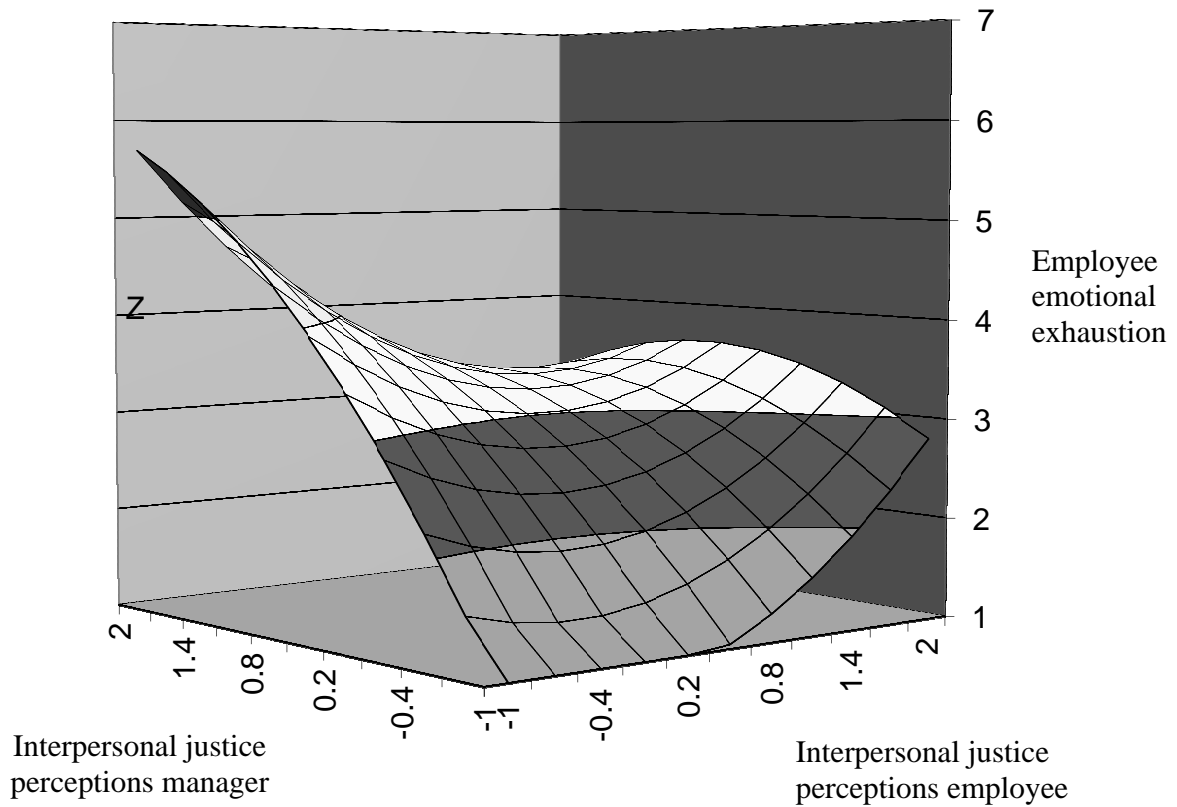
(Dis)agreement in interpersonal justice perceptions among manager and employee and employee intrinsic motivation



To test *Hypotheses 3a-c* that job satisfaction and intrinsic motivation will be higher, and emotional exhaustion lower when interpersonal justice perceptions are in agreement and high rather than in agreement and low, I examine the slope of the surface along the line where employee and manager agree ($E = M$), which runs from the closest corner of the figure (both perceive interpersonal justice as being low) to the furthest corner of the figure (both perceive interpersonal justice as being high). The slopes are estimated as $a_1 = b_1 + b_2$ and $a_2 = b_3 + b_4 + b_5$. When $a_1 \neq 0$ and $a_2 = 0$ there is a

Figure 3

(Dis)agreement in interpersonal justice perceptions among manager and employee and employee emotional exhaustion



positive or negative linear relationship among employee-manager perceptual agreement and the respective outcome. If $a_2 \neq 0$ then the line of agreement is curvilinear, either bowl-shaped, ($a_2 > 0$) or dome-shaped, ($a_2 < 0$). The tests of the significance of the slopes indicate that none of the slopes along the lines of agreement were significant or curvilinear (see *Table 3*). As such, *Hypotheses 3a-c* are not supported.

Table 3

Shape of the Response Surface depicting the Relation among Manager and Employee Interpersonal Justice Perceptions and Job Satisfaction, Intrinsic Motivation, and Emotional Exhaustion

Shape of response surface along lines of interest	Job satisfaction	Intrinsic motivation	Emotional exhaustion
E = M line (Employee perception = Manager perception)			
Slope ($a_1 = b_1 + b_2$)	-0.25	-0.10	1.25
Curvature ($a_2 = b_3 + b_4 + b_5$)	0.16	0.11	-0.49
E = -M line (Employee perception = - Manager perception)			
Slope ($a_3 = b_1 - b_2$)	0.34	-1.13	-1.60*
Curvature ($a_4 = b_3 - b_4 + b_5$)	-0.45*	-1.55**	0.55

To test *Hypotheses 4a-c*, I observe the slope of the surface along the line of disagreement ($E = -M$) to see whether it is significantly increasing for job satisfaction and intrinsic motivation and significantly decreasing for emotional exhaustion. This would indicate that situations in which the manager perceives his or her own interpersonal justice as higher than the employee, i.e. in which the manager is ‘unfair and unaware’, are associated with lower levels of job satisfaction and intrinsic motivation and higher levels of emotional exhaustion than opposite situations in which the employee perceives the manager as being interpersonally more just than the manager perceives him- or herself to be. The slope of this line is denoted by $a_3 = b_1 - b_2$, where b_1 and b_2 are the coefficients of the main effects of employee (b_1) and manager (b_2) interpersonal justice perceptions. A one tailed t-test reveals that this is not the case for job satisfaction ($a_3 = 0.34$, *ns*) and intrinsic motivation ($a_3 = -1.13$, *ns*) in rejection of *Hypotheses 4a* and *4b*. In contrast, emotional exhaustion is indeed significantly higher when managers perceive themselves as interpersonally more just than they are perceived by their employees in line with *Hypothesis 4c* ($a_3 = -1.60$, $p < .05$).

3.4 Discussion

3.4.1 Summary

In this study I proposed that managers perceive their own behavior on average as interpersonally more just than do their employees and that, more generally, perceptual (dis)agreement among manager and employee regarding the manager’s interpersonal justice impacts employees’ emotions and attitudes beyond the often observed main effects of interpersonal justice. In particular, drawing on similarity-attraction theory (Byrne, 1961; Byrne, Young, & Griffitt, 1966; Byrne, Clore, & Smeaton, 1986; Byrne, 1971a, Byrne, 1971b; Byrne, 1997), research on belief reinforcement and reduction of ambiguity and uncertainty (e.g., Byrne, 1971b; Festinger, 1957; Hardin & Higgins, 1996; Haslam, Oakes, Turner, & McGarty, 1996; Humborstad & Kuvaas, 2013), and theory on self-other rating agreement (Ashford, 1989; Atwater & Yammarino, 1992; Atwater & Yammarino, 1997; Yammarino & Atwater, 1997), I suggested that when manager and employee interpersonal justice

