

Justice at the Millennium, a Decade Later: A Meta-Analytic Test of Social Exchange and Affect-Based Perspectives

Jason A. Colquitt
University of Georgia

Brent A. Scott
Michigan State University

Jessica B. Rodell
University of Georgia

David M. Long
College of William & Mary

Cindy P. Zapata
Georgia Institute of Technology

Donald E. Conlon
Michigan State University

Michael J. Wesson
Texas A&M University

Although a flurry of meta-analyses summarized the justice literature at the turn of the millennium, interest in the topic has surged in the decade since. In particular, the past decade has witnessed the rise of social exchange theory as the dominant lens for examining reactions to justice, and the emergence of affect as a complementary lens for understanding such reactions. The purpose of this meta-analytic review was to test direct, mediating, and moderating hypotheses that were inspired by those 2 perspectives, to gauge their adequacy as theoretical guides for justice research. Drawing on a review of 493 independent samples, our findings revealed a number of insights that were not included in prior meta-analyses. With respect to social exchange theory, our results revealed that the significant relationships between justice and both task performance and citizenship behavior were mediated by indicators of social exchange quality (trust, organizational commitment, perceived organizational support, and leader–member exchange), though such mediation was not apparent for counterproductive behavior. The strength of those relationships did not vary according to whether the focus of the justice matched the target of the performance behavior, contrary to popular assumptions in the literature, or according to whether justice was referenced to a specific event or a more general entity. With respect to affect, our results showed that justice–performance relationships were mediated by positive and negative affect, with the relevant affect dimension varying across justice and performance variables. Our discussion of these findings focuses on the merit in integrating the social exchange and affect lenses in future research.

Keywords: justice, social exchange, affect

The turn of the millennium was a watershed moment for the organizational justice literature. After decades of empirical study, a flurry of meta-analytic reviews provided complementary snap-

shots of the state of the literature (Cohen-Charash & Spector, 2001; Colquitt, Conlon, Wesson, Porter, & Ng, 2001; Skitka, Winquist, & Hutchinson, 2003; Viswesvaran & Ones, 2002). Looking back, these reviews seemed to represent a sort of pivot point for the justice domain as it moved into a more established stage of its literature life cycle (Colquitt & Greenberg, 2003). Far from closing the book on examinations of justice effects, the decade after these reviews was associated with a surge of research activity. Whereas a PsycINFO search yields over 600 articles on justice or fairness in industrial/organizational psychology journals from 1975 to 1999 (the search period for most of the earlier reviews), that same search yields over 1,600 articles from 1999 to 2010.

That decade's worth of research has changed the complexion of the justice literature in at least two respects. First and foremost, the decade witnessed the rise of social exchange theory as it moved from an emerging lens for justice phenomena to perhaps the dominant lens for explaining justice effects

Jason A. Colquitt, Department of Management, University of Georgia; Brent A. Scott, Department of Management, Michigan State University; Jessica B. Rodell, Department of Management, University of Georgia; David M. Long, Department of Organizational Behavior, College of William & Mary; Cindy P. Zapata, Department of Organizational Behavior, Georgia Institute of Technology; Donald E. Conlon, Department of Management, Michigan State University; Michael J. Wesson, Department of Management, Texas A&M University.

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Correspondence concerning this article should be addressed to Jason A. Colquitt, University of Georgia, Department of Management, Terry College of Business, 412 Brooks Hall, Athens, GA 30602-6256. E-mail: colq@uga.edu

(Colquitt, 2008; Cropanzano & Rupp, 2008). Two of the meta-analytic reviews did cite seminal conceptual articles on social exchange (e.g., Blau, 1964; Organ, 1988, 1990) and key empirical pieces integrating exchange concepts with justice (e.g., Konovsky & Pugh, 1994; Masterson, Lewis, Goldman, & Taylor, 2000; Moorman, 1991), but such discussions were relatively minor threads in their narratives (Cohen-Charash & Spector, 2001; Colquitt et al., 2001). More importantly, the reviews did not examine some critical questions that lay at the core of contemporary justice research utilizing a social exchange lens. For example, do relationships between justice variables and reciprocative behaviors (e.g., citizenship behavior) depend on whether the focus of the justice matches the target of the reciprocation? As another example, is the social exchange relationship applicable in the context of one specific event or only when referencing more long-term relationships with entities, such as one's supervisor or organization? As still another example, to what extent do indicators of the quality of social exchange relationships mediate the linkages between justice and reciprocative behaviors?

The past 10 years have changed the justice literature in a second respect. After decades of painting individuals as rational beings who reason about justice issues, justice scholars began acknowledging that individuals feel justice issues as well (Cropanzano, Stein, & Nadisic, 2011; De Cremer, 2007a). None of the meta-analyses included discussions of theories in the affect domain (e.g., Lazarus, 1991; Weiss & Cropanzano, 1996), and only two included affective variables as outcomes—in both cases, negative affect (Cohen-Charash & Spector, 2001; Skitka et al., 2003). As a result, none of the reviews were able to answer questions that have emerged as affect has taken on a more central role in the justice literature. For example, does justice predict positive affect as well, or only negative affect? As another example, do positive and negative affect mediate the relationships between justice variables and task performance, organizational citizenship behavior (OCB), and counterproductive work behavior (CWB)?

The purpose of the present research was to use meta-analysis to test hypotheses inspired by the social exchange and affect lenses described above, in an effort to gauge their adequacy as theoretical guides for justice research. In the process of testing those hypotheses, our analyses also provide a meta-analytic update of sorts for some of the relationships included in earlier reviews, given that our meta-analysis is 3 times larger than the most expansive of the earlier reviews. Following Colquitt et al. (2001), we organize our review around four dimensions of justice. Procedural justice reflects the perceived fairness of decision-making processes and the degree to which they are consistent, accurate, unbiased, and open to voice and input (Leventhal, 1980; Thibaut & Walker, 1975). Distributive justice reflects the perceived fairness of decision outcomes, especially the degree to which outcomes are equitable (Adams, 1965; Leventhal, 1976). Interpersonal and informational justice reflect the perceived fairness of the enactment and implementation of decisions (Bies & Moag, 1986), with the former reflecting the respectfulness and propriety of communications and the latter reflecting the truthfulness and adequacy of explanations (J. Greenberg, 1993a).

The Rise of Social Exchange Theorizing in the Justice Literature

Although the justice literature has focused a great deal of theoretical attention on the mechanics of how justice perceptions are formed—as represented in work on the relational model, fairness theory, fairness heuristic theory, and the like (Folger & Cropanzano, 1998; Lind, 2001; Tyler & Lind, 1992)—examinations of justice effects have historically been less nuanced. Colquitt et al.'s (2001) review relied on fairly straightforward arguments for what outcomes might be affected by the various justice dimensions. For example, the two-factor model argues that distributive justice would predict outcome-referenced dependent variables and procedural justice would predict system-referenced dependent variables (Sweeney & McFarlin, 1993). As another example, the agent-system model suggests that interpersonal and informational justice would predict agent-referenced dependent variables (Bies & Moag, 1986).

Although the link was not always explicit at the time, such rules of thumb are consistent with theorizing on social exchange theory (e.g., Blau, 1964; Emerson, 1976; Foa & Foa, 1980; Homans, 1958; Thibaut & Kelley, 1959). Social exchange theory can be viewed as a multidisciplinary paradigm that describes how multiple kinds of resources can be exchanged following certain rules and how such exchanges can engender high-quality relationships (for a review, see Cropanzano & Mitchell, 2005). Resources are defined as anything transacted in an interpersonal context and can be classified according to whether they are concrete or symbolic and whether the identity of the provider is relevant, with *particularistic* resources having high provider relevance and *universal* resources having low provider relevance (Foa & Foa, 1980). The rules of exchange are defined as normative definitions of the situation that emerge between exchange participants (Emerson, 1976) and can range from competition to reciprocity to altruism (Gouldner, 1960; Meeker, 1971). Relationships are defined as associations between two interacting partners (Cropanzano & Mitchell, 2005) and can be described in a number of ways, including the degree of mutual trust, support, and obligation (Blau, 1964; Mills & Clark, 1982).