perceptions differ, the employee experiences lower levels of job satisfaction and intrinsic motivation, and higher levels of emotional exhaustion. In the organizational behavior literature, manager and employee have generally been found to often have substantially different perceptions of their behaviors. Heidemeier and Moser (2009), for instance, found that manager and employee perceptions of employee job performance had a correlation of only .22, Gerstner and Day's meta-analysis (1997) showed that manager and employee perceptions of LMX had an average correlation of .29, and Atwater and Yammarino (1992) found a correlation of only .12 in perceptions of the manager's transformational leadership among naval officers and their employees. This study's results echo these findings with a significant but low correlation of .15 ($p < .05$) for manager and employee perceptions of the manager's interpersonal justice. More specifically, manager self-perceptions of interpersonal justice significantly exceeded those of their employees. Applying polynomial regression and response surface analysis, demonstrated that, as expected, perceptual agreement regarding the manager's interpersonal justice had a significant positive relationship with job satisfaction and intrinsic motivation. While the coefficient for emotional exhaustion was in the predicted direction, it was not significant. Further, I proposed that more positive employee attitudes and emotions would be observed when manager and employee were in positive agreement, i.e. when both perceive the manager as interactionally just, than when they were in negative agreement, i.e. both perceive him/her as interpersonally unjust. The results indicated, however, that the slopes of the surface along the line of agreement were insignificant. While not what was hypothesized there is some evidence from work on intrinsic motivation that also reports no main effect of interpersonal justice on intrinsic motivation (Zapata-Phelan et al., 2009). Alternatively it could be an issue with the data. In this sample there were only few managers who were 'unfair and aware'. Thus this area of the surface is not very well estimated and might not accurately capture the actual relationship. Further work may fruitfully explore the effect of being 'unfair and aware'. Finally, it was suggested that when the manager perceives him- or herself as interpersonally more just than does the employee (i.e., unfair and unaware) rather than the other way around (i.e., fair and unaware), employees display lower levels of job satisfaction and intrinsic motivation and higher levels of emotional exhaustion. Results indicate that this is indeed the case for emotional exhaustion. For job satisfaction and intrinsic

motivation there was, in contrast, no such significant relation. A possible reason for these findings is that when the employee perceives the manager as interpersonally more just than the manager him- or herself, this might still negatively impact employee attitudes such as job satisfaction and intrinsic motivation due to elevated ambiguity or the experience of working for a manager who does not set accurate self or unit goals, so that there is no significant difference in these attitudes between employees who have ‘unfair and unaware’ managers and ‘fair and unaware’ managers. In contrast, working for ‘fair and unaware’ managers may not be so onerous that it becomes emotionally exhausting, thus leading to a significant difference between the two types of managers for this outcome.

3.4.2 Theoretical contributions

This study contributes to the literature in a number of ways. First, it adds to the justice literature by drawing attention to the fact that different stakeholders may perceive the level of justice enacted quite differently and that such perceptual disagreement matters. Justice research has almost exclusively focused on employees’ justice perceptions. Research on how just managers perceive themselves to be is at best scarce (e.g., Brockner, 2006; Zapata et al., 2013). A combination of both perspectives, however, has not yet been considered at all. My findings that manager interpersonal justice perceptions on average exceed those of employees may help understand why some managers who are perceived as unjust by their employees do not (see a need to) change their behavior. This paper further highlights the importance of considering the possibility that managerial self-perceptions matter for employee attitudes and emotions and that in particular *disagreement* in justice perceptions among manager and employee may incrementally explain these outcomes. In particular, after replicating findings from previous studies for a main effect of interpersonal justice on job satisfaction (Colquitt et al., 2001) and emotional exhaustion (Cole et al., 2010) as well as the non-significant main effect of intrinsic motivation (Zapata et al., 2013), I show that inclusion of the manager’s self-perceptions considerably increases the variance explained by the regressions and demonstrates that disagreement among manager and employee interpersonal justice perceptions are an important element in predicting employee attitudes. With attention

among justice researchers shifting from the effect of just behaviors on justice receivers (employees) to the *motives and conditions* impacting justice actors (managers) (treating justice as a dependent variable, e.g., Cornelis, Van Hiel, and De Cremer, 2012; Cornelis, Van Hiel, De Cremer, and Mayer, 2013; Gilliland & Schepers, 2003; Korsgaard, Roberson, & Rymph, 1998; Scott, Colquitt, & Zapata-Phelan, 2007; Scott et al., 2009; Seppälä, Lipponen, Pirttilä-Backman, & Lipsanen, 2012; Oc, Bashshur & Moore, in press; Zapata, Olsen & Martins; 2013), my results show that beyond motives and context it is also important to consider how justice actors *perceive* their own behaviors if we seek to understand their behaviors and their employee's reactions to (in)justice.

Second, this paper links the literature on organizational fit, and in particular the concept of perceptual fit as introduced by Ostroff and colleagues (2005), to the justice literature. Ostroff et al. (2005) argue that when employees and managers do not fit perceptually employees lack clarity on what is valued and expected in a company. This paper argues that perceptual disagreement in interpersonal justice perceptions should, in a similar fashion, lead to ambiguity and uncertainty on the part of the employee.

3.4.3 Practical Implications

In terms of practical implications, this study highlights the importance of managers and their employees being in perceptual agreement regarding the manager's interpersonal justice. If managers are unfair and unaware they will see no need to alter their behavior. One powerful tool to increase managerial justice is training programs for managers (e.g., Greenberg, 2006; Skarlicki & Latham, 1996; Skarlicki & Latham, 2005). My findings suggest that such training programs might be able to increase employees' job satisfaction and intrinsic motivation, and decrease emotional exhaustion by highlighting for managers their lack of awareness of how they are perceived by their employees and that actively seeking the employees' feedback regarding interpersonal justice may be a way to improve that. Another way to make *both* parties sensitive towards each other's interpersonal justice perceptions might be the introduction of formalized feedback processes among managers and employees regarding managerial justice much like 360 degree feedback programs

(e.g., Edwards & Ewen, 1996; Hazucha, Hezlett, & Schneider, 1993; Seifert, Yukl, & McDonald, 2003; London & Beatty, 1993; Waldman, Atwater, & Antonioni, 1998).

3.4.4 Limitations

While the first study of its kind to examine perceptual differences in justice perceptions, this study is not without limitations. One issue is that using a snowball sampling technique for data collection may lead to a less representative sample. While this approach is of course powerful in that my sample consists of dyads of real working adults interacting in the workplace, it is possible that this sample is less likely to include manager-employee dyads that do not get well along with each other. Indeed the data contain few data points in the area where manager and employee agree on the manager being interpersonally unjust. However, given the fact that the ‘unfair and unaware’ and ‘fair and unaware’ managers were relatively well represented in the sample it suggests that employees who perceived their manager as interpersonally unjust still asked him or her to participate in the study and that managers who saw themselves as interpersonally unjust still consented to participate. One possible explanation for the lack of data in the region of negative agreement may be that in organizations there may be few cases where both agree that the manager is interpersonally unjust. Managers aim to feel good about their own behavior (Scott et al., 2009) and those who are perceived as unjust (and realize this) have incentives to alter their behavior (Oc, Bashshur, & Moore, in press). Further, if both parties agree that the manager is interpersonally unjust, the managerial behavior might have an underlying cause such as low employee performance or a low quality manager-employee relationship which induces one of the two parties to end the work relationship, leaving fewer of these dyads in the organization.

A second limitation is that despite the power of polynomial regression and response surface analysis for testing the hypotheses, these methods explore associations rather than causal effects. In future studies it would be interesting to explore whether employees who have low levels of job satisfaction or intrinsic motivation or high levels of emotional exhaustion tend to develop lower interpersonal justice perceptions in the first place, resulting in a greater divergence of justice perceptions among manager and employee.

3.4.5 Directions for further research

This study indicates several promising directions for further research. It shows that managerial interpersonal justice perceptions matter for employee job attitudes and emotions, and that these are most positive when manager and employee perceptions coincide. To foster such perceptual agreement in organizations it will be essential to further explore how managers form their justice self-perceptions, e.g., what information they draw upon, and where disagreement with the employees' perceptions stems from.

Second, I proposed a positive manager-employee relationship, role ambiguity and the manager's personal characteristics and work behaviors (e.g., openness to feedback, goal-setting) as possible mechanisms driving the association among perceptual (dis)agreement in managerial and employee interpersonal justice perceptions and employee job satisfaction, intrinsic motivation, and emotional exhaustion. While there is strong evidence for the relationship of perceptual agreement with job satisfaction and intrinsic motivation, it was beyond the scope of this paper to test the mediating mechanisms. Understanding these mechanisms, however, would help understand the drivers of these relationships and may suggest more effective interventions for preventing the development of negative attitudes and emotions. It would be especially important to explore whether the association of perceptual disagreement and employee outcomes is mediated by mechanisms associated with the relationship among managers and employees such as negative sentiments towards each other or increased ambiguity and uncertainty experienced by the employee, or whether perceptual disagreement itself is simply an outcome of manager characteristics such as self-esteem (e.g., Atwater & Yammarino, 1997). This is of high importance since managerial characteristics such as self-esteem might independently correlate with both perceptual disagreement and manager behaviors (e.g., goal-setting, feedback seeking) which themselves have a direct effect on employee job satisfaction, intrinsic motivation, and emotional exhaustion (e.g., Colquitt et al., 2001; Colquitt et al., 2013; Lambert, Hogan, & Griffin, 2007; McFarlin & Sweeney, 1992; Zapata-Phelan et al., 2009).

Third, as pointed out by Fairness Theory (Folger & Cropanzano, 2001), manager *intentions* and employee perceptions play an important role in shaping employees' reactions to injustice. In the context of this study, one might reasonably assume that employees would react more negatively to interpersonal injustice when it is intentional (the manager is 'unfair and aware'), rather than when the manager acts unintentionally (being 'unfair and unaware'). While this may be partly offset by a negative influence of less positive sentiments or increased ambiguity in cases when managers are not aware of their injustice, the response surface graphs indicate exactly the opposite. While this comparison was not the focus of the present study, eliciting employees' perceptions of intentionality in order to see whether and how they coincide with the unaware/aware categories would be an interesting avenue for future research.

3.4.6 Concluding Remarks

To conclude, this study highlights the role managers' perceptions of their own justice behaviors play for employee work attitudes and emotions, such as job satisfaction, intrinsic motivation, and emotional exhaustion. As such, this study constitutes a first step in understanding how managers, as the enactors of justice, evaluate their own justice actions and what implications this may have for employee outcomes. Practically, it stresses that managers should take time not only to elicit how they are perceived by their employees, but also to communicate their own perceptions so that the two parties understand each other better in terms of their motives, expectations, and behaviors.

REFERENCES

- Abeler, J., Altmann, S., Kube, S., & Wibrall, M. (2010). Gift exchange and workers' fairness concerns: When equality is unfair. *Journal of the European Economic Association*, 8, 1299-1324.
- Abramis, D. J. (1994). Work role ambiguity, job satisfaction, and job performance: Meta-analyses and review. *Psychological Reports*, 75, 1411-1433.
- Adams, J. S. (1963). Toward an understanding of inequity. *Journal of Abnormal and Social Psychology*, 67, 422-436.
- Agle, B. R., Mitchell, R. K., & Sonnenfeld, J. A. (1999). Who matters to CEOs? An investigation of stakeholder attributes and salience, corporate performance, and CEO values. *Academy of Management Journal*, 42, 507-525.
- Ambrose, M. L., & Cropanzano, R. (2003). A longitudinal analysis of organizational fairness: an examination of reactions to tenure and promotion decisions. *Journal of Applied Psychology*, 88, 266-275.
- Ambrose, M. L., & Schminke, M. (2009). Assessing roadblocks to justice: A model of fair behavior in organizations. *Research in Personnel and Human Resources Management*, 28, 219-263.
- Ambrose, M. L., Seabright, M. A., & Schminke, M. (2002). Sabotage in the workplace: The role of organizational injustice. *Organizational Behavior and Human Decision Processes*, 89, 947-965.
- Angrist, J. D., & Pischke, S. (2008). *Mostly harmless econometrics: An empiricists' companion*. Princeton, NJ: Princeton University Press.
- Antonakis, J., Bendahan, S., Jacquart, P., & Lalive, R. (2010). On making causal claims: A review and recommendations. *The Leadership Quarterly*, 21, 1086-1120.
- Antonakis, J., Bendahan, S., Jacquart, P., & Lalive, R. (2014). Causality and endogeneity: Problems and solutions. In D. V. Day (Ed.), *The Oxford handbook of*

leadership and organizations (pp. 93-117). New York, NY: Oxford University Press.

Aryee, S., Budhwar, P. S., & Chen, Z. X. (2002). Trust as a mediator of the relationship between organizational justice and work outcomes: Test of a social exchange model. *Journal of Organizational Behavior, 23*, 267-285.

Ashford, S. 1989. Self-assessments in organizations: A literature review and integrative model. *Research in Organizational Behavior, 11*, 133-174.

Ashkanasy, N. M., & Gallois, C. (1994). Leader attribution and evaluations: Effects of locus of control, supervisory control, and task control. *Organizational Behavior and Human Decision Processes, 59*, 27-50.

Atwater, L. E., & Yammarino, F. J. (1992). Does self-other agreement on leadership perceptions moderate the validity of leadership and performance predictions? *Personnel Psychology, 45*, 141-164.

Atwater, L. E., & Yammarino, F. J. (1997). Self-other rating agreement: A review and model. *Research in Personnel and Human Resources Management, 15*, 121-174.

Atwater, L. E., Ostroff, C., Yammarino, F. J., & Fleenor, J. W. (1998). Self-other agreement: Does it really matter? *Personnel Psychology, 51*, 577-598.

Baird, L. S. (1977). Self and superior ratings of performance: As related to self-esteem and satisfaction with supervision. *Academy of Management Journal, 20*, 291-300.

Barclay, L. J., & Whiteside, D. B. (2012). It's not me, it's you: Exploring the precipitation of injustice. *Paper Presentation at the International Roundtable for Innovations in Organizational Justice, Nice, France.*

Bashshur, M. R., Hernández, A., & González-Romá, V. (2011). When managers and their teams disagree: A longitudinal look at the consequences of differences in perceptions of organizational support. *Journal of Applied Psychology, 96*, 558-573.

- Bass, B. M., & Yammarino, F. J. (1991). Congruence of self and others' leadership ratings of naval officers for understanding successful performance. *Applied Psychology, 40*, 437-454.
- Belsley, D. A., Kuh, E., & Welsch, R. E. (1980). *Regression diagnostics: Identifying influential data and sources of collinearity*. New York, NY: John Wiley & Sons.
- Bernardin, H. J. (1979). The predictability of discrepancy measures of role constructs. *Personnel Psychology, 32*, 139-153.
- 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, pp. 43–55). Greenwich, CT: JAI Press.
- Bies, R. J., & Tripp, T. M. (2001). A passion for justice: The rationality and morality of revenge. In R. Cropanzano (Ed.), *Justice in the workplace: From theory to practice* (Vol. 2, 197-208). Mahwah, NJ: Lawrence Erlbaum Associates.
- Blader, S. L., & Tyler, T. R. (2005). How can theories of organizational justice explain the effects of fairness? In J. Greenberg, & J. A. Colquitt (Eds.), *Handbook of organizational justice* (pp. 329-354). Mahwah, NJ: Lawrence Erlbaum Associates.
- Blau, P. M. (1964). *Exchange and power in social life*. New York: Wiley.
- Bradley, G. W. (1978). Self-serving biases in the attribution process: A reexamination of the fact or fiction question. *Journal of Personality and Social Psychology, 36*, 56-71.
- Brockner, J. (2006). Why it's so hard to be fair. *Harvard Business Review, 84*, 122-129.
- Brockner, J., Greenberg, J., Brockner, A., Bortz, J., Davy, J., & Carter, C. (1986). Layoffs, equity theory, and work performance: Further evidence of the impact of survivor guilt. *Academy of Management Journal, 29*, 373-384.
- Browne, C. G., & Neitzel, B. J. (1952). Communication, supervision, and morale. *Journal of Applied Psychology, 36*, 86-91.