One of the first integrations of social exchange theorizing with justice occurred in Organ and Konovsky's (1989) examination of the antecedents of OCB (see also Organ, 1988, 1990). In reflecting on the association between pay cognitions and citizenship, the authors speculated that fairness fosters a sense of trust on the part of employees, making them feel less anxious about engaging in extra-mile gestures. Organ and Konovsky based their supposition on Blau's (1964) discussion of social versus economic exchange. Specifically, they argued that fairness was capable of fostering a social exchange relationship, which involves a mutual provision of diffuse, vaguely defined obligations delivered over an open-ended time frame. Moorman (1991) echoed such arguments in his empirical study of justice and OCB, suggesting that fair treatment would cause employees to redefine their working relationship as one of social exchange, with citizenship serving as an exchangeable resource. In a similar vein, Konovsky and Pugh (1994) suggested that justice would convey the sort of trust that made social exchange relationships more viable, thereby encouraging OCB.

These early integrations of justice and social exchange gave rise to what Cropanzano and Rupp (2008) termed *contemporary social exchange theory* (see also Cropanzano & Byrne, 2000; Cropanzano, Rupp, Mohler, & Schminke, 2001). Relative to the multidisciplinary

paradigm described above, contemporary theorizing focuses on social exchange as a type of interpersonal relationship, drawing primarily on Blau's (1964) discussion (see also Mills & Clark, 1982). With respect to the resources transacted (Foa & Foa, 1980), most applications focus on symbolic and particularistic resources such as justice and citizenship.¹ With respect to the rules of exchange (Meeker, 1971), most studies focus on reciprocity, which Gouldner (1960) described as a universal norm demanding that people should help (and refrain from injuring) those who help them. Taken together, this version of social exchange theory is well suited for explaining why beneficial actions on the part of supervisors or organizations might result in beneficial actions on the part of employees.

Social Exchange Outcomes: Reciprocal Behaviors

In the context of social exchange, justice reflects the sort of symbolic resource that should foster reciprocal actions on the part of employees (Cropanzano & Byrne, 2000; Cropanzano & Rupp, 2008; Cropanzano, Rupp, et al., 2001). Given its importance to contemporary social exchange theorizing, it is not surprising that OCB emerged as the exemplar among social exchange outcomes (Konovsky & Pugh, 1994; Moorman, 1991; Organ, 1988, 1990; Organ & Konovsky, 1989). Organ (1997) defined OCB as actions that support the psychological environment in which work occurs, noting that such actions are less enforceable job requirements and less likely to be explicitly rewarded. Some of the actions that fall under the OCB umbrella, such as helping, courtesy, and civic virtue, resemble Blau's (1964) discussion of advice and assistance, which he viewed as exemplars of reciprocity. Moreover, its more discretionary nature gives OCB a degree of particularism, given that the identity of the provider has some relevance to the way the resource is perceived. Foa and Foa (1980) argued that particularistic resources tend to be exchanged in the vaguely defined and open-ended fashion that has come to characterize social exchange relationships. In support of such theorizing, empirical research has consistently revealed positive relationships between the justice dimensions and OCB. Indeed, all of the earlier meta-analytic reviews included OCB as an outcome, though the number of studies was small with specific justice dimensions (Cohen-Charash & Spector, 2001; Colquitt et al., 2001; Skitka et al., 2003; Viswesvaran & Ones, 2002).

The social exchange relevance of task performance, defined here as activities that execute, maintain, or serve an organization's technical core or mission (Motowidlo & Van Scotter, 1994), is less clear. On the one hand, such behaviors are specified in employees' job descriptions, likely making them more universal than particularistic, and therefore subject to more specific and defined repayment schedules (Foa & Foa, 1980). On the other hand, the distinction between *adequate performance* and *exemplary performance* does seem to possess a more voluntary or discretionary element. For their part, the earlier meta-analyses yielded correlations between .03 and .30, depending on the justice dimension and the measurement approach (Cohen-Charash & Spector, 2001, 2002; Colquitt et al., 2001; Skitka et al., 2003; Viswesvaran & Ones, 2002). Despite such inconsistencies, studies utilizing a social exchange lens have frequently utilized task performance as a conceptualization of reciprocal behaviors (Aryee, Budhwar, & Chen, 2002; Masterson et al., 2000; Rupp & Cropanzano, 2002; Wayne, Shore, Bommer, & Tetrick, 2002).