- Burton, J. P., Sablinski, C. J., & Sekiguchi, T. (2008). Linking justice, performance, and citizenship via leader–member exchange. *Journal of Business and Psychology, 23*, 51-61.
- Byrne, D., Clore, G. L., & Smeaton, G. (1986). The attraction hypothesis: Do similar attitudes affect anything?.
- Byrne, D. (1997). An overview (and underview) of research and theory within the attraction paradigm. *Journal of Social and Personal Relationships, 14*, 417-431.
- Byrne, D. (1961). Interpersonal attraction and attitude similarity. *Journal of Abnormal and Social Psychology, 62*, 713-715.
- Byrne, D. (1971a). *The attraction paradigm*. New York: Academic Press.
- Byrne, D. (1971b). The ubiquitous relationship: Attitude similarity and attraction: A cross-cultural study. *Human Relations, 24*, 201–207.
- Byrne, D., Young, R.K., & Griffitt, W. (1966). The reinforcement properties of attitude statements. *Journal of Experimental Research in Personality, 1*, 266-276.
- Cable, D. M., & DeRue, D. S. (2002). The convergent and discriminant validity of subjective fit perceptions. *Journal of Applied Psychology, 87*, 875-884.
- Cable, D. M., & Judge, T. A. (1997). Interviewers' perceptions of person–organization fit and organizational selection decisions. *Journal of Applied Psychology, 82*, 546-561.
- Camerer, C., & Lovallo, D. (1999). Overconfidence and excess entry: An experimental approach. *American Economic Review, 89*, 306–318.
- Camerer, C., & Weber, M. (1992). Recent developments in modeling preferences: uncertainty and ambiguity. *Journal of Risk and Uncertainty, 5*, 325-370.
- Cammann, C., Fichman, M., Jenkins, D., & Klesh, J. (1979). The Michigan Organizational Assessment Questionnaire. *Unpublished manuscript*, University of Michigan.

- Cammann, C., Fichman, M., Jenkins, G., & Klesh, J. (1983). Assessing the attitudes and perceptions of organizational members. In S. Seashore, E. Lawler, P. Mirvis, & C. Cammann (Eds.), *Assessing Organizational Change* (pp. 71-138). New York, NY: Wiley.
- Carpenter, M. A., & Sanders, W. M. (2002). Top management team compensation: The missing link between CEO pay and firm performance? *Strategic Management Journal*, *23*, 367-375.
- Chaiken, S., & Eagly, A. H. (1983). Communication modality as a determinant of persuasion: The role of communicator salience. *Journal of Personality and Social Psychology*, *45*, 241-256.
- Chugh, D., Bazerman, M. H., & Banaji, M. R. (2005). Bounded ethicality as a psychological barrier to recognizing conflicts of interest. In D. A. Moore, D. M. Cain, G. Loewenstein, & M. H. Bazerman (Eds.), *Conflicts of interest* (pp. 74-95). Cambridge, MA: Cambridge University Press.
- Church, A. H. (1997). Managerial self-awareness in high-performing individuals in organizations. *Journal of Applied Psychology*, *82*, 281-292.
- Cohen, A. R. (1959). Situational structure, self-esteem, and threat-oriented reactions to power. In D. Cartwright (Ed.), *Studies in social power* (pp. 35-52). Ann Arbor: University of Michigan Press.
- Cohen-Charash, Y., & Spector, P.E. (2001). The role of justice in organizations: A meta-analysis. *Organizational Behavior and Human Decision Processes*, *86*, 278-321.
- Cole, M. S., Bernerth, J. B., Walter, F., & Holt, D. T. (2010). Organizational justice and individuals' withdrawal: Unlocking the influence of emotional exhaustion. *Journal of Management Studies*, *47*, 367-390.
- Colquitt, J. A. (2001). On the dimensionality of organizational justice: a construct validation of a measure. *Journal of Applied Psychology*, *86*, 386-400.

- Colquitt, J. A., Conlon, D. E., Wesson, M. J., Porter, C. O. L. H., & Ng K. Y. (2001). Justice at the millennium: A meta-analytic review of 25 years of organizational justice research. *Journal of Applied Psychology, 86*, 425-445.
- Colquitt, J. A., & Greenberg, J. (2003). Organizational justice: A fair assessment of the state of the literature. In J. Greenberg (Ed.), *Organizational Behavior: The State of the Science* (2nd ed., pp. 165–210). Mahwah, NJ: Lawrence Erlbaum Associates.
- 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? *Journal of Applied Psychology, 97*, 1-15.
- 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. *Journal of Applied Psychology, 98*, 199-236.
- Cooper, A., Woo, C.Y., & Dunkelberg, W.C. (1988). Entrepreneurs' perceived chances for success. *Journal of Business Venturing, 3*, 97–108.
- Cornelis, I., Van Hiel, A., & De Cremer, D. (2012). The effect of followers' belongingness needs on leaders' procedural fairness enactment, *Journal of Personnel Psychology, 11*, 31-39.
- Cornelis, I., Van Hiel, A., De Cremer, D., & Mayer, D. M. (2013). When leaders choose to be fair: Follower belongingness needs and leader empathy influences leaders' adherence to procedural fairness rules. *Journal of Experimental Social Psychology, 49*, 605-613.
- Cropanzano, R., Goldman, B., & Folger, R. (2003). Deontic justice: The role of moral principles in workplace fairness. *Journal of Organizational Behavior, 24*, 1019-1024.
- Cropanzano, R., & Rupp, D. E. (2002). Some reflections on the morality of organizational justice. In S. W. Gilliland, D. D. Steiner, & D. P. Skarlicki (Eds.),

Emerging perspectives on managing organizational justice (225-278). Greenwich, CT: Information Age Publishing.

Cropanzano, R., & Rupp, D. E. (2003). An overview of organizational justice: Implications for work motivation. In L. W. Porter, G. A. Bigley, & R. M. Steers (Eds.), *Motivation and Work Behavior* (pp. 82–94). Boston, MA: McGraw-Hill.

Cyert, R. M., & March, J. G. (1963). *A behavioral theory of the firm*. Englewood Cliffs, NJ: Prentice-Hall.

Dunegan, K. J., Uhl-Bien, M., & Duchon, D. (2002). LMX and subordinate performance: The moderating effects of task characteristics. *Journal of Business and Psychology, 17*, 275-285.

Dwyer, D. J., & Ganster, D. C. (1991). The effects of job demands and control on employee attendance and satisfaction. *Journal of Organizational Behavior, 12*, 595-608.

Eddleston, K. A., Veiga, J. F., & Powell, G. N. (2006). Explaining sex differences in managerial career satisfier preferences: the role of gender self-schema. *Journal of Applied Psychology, 91*, 437-445.

Edwards, J. R. (1994). The study of congruence in organizational behavior research: Critique and a proposed alternative. *Organizational Behavior and Human Decision Processes, 58*, 51-100.

Edwards, J. R. (2001). Ten difference score myths. *Organizational Research Methods, 4*, 265-287.

Edwards, J. R. (2002). Alternatives to difference scores: Polynomial regression analysis and response surface methodology. In F. Drasgow & N. Schmitt (Eds.), *Measuring and analyzing behavior in organizations: Advances in measurement and data analysis* (pp. 350-400). San Francisco, CA: Jossey-Bass.

Edwards, J. R., & Parry, M. E. (1993). On the use of polynomial regression equations as an alternative to difference scores in organizational research. *Academy of Management Journal, 36*, 1577-1613.

- Edwards, M. R., & Ewen, A. J. (1996). *360-degree feedback: The powerful new model for employee assessment and performance improvement*. New York: American Management Association.
- Elliot, A. J., & Harackiewicz, J. M. (1994). Goal setting, achievement orientation, and intrinsic motivation: A mediational analysis. *Journal of Personality and Social Psychology*, *66*, 968-980.
- Ellsberg, D. (1961). Risk, ambiguity, and the savage axioms, *Quarterly Journal of Economics*, *75*, 643-669.
- Elovainio, M., Kivimäki, M., & Helkama, K. (2001). Organizational justice evaluations, job control, and occupational strain. *Journal of Applied Psychology*, *86*, 418-424.
- Endler, N. S., & Magnusson, D. (1976). Personality and person by situation interactions. In N. S. Endler, & D. Magnusson (Eds.), *Interactional psychology and personality* (pp. 1-25). New York: Hemisphere.
- Epley, N., & Whitchurch, E. (2008). Mirror, mirror on the wall: Enhancement in self-recognition. *Personality and Social Psychology Bulletin*, *34*, 1159-1170.
- Farris, G. F., & Lim, F. G. (1969). Effects of performance on leadership, cohesiveness, influence, satisfaction, and subsequent performance. *Journal of Applied Psychology*, *53*, 490-497.
- Festinger, L. (1957). *A theory of cognitive dissonance*. Stanford, CA: Stanford University Press.
- Fiske, S. T. (1980). Attention and weight in person perception: The impact of negative and extreme behavior. *Journal of Personality and Social Psychology*, *38*, 889-906.
- Fiske, S. T., & Taylor, S. E. (1984). *Social cognition*. New York, NY: Random House.

- Folger, R. (1977). Distributive and procedural justice: Combined impact of "voice" and improvement on experienced inequity. *Journal of Personality and Social Psychology*, 35, 108-119.
- Folger, R. (1998). Fairness as a moral virtue. In M. Schminke (Ed.), *Managerial ethics: Moral management of people and processes* (pp. 13-34). Mahwah, NJ: Lawrence Erlbaum Associates.
- Folger, R. (2001). Fairness as deonance. In S. W. Gilliland, D. D. Steiner, & D. P. Skarlicki (Eds.), *Research in social issues in management* (Vol. 1, pp. 3–33). New York: Information Age Publishing.
- Folger, R., & Cropanzano, R. (2001). Fairness theory: Justice as accountability. *Advances in Organizational Justice*, 1, 1-55.
- Folger, R., Cropanzano, R., & Goldman, B. (2005). What is the relationship between justice and morality. In J. Greenberg & J. A. Colquitt (Eds.), *Handbook of organizational justice* (pp. 215–245). Mahwah, NJ: Lawrence Erlbaum Associates.
- Folger, R. & Skarlicki, D. P. (1998). When tough times make tough bosses: Managerial distancing as a function of layoff blame. *Academy of Management Journal*, 41, 79-87.
- Folger, R., & Skarlicki, D. P. (2001). Fairness as a dependent variable: Why tough times can lead to bad management. In R. Cropanzano (Ed.), *Justice in the workplace: From theory to practice* (Vol. 2, pp. 97-118). Mahwah, NJ: Lawrence Erlbaum Associates.
- Fortin, M. (2008). Perspectives on organizational justice: concept clarification, social context integration, time and links with morality. *International Journal of Management Reviews*, 10, 93-126.
- Fortin, M., Nadistic, T., & Cugueró i Escofet, N. (2011). Fairness judgments: One size fits all? A mixed method study of justice norms in workplace interactions with close and distant managers and peers. *Paper Presentation at the 2nd*

International Workshop on Organisational Justice and Behavioural Ethics, Aston, Great Britain.

Foster, E. M. (1997). Instrumental variables for logistic regression: An illustration. *Social Science Research, 26*, 487-504.

Foster, E. M., & McLanahan, S. (1996). An illustration of the use of instrumental variables: Do neighborhood conditions affect a young person's chance of finishing high school. *Psychological Methods, 1*, 249-260.

Freund, B., Colgrove, L. A., Burke, B. L., & McLeod, R. (2005). Self-rated driving performance among elderly drivers referred for driving evaluation. *Accident Analysis & Prevention, 37*, 613-618.

Gaines, J., & Jermier, J. M. (1983). Emotional exhaustion in a high stress organization. *Academy of Management Journal, 26*, 567-586.

Gerstner, C. R., & Day, D. V. (1997). Meta-Analytic review of leader-member exchange theory: Correlates and construct issues. *Journal of Applied Psychology, 82*, 827-844.

Gibson, C. B., Cooper, C. D., & Conger, J. A. (2009). Do you see what we see? The complex effects of perceptual distance between leaders and teams. *Journal of Applied Psychology, 94*, 62-76.

Gigerenzer, G., & Goldstein, D. G. (1996). Reasoning the fast and frugal way: models of bounded rationality. *Psychological Review, 103*, 650-669.

Gilliland, S. W. (1994). Effects of procedural and distributive justice on reactions to a selection system. *Journal of Applied Psychology, 79*, 691-701.

Gilliland, S. W., & Schepers, D. H. (2003). Why we do the things we do: A discussion and analysis of determinants of just treatment in layoff implementation decisions. *Human Resource Management Review, 13*, 59-83.

Glomb, T. M., & Liao, H. (2003). Interpersonal aggression in work groups: Social influence, reciprocal, and individual effects. *Academy of Management Journal, 46*, 486-496.

- Godshalk, V. M., & Sosik, J. J. (2000). Does mentor-protégé agreement on mentor leadership behavior influence the quality of a mentoring relationship? *Group & Organization Management*, 25, 291-317.
- Golden, T. D., & Veiga, J. F. (2008). The impact of superior-subordinate relationships on the commitment, job satisfaction, and performance of virtual workers. *The Leadership Quarterly*, 19, 77-88.
- Graen, G., & Schiemann, W. (1978). Leader-member agreement: A vertical dyad linkage approach. *Journal of Applied Psychology*, 63, 206-212.
- Graen, G., Novak, M. A., & Sommerkamp, P. (1982). The effects of leader-member exchange and job design on productivity and satisfaction: Testing a dual attachment model. *Organizational Behavior and Human Performance*, 30, 109-131.
- Grant, A. M. (2008). Does intrinsic motivation fuel the prosocial fire? Motivational synergy in predicting persistence, performance, and productivity. *Journal of Applied Psychology*, 93, 48-58.
- Gray, J. A. (1990). Brain systems that mediate both emotion and cognition. *Cognition and Emotion*, 4, 269-288.
- Greenberg, J. (1983). Overcoming egocentric bias in perceived fairness through self-awareness. *Social Psychology Quarterly*, 46, 152-156.
- Greenberg, J. (1990). Employee theft as a reaction to underpayment inequity: The hidden cost of pay cuts. *Journal of Applied Psychology*, 75, 561-568.
- Greenberg, J. (1993a). Stealing in the name of justice: Informational and interpersonal moderators of theft reactions to underpayment inequity. *Organizational Behavior and Human Decision Processes*, 54, 81-103.
- Greenberg, J. (1993b). 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* (pp.79-103), Hillsdale, NJ: Lawrence Erlbaum Associates.

- Greenberg, J. (2006). Losing sleep over organizational injustice: Attenuating insomniac reactions to underpayment inequity with supervisory training in interactional justice. *Journal of Applied Psychology, 91*, 58-69.
- Greenberg, J., & Ornstein, S. (1983). High status job title compensation for underpayment: A test of equity theory. *Journal of Applied Psychology, 68*, 285-297.
- Greene, C. N. (1972). Relationships among role accuracy, compliance, performance evaluation, and satisfaction within managerial dyads. *Academy of Management Journal, 15*, 205–215.
- Greene, W. H. (2003). *Econometric analysis* (5th ed.). Upper Saddle River, NJ: Prentice Hall.
- Ham, J., & van den Bos, K. (2010). The merits of unconscious processing of directly and indirectly obtained information about social justice. *Social Cognition, 28*, 180-190.
- Ham, J., van den Bos, K., & van Doorn, E. A. (2009). Lady Justice thinks unconsciously: Unconscious thought can lead to more accurate justice judgments. *Social Cognition, 27*, 509-521.
- Hambrick, D. C., Finkelstein, S., & Mooney, A. C. (2005). Executive job demands: New insights for explaining strategic decisions and leader behaviors. *Academy of Management Review, 30*, 472–491.
- Hamner, W. C., & Tosi, H. L. (1974). Relationship of role conflict and role ambiguity to job involvement measures. *Journal of Applied Psychology, 59*, 497-499.
- Hardin, C. D. & Higgins, E. T. (1996). Shared reality: How social verification makes the subjective objective. In R. M. Sorrentino, & E. T. Higgins (Eds.), *Handbook of motivation and cognition* (Vol. 3, pp. 28 – 84). New York: Guilford Press.
- Haslam, S. A., Oakes, P. J., Turner, J. C., & McGarty, C. (1996). Social identity, self-categorization, and the perceived homogeneity of ingroups and outgroups:

- The interaction between social motivation and cognition. In R. M. Sorrentino & E. T. Higgins (Eds.), *Handbook of motivation and cognition* (Vol. 3, pp.182-222). New York: Guilford Press.
- Hatfield, J. D., & Huseman, R. C. (1982). Perceptual congruence about communication as related to satisfaction: Moderating effects of individual characteristics. *Academy of Management Journal*, 25, 349–358.
- Hazucha, J. F., Hezlett, S. A., & Schneider, R. J. (1993). The impact of 360-degree feedback on management skills development. *Human Resource Management*, 32, 325-351.
- Heidemeier, H., & Moser, K. (2009). Self–other agreement in job performance ratings: A meta-analytic test of a process model. *Journal of Applied Psychology*, 94, 353-370.
- Hoogervorst, N., De Cremer, D., & van Dijke, M. (2013). When do leaders grant voice? How leaders' perceptions of followers' control and belongingness needs affect the enactment of fair procedures. *Human Relations*, 66, 973–992.
- House, R. J. (1971). A path goal theory of leader effectiveness. *Administrative Science Quarterly*, 16, 321-339.
- Humborstad, S. I. W., & Kuvaas, B. (2013). Mutuality in leader–subordinate empowerment expectation: Its impact on role ambiguity and intrinsic motivation. *The Leadership Quarterly*, 24, 363-377.
- Irving, P. G., Coleman, D. F., & Bobocel, D. R. (1999). The moderating effect of negative affectivity in the procedural justice-job satisfaction relation. *Canadian Journal of Behavioural Science/Revue Canadienne des Sciences du Comportement*, 37, 20-32.
- Jackson, S. E., & Schuler, R. S. (1985). A meta-analysis and conceptual critique of research on role ambiguity and role conflict in work settings. *Organizational Behavior and Human Decision Processes*, 36, 16-78.

- Janssen, O. (2001). Fairness perceptions as a moderator in the curvilinear relationships between job demands, and job performance and job satisfaction. *Academy of Management Journal*, *44*, 1039-1050.
- Jehn, K. A., & Chatman, J. A. (2000). The influence of proportional and perceptual conflict composition on team performance. *International Journal of Conflict Management*, *11*, 56-73.
- 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. *Journal of Applied Psychology*. Advance online publication.
- Jones, E. E., & Nisbett, R. E. (1972). The actor and the observer: Divergent perceptions of the causes of behavior. In E. E. Jones, D. E. Kanouse, H. H. Kelley, R. E. Nisbett, S. Valins, & B. Weiner (Eds.), *Attribution: Perceiving the causes of behavior* (pp. 79–94). Morristown, NJ: General Learning Press.
- Juanchich, M., Teigen, K. H., & Gourdon, A. (2013). Top scores are possible, bottom scores are certain (and middle scores are not worth mentioning): A pragmatic view of verbal probabilities. *Judgment & Decision Making*, *8*, 345-364.
- Judge, T. A. & Colquitt, J. A. (2004). Organizational justice and stress: The mediating role of work–family conflict. *Journal of Applied Psychology*, *89*, 395-404.
- Kahn, R. L., Wolfe, D. M., Quinn, R. P., Snoek, J. D., & Rosenthal, R. A. (1964). *Organizational stress: Studies in role conflict and ambiguity*. New York: Wiley.
- Kahneman, D., Slovic, P., & Tversky, A. (1982). *Judgment under uncertainty: Heuristics and biases*. New York, NY: Cambridge University Press.
- Kammeyer-Mueller, J. D, Judge, D. A., & Piccolo, R. F. (2008). Self-esteem and extrinsic career success: Test of a dynamic model. *Applied Psychology: An International Review*, *57*: 204-224.

- Kaplan, S., Bradley, J.C, Luchman, J. N., & Haynes, D. (2009). On the role of positive and negative affectivity in job performance: A meta-analytic investigation. *Journal of Applied Psychology, 94*, 162-176.
- Karasek, R. A., Jr. (1979). Job demands, job decision latitude, and mental strain: Implications for job redesign. *Administrative Science Quarterly, 24*, 285–311.
- Katz, D., & Kahn, R. L. (1966). *The social psychology of organizations*. New York: John Wiley & Sons.
- Katz, D., & Kahn, R. L. (1978). *The social psychology of organizations* (2nd ed.). New York: John Wiley & Sons.
- Keller, R. T. (1975). Role conflict and ambiguity: Correlates with job satisfaction and values. *Personnel Psychology, 28*, 57-64.
- Kellerman, B. (2004). *Bad leadership: What it is, how it happens, why it matters*. Boston, MA: Harvard Business School Press.
- Kennedy, P. (2003). *A guide to econometrics* (5th ed.). Cambridge, MA: The MIT Press.
- Keren, G., & Teigen, K. H. (2001). Why is $p=.90$ better than $p=.70$? Preference for definitive predictions by lay consumers of probability judgments. *Psychonomic Bulletin & Review, 8*, 191-202.
- Konovsky, M. A., & Cropanzano, R. (1991). Perceived fairness of employee drug testing as a predictor of employee attitudes and job performance. *Journal of Applied Psychology, 76*, 698-707.
- Konovsky, M. A., & Pugh, S. D. (1994). Citizenship behavior and social exchange. *Academy of Management Journal, 37*, 656-669.
- Korsgaard, M. A., Roberson, L., & Rymph, R. D. (1998). What motivates fairness? The role of subordinate assertive behavior on managers' interactional fairness. *Journal of Applied Psychology, 83*, 731-744.

- Lambert, E. G., Hogan, N. L., & Griffin, M. L. (2007). The impact of distributive and procedural justice on correctional staff job stress, job satisfaction, and organizational commitment. *Journal of Criminal Justice*, *35*, 644-656.
- Lang, J., Bliese, P. D., Lang, J. W., & Adler, A. B. (2011). Work gets unfair for the depressed: Cross-lagged relations between organizational justice perceptions and depressive symptoms. *Journal of Applied Psychology*, *96*, 602-618.
- Larwood, L., & Whittaker, W. (1977). Managerial myopia: Self-serving biases in organizational planning. *Journal of Applied Psychology*, *62*, 194-198.
- Lee, R. T., & Ashforth, B. E. (1993). A further examination of managerial burnout: Toward an integrated model. *Journal of Organizational Behavior*, *14*, 3-20.
- Lee, R. T., & Ashforth, B. E. (1996). A meta-analytic examination of the correlates of the three dimensions of job burnout. *Journal of Applied Psychology*, *81*, 123-133.
- Leventhal, G. S. (1980). What should be done with equity theory? New approaches to the study of fairness in social relationships. In K. J. Gergen, M. S. Greenberg, & R. H. Willis (Eds.), *Social exchange: Advances in theory and research* (pp. 27-55). New York, NY: Plenum Press.
- Lim, V. K. (2002). The IT way of loafing on the job: Cyberloafing, neutralizing and organizational justice. *Journal of Organizational Behavior*, *23*, 675-694.
- Lind, E. A., Kanfer, R., & Earley, P. C. (1990). Voice, control, and procedural justice: Instrumental and noninstrumental concerns in fairness judgments. *Journal of Personality and Social Psychology*, *59*, 952-959.
- Lind, E.A., & Tyler, T.R. (1988). *The social psychology of procedural justice*. New York: Plenum Press.
- Locke, E. A. (1976). The nature and causes of job satisfaction. In M. D. Dunnette (Ed.), *Handbook of industrial and organizational psychology* (pp. 1297-1343). Chicago, IL: Rand McNally.