Behaviors such as employee theft, poor attendance, tardiness, substance abuse, accidents, sabotage, sexual harassment, and verbal and physical abuse can be considered examples of deviant, retaliatory, or counterproductive work behavior, defined here as intentional behaviors that hinder organizational goal accomplishment (Sackett & Devore, 2001). Blau's (1964) social exchange formulation did not emphasize CWB, as he did not seem to view the avoidance of negative behavior as a form of reciprocation for received benefits. Gouldner (1960) did describe refraining from injuring as a form of reciprocity, however, and J. Greenberg and Scott (1996) used social exchange arguments to explain the negative relationship between justice and theft. Of the earlier meta-analyses, only Cohen-Charash and Spector (2001) and Skitka et al. (2003) included CWB, with several estimates based only on a handful of studies.

In summary, most of the social exchange-based research in the justice literature has operationalized reciprocation with one of the three outcomes reviewed above. Although the earlier reviews included these outcomes, many of the estimates for task performance and CWB were either inconsistent or based on a small number of studies. Moreover, the social exchange relevance of task performance and CWB remains less clear, relative to OCB. Our review therefore sought to provide an updated quantitative synthesis of the relationships between the justice dimensions and these reciprocal behaviors. We hypothesized the following:

Hypotheses 1a-1c: Justice (hereafter referring to distributive, procedural, interpersonal, and informational justice) is positively related to (a) OCB and (b) task performance and negatively related to (c) CWB.

Social Exchange Mediators: Social Exchange Quality

To the extent that justice predicts reciprocal behaviors by fostering a social exchange relationship, the operative question becomes how best to capture that relationship. Cropanzano and Byrne (2000) were the first to offer a comprehensive discussion of this issue in contemporary social exchange theorizing. They noted that any intervening variable needed to be able to capture the obligatory dynamics at play in exchange relationships while also being adaptable to multiple foci (e.g., supervisor, organization). The authors noted,

There are currently only a small number of constructs that capture the notion of obligation and can be easily extended across a range of foci. Based on previous research and our own theoretical notions, we have identified several promising candidates. These include trust, LMX, support, commitment, and psychological contracts. (Cropanzano & Byrne, 2000, pp. 150-151)

They later noted,

¹ Although describing justice as a symbolic and particularistic resource is consistent with its positioning in contemporary social exchange theorizing (Cropanzano & Byrne, 2000; Cropanzano & Mitchell, 2005; Cropanzano & Rupp, 2008; Cropanzano, Rupp, et al., 2001), it should be noted that the *resource* term could be confusing where distributive justice is concerned. That justice form depends, in part, on the allocation of a more concrete and universal resource: money (Adams, 1965; Foa & Foa, 1980; Homans, 1958). Even with distributive justice, however, the resulting sense of fairness is believed to have socioemotional consequences that go beyond the favorability of the monetary outcomes (Cropanzano, Rupp, et al., 2001). It is that fairness, along with the fairness triggered by procedural, interpersonal, and informational justice, that constitutes the *resource* in our discussions of contemporary social exchange theory.

They each seem to tap into a different aspect of what we mean by the term “relationship”. . . . It is certainly true that important differences exist among these five constructs. However, for purposes of justice research these differences might be less significant than the similarities. In the end, all of these variables might be important. It may be that our elusive intervening variable may be comprised of some or all of these constructs. (Cropanzano & Byrne, 2000, p. 156)

Subsequent treatments of this issue brought more convergence to this set of social exchange indicators (Cropanzano & Mitchell, 2005; Cropanzano & Rupp, 2008; Cropanzano, Rupp, et al., 2001), though psychological contracts were absent from some of those discussions (Cropanzano & Mitchell, 2005; Cropanzano & Rupp, 2008) and have rarely been linked to justice perceptions. Our review therefore focuses on trust, commitment, perceived organizational support (POS), and leader–member exchange (LMX) as indicators of the quality of social exchange relationships.