- Loi, R., Yang, J., & Diefendorff, J. M. (2009). Four-factor justice and daily job satisfaction: a multilevel investigation. *Journal of Applied Psychology, 94*, 770-781.
- London, M., & Beatty, R. W. (1993). 360-degree feedback as a competitive advantage. *Human Resource Management, 32*, 353-372.
- Long, C. (2011). Charting central currents: Examining managers' perspectives on fairness-promotion. *Working paper*.
- Lowin, A., & Craig, J. R. (1968). The influence of performance on managerial style: An experimental object-lesson in the ambiguity of correlational data. *Organizational Behavior and Human Performance, 3*, 440-458.
- Mabe, P. A., & West, S. G. (1982). Validity of self-evaluation of ability: A review and meta-analysis. *Journal of Applied Psychology, 67*, 280-296.
- Major, D. A., Kozlowski, S. W., Chao, G. T., & Gardner, P. D. (1995). A longitudinal investigation of newcomer expectations, early socialization outcomes, and the moderating effects of role development factors. *Journal of Applied Psychology, 80*, 418-431.
- Martinko, J. M., Harvey, P., & Douglas, S. C. (2007). The role, function, and contribution of attribution theory to leadership: A review. *The Leadership Quarterly, 18*, 561-585.
- Martins, L. L., Eddleston, K. A., & Veiga, J. F. (2002). Moderators of the relationship between work-family conflict and career satisfaction. *Academy of Management Journal, 45*, 399-409.
- Maslach, C. (1976). Burned-out. *Human Behavior, 5*, 16-22.
- Maslach, C. (1982). *Burnout: The costs of caring*. Englewood Cliffs, NJ: Prentice-Hall.
- Maslach, C., & Jackson, S. E. (1981). The measurement of experienced burnout. *Journal of Occupational Behavior, 2*, 99-113.

- Masterson, S. S., Lewis, K., Goldman, B. M., & Taylor, M. S. (2000). Integrating justice and social exchange: The differing effects of fair procedures and treatment on work relationships. *Academy of Management Journal*, *43*, 738-748.
- Mattern, K. D., Burrus, J., & Shaw, E. (2010). When both the skilled and unskilled are unaware: Consequences for academic performance. *Self and Identity*, *9*, 129-141.
- McFarlin, D. B., & Sweeney, P. D. (1992). Research notes. Distributive and procedural justice as predictors of satisfaction with personal and organizational outcomes. *Academy of Management Journal*, *35*, 626-637.
- Mikula, G. (1986). The experience of injustice: Toward a better understanding of its phenomenology. In H. W. Bierhoff, R. L. Cohen, & J. Greenberg (Eds.), *Justice in interpersonal relations* (pp. 103-123). New York, NY: Plenum Press.
- Miles, R. E. (1964). Attitudes toward management theory as a factor in managers' relationships with their superiors. *Academy of Management Journal*, *7*, 308-314.
- Mitchell, R. K., Agle, B. R., & Wood, D. J. (1997). Toward a theory of stakeholder identification and salience: Defining the principle of who and what really counts. *Academy of Management Review*, *22*, 853-886.
- Morgeson, F. P., & Humphrey, S. E. (2006). The Work Design Questionnaire (WDQ): developing and validating a comprehensive measure for assessing job design and the nature of work. *Journal of Applied Psychology*, *91*, 1321-1339.
- Motowidlo, W. C., & Van Scotter, J. R. (1994). Evidence that task performance should be distinguished from contextual performance. *Journal of Applied Psychology*, *79*, 475-480.
- Ng, K. Y., Ang, S., & Chan, K. Y. (2008). Personality and leader effectiveness: a moderated mediation model of leadership self-efficacy, job demands, and job autonomy. *Journal of Applied Psychology*, *93*, 733.

- Oc, B., & Bashshur, M. R. & Moore, C. (in press). Speaking truth to power: The effect of candid feedback on how individuals with power allocate resources. *Journal of Applied Psychology*.
- Organ, D. W., & Konovsky, M. (1989). Cognitive versus affective determinants of organizational citizenship behavior. *Journal of Applied Psychology, 74*, 157-164.
- Ostroff, C., Shin, Y., & Kinicki, A. J. (2005). Multiple perspectives of congruence: Relationships between value congruence and employee attitudes. *Journal of Organizational Behavior, 26*, 591-623.
- Pachur, T., & Hertwig, R. (2006). On the psychology of the recognition heuristic: retrieval primacy as a key determinant of its use. *Journal of Experimental Psychology: Learning, Memory, and Cognition, 32*, 983-1002.
- Pallak, S. R. (1983). Salience of a communicator's physical attractiveness and persuasion: A heuristic versus systematic processing interpretation. *Social Cognition, 2*, 158-170.
- Perry, T., & Zenner, M. (2001). Pay for performance? Government regulation and the structure of compensation contracts. *Journal of Financial Economics, 62*, 453-488.
- Podsakoff, P. M., Bommer, W. H., Podsakoff, N. P., & MacKenzie, S. B. (2006). Relationships between leader reward and punishment behavior and subordinate attitudes, perceptions, and behaviors: A meta-analytic review of existing and new research. *Organizational Behavior and Human Decision Processes, 99*, 113-142.
- Podsakoff, P. M., MacKenzie, S. B., Lee, J., & Podsakoff, N. P. (2003). Common method biases in behavioral research: A critical review of the literature and recommended remedies. *Journal of Applied Psychology, 88*, 879-903.
- Podsakoff, P. M., MacKenzie, S. B., & Podsakoff, N. P. (2012). Sources of method bias in social science research and recommendations on how to control it. *Annual Review of Psychology, 63*, 539-569.

- Rieskamp, J., & Hoffrage, U. (2008). Inferences under time pressure: How opportunity costs affect strategy selection. *Acta Psychologica, 127*, 258-276.
- Rizzo, J. R., House, R. J., & Lirtzman, S. I. (1970). Role conflict and ambiguity in complex organizations. *Administrative Science Quarterly, 15*, 150-163.
- Rupp, D. E., Shao, R., Jones, K. S., & Liao, H. (in press). The utility of a multifoci approach to the study of organizational justice: A meta-analytic investigation into the consideration of normative rules, moral accountability, bandwidth-fidelity, and social exchange. *Organizational Behavior and Human Decision Processes*.
- Ryan, R. M., & Connell, J. P. (1989). Perceived locus of causality and internalization: Examining reasons for acting in two domains. *Journal of Personality and Social Psychology, 57*, 749-761.
- Ryan, R. M., & Deci, E. L. (2000a). Intrinsic and extrinsic motivations: Classic definitions and new directions. *Contemporary Educational Psychology, 25*, 54-67.
- Ryan, R. M., & Deci, E. L. (2000b). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American Psychologist, 55*, 68-78.
- Sackett, P. R., Laczó, R. M., & Lippe, Z. P. (2003). Differential prediction and the use of multiple predictors: The omitted variables problem. *Journal of Applied Psychology, 88*, 1046-1056.
- Samuelson, C. D., & Allison, S. T. (1994). Cognitive factors affecting the use of social decision heuristics in resource-sharing tasks. *Organizational Behavior and Human Decision Processes, 58*, 1-27.
- Saridakis, G., Muñoz Torres, R., & Tracey, P. (2009). The endogeneity bias in the relationship between employee commitment and job satisfaction. *Judge Business School Working Paper Series*, 1-15.
- Schmitt, N., & Bedeian, A. (1982). A comparison of LISREL and two stage least squares analysis of an hypothesized life-job satisfaction reciprocal relationship. *Journal of Applied Psychology, 67*, 806-817.

- Schneider, B., Hanges, P. J., Smith, D. B., & Salvaggio A. N. (2003). Which comes first: Employee attitudes or organizational financial and market performance? *Journal of Applied Psychology, 88*, 836-851.
- 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. *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. *Journal of Applied Psychology, 92*, 1597-1609.
- Sedikides, C., Meek, R., Alicke, M. D., & Taylor, S. (2013). Behind bars but above the bar: Prisoners consider themselves more prosocial than non-prisoners. *British Journal of Social Psychology 53*, 396-403.
- Seifert, C. F., Yukl, G., & McDonald, R. A. (2003). Effects of multisource feedback and a feedback facilitator on the influence behavior of managers toward subordinates. *Journal of Applied Psychology, 88*, 561-569.
- Seppälä, T., Lipponen, J., Pirttilä-Backman, A. Lipsanen, J. (2012). A trust-focused model of leaders' fairness enactment, *Journal of Personnel Psychology, 11*, 20-30.
- Shah, A. K., & Oppenheimer, D. M. (2008). Heuristics made easy: an effort-reduction framework. *Psychological Bulletin, 134*, 207-222.
- Siemer, M., & Reisenzein, R. (1998). Effects of mood on evaluative judgements: Influence of reduced processing capacity and mood salience. *Cognition & Emotion, 12*, 783-805.
- Simon, H. A. (1956). Rational choice and the structure of the environment. *Psychological Review, 63*, 129-138.
- Simon, H. A. (1990). Invariants of human behavior. *Annual Review of Psychology, 41*, 1-19.

- Skarlicki, D. P., & Folger, R. (1997). Retaliation in the workplace. The roles of distributive, procedural and interactional justice. *Journal of Applied Psychology*, 82, 434-443.
- Skarlicki, D. P., & Latham, G. P. (1996). Increasing citizenship behavior within a labor union: A test of organizational justice theory. *Journal of Applied Psychology*, 81, 161-169.
- Skarlicki, D. P., & Latham, G. P. (2005). How can training be used to foster organizational justice? In J. Greenberg & J. A. Colquitt (Eds.), *The handbook of organizational justice* (pp. 3–56). Mahwah, NJ: Lawrence Erlbaum Associates.
- Skitka, L. J., Winkler, J., & Hutchinson, S. (2003). Are outcome fairness and outcome favorability distinguishable psychological constructs? A meta-analytic review. *Social Justice Research*, 16, 309-341.
- Sosik, J. J. (2001). Self-other agreement on charismatic leadership: Relationships with work attitudes and managerial performance. *Group & Organization Management*, 26, 484-511.
- Sparr, J. L., & Sonnentag, S. (2008). Fairness perceptions of supervisor feedback, LMX, and employee well-being at work. *European Journal of Work and Organizational Psychology*, 17, 198-225.
- Spreitzer, G. M., & Mishra, A. K. (1999). Giving up control without losing control: Trust and its substitutes' effects on managers' involving employees in decision making. *Group & Organization Management*, 24, 155-187.
- Staw, B. M. (1975). Attribution of the “causes” of performance: A general alternative interpretation of cross-sectional research on organizations. *Organizational Behavior and Human Performance*, 13, 414-432.
- Stock, J. H., Wright, J. H., & Yogo, M. (2002). A survey of weak instruments and weak identification in generalized method of moments. *Journal of Business & Economic Statistics*, 20, 518-529.

- Svenson, O. (1981). Are we all less risky and more skillful than our fellow drivers? *Acta Psychologica*, *47*, 143-148.
- Sweeney, P. D. (1990). Distributive justice and pay satisfaction: A field test of an equity theory prediction. *Journal of Business and Psychology*, *4*, 329-341.
- Taylor, M. S., Masterson, S. S., Renard, M. K., & Tracy, K. B. (1998). Managers' reactions to procedurally just performance management systems. *Academy of Management Journal*, *41*, 568-579.
- Taylor, M. S., Tracy, K. B., Renard, M. K., Harrison, J. K. & Carroll, S. J. (1995). Due process in performance appraisal: A quasi-experiment in procedural justice. *Administrative Science Quarterly*, *40*, 495-523.
- Taylor, S. E., & Fiske, S. T. (1978). Salience, attention, and attribution: Top-of-the-head phenomena. In L. Berkowitz (Ed.), *Advances in Experimental Social Psychology* (Vol. 11, pp. 249-288). New York: Academic Press.
- Tepper, B. J. (1995). Upward maintenance tactics in supervisory mentoring and nonmentoring relationships. *Academy of Management Journal*, *38*, 1191-1205.
- Thibaut, J. W., & Walker, L. (1975). *Procedural justice: A psychological analysis*. Hillsdale, NJ: Lawrence Erlbaum Associates.
- Thomas, C. H., & Lankau, M. J. (2009). Preventing burnout: The effects of LMX and mentoring on socialization, role stress, and burnout. *Human Resource Management*, *48*, 417-432.
- Trahan, W., & Steiner, D. D. (1994). Factors affecting supervisors' use of disciplinary actions following poor performance. *Journal of Organizational Behavior*, *15*, 129-139.
- Turban, D. B., & Jones, A. P. (1988). Supervisor-subordinate similarity: Types, effects, and mechanisms. *Journal of Applied Psychology*, *73*, 228-234.
- Tversky, A., & Kahneman, D. (1974). Judgment under uncertainty: Heuristics and biases. *Science*, *185*, 1124-1131.

- Tyler, T. R., & Blader, S. L. (2003). The group engagement model: Procedural justice, social identity, and cooperative behavior. *Personality and Social Psychology Review*, 7, 349-361.
- 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.
- Vecchio, R. P., Griffeth, R. W., & Hom, P. W. (1986). The predictive utility of the vertical dyad linkage approach. *The Journal of social psychology*, 126, 617-625.
- Von Emster, G. R., & Harrison, A. A. (1998). Role ambiguity, spheres of control, burnout, and work-related attitudes of teleservice professionals. *Journal of Social Behavior & Personality*, 13, 375-385.
- Waldman, D. A., Atwater, L. E., & Antonioni, D. (1998). Has 360 degree feedback gone amok? *The Academy of Management Executive*, 12, 86-94.
- Wanberg, C. R., Bunce, L. W., & Gavin, M. B. (1999). Perceived fairness of layoffs among individuals who have been laid off: A longitudinal study. *Personnel Psychology*, 52, 59-84.
- Wayne, S. J., Shore, L. M., Bommer, W. H., & Tetrick, L. E. (2002). The role of fair treatment and rewards in perceptions of organizational support and leader-member exchange. *Journal of Applied Psychology*, 87, 590-598
- Webber, R. A. (1970). Perceptions of interactions between superiors and subordinates. *Human Relations*, 23, 235-248.
- Wexley, K. N., Alexander, R. A., Greenawalt, J. P., & Couch, M. A. (1980). Attitudinal congruence and similarity as related to interpersonal evaluations in manager-subordinate dyads. *Academy of Management Journal*, 23, 320-330.
- Wharton, A. S. (1993). The affective consequences of service work managing emotions on the job. *Work and Occupations*, 20, 205-232.
- Whiteside, D. B., & Barclay, L. J. (2013). Losing control of fairness: Examining the effects of self-control failure on fair behavior. *Paper Presentation at the*

International Workshop on Organizational Justice and Behavioral Ethics, Toulouse, France.

Whiteside, D. B., & Barclay, L. J. (2014, August). When wanting to be fair isn't enough: Examining and overcoming the effects of depletion on fairness. *Paper Presentation at the Annual Meeting of the Academy of Management, Philadelphia, Pennsylvania.*

Whiteside, D. B., & Barclay, L. J. (in press). The justice tug-of-war: A dyadic approach to conflicting perceptions of fairness. In S. W. Gilliland, D. D. Steiner, & D. P. Skarlicki (Eds.), *Research in social issues in management, Volume 8*. Greenwich, CT: Information Age Publishing.

Williams, S. (1999). The effects of distributive and procedural justice on performance. *The Journal of Psychology, 133*, 183-193.

Wooldridge, J. M. (2013). *Introductory econometrics: A modern approach* (5th ed.). Mason, OH: South-Western.

Yammarino, F. J., & Atwater, L. E. (1997). Do managers see themselves as other see them? Implications of self-other rating agreement for human resources management. *Organizational Dynamics, 25*, 35-44.

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.

Zapata-Phelan, C. P., Colquitt, J. A., Scott, B. A., & Livingston, B. (2009). Procedural justice, interactional justice, and task performance: The mediating role of intrinsic motivation. *Organizational Behavior and Human Decision Processes, 108*, 93-105.