Trust has been defined as confident, positive expectations about the words, actions, and decisions of a trustee (Lewicki & Bunker, 1995; McAllister, 1995) and as a willingness to be vulnerable to a trustee irrespective of the ability to monitor or control the trustee’s actions (R. C. Mayer, Davis, & Schoorman, 1995). In his discussion of social exchange, Blau (1964) focused on the risks involved in the diffuse nature of such relationships, writing, “Since there is no way to assure an appropriate return for a favor, social exchange requires trusting others to discharge their obligations” (p. 94). Trust was later described as a key component of the exchange process in close relationships (Holmes, 1981) and took on a central role in Organ’s theorizing about the linkage between justice and OCB (Organ, 1988, 1990; Organ & Konovsky, 1989). In an empirical study of hospital employees, Konovsky and Pugh (1994) showed that procedural justice was positively associated with trust in one’s supervisor, with trust going on to predict OCB. More recently, Kernan and Hanges (2002) linked procedural, interpersonal, and informational justice to trust in a study of survivor reactions to corporate restructuring. Although trust was included in two of the justice meta-analyses, many of the estimates were based on a small number of studies (Cohen-Charash & Spector, 2001; Colquitt et al., 2001), especially in the case of interpersonal and informational justice.

Organizational commitment is defined as the desire on the part of an employee to remain a member of an organization (N. J. Allen & Meyer, 1990). Although often used as a terminal outcome in justice research, the affective dimension of the construct has also been viewed as an indicator of social exchange quality (Masterson et al., 2000; Mowday, Porter, & Steers, 1982; Shore, Tetrick, Lynch, & Barksdale, 2006; Wayne et al., 2002). That framing is consistent with Blau’s (1964) suggestion that the establishment and maintenance of social exchange relationships require a long-term commitment on the part of both parties, so that diffuse favors can be repaid over the long term. In support of this logic, Wayne et al. (2002) showed that procedural justice and distributive justice were both strongly correlated with organizational commitment in a sample of employees from metal fabricating plants. Similar to trust, organizational commitment was included in the earlier justice meta-analyses (Cohen-Charash & Spector, 2001; Colquitt et al., 2001; Skitka et al. 2003; Viswesvaran & Ones, 2002), but few studies had linked commitment to interpersonal and informational justice.

POS reflects the degree to which the organization is perceived to value employee contributions and well-being (Eisenberger, Huntington, Hutchison, & Sowa, 1986), whereas *LMX* reflects the degree to

which a supervisor–employee relationship is characterized by mutual respect and obligation (Gerstner & Day, 1997). Like trust and commitment, both POS and LMX could be referenced to other targets (e.g., perceived supervisor support or organization–member exchange). However, the justice literature has tended to use them as indicators of organization- and supervisor-focused exchanges, respectively. Indeed, the two have emerged as the most oft-used operationalizations of social exchange quality, with a number of studies revealing linkages with the justice dimensions (Aryee & Chay, 2001; Erdogan, Liden, & Kraimer, 2006; Masterson et al., 2000; Moorman, Blakely, & Niehoff, 1998; Tekleab, Takeuchi, & Taylor, 2005; Wayne et al., 2002). Of the earlier reviews, only Cohen-Charash and Spector (2001) included POS and LMX, with only a handful of studies represented in those meta-analyses.

In summary, justice studies that utilize the contemporary version of social exchange theory for grounding their hypotheses tend to operationalize social exchange quality using one of the four constructs reviewed above (Cropanzano & Byrne, 2000; Cropanzano & Mitchell, 2005; Cropanzano & Rupp, 2008; Cropanzano, Rupp, et al., 2001). Although the earlier reviews tended to include trust and organizational commitment, only one included POS and LMX (Cohen-Charash & Spector, 2001). The magnitudes of the relationships among justice and the social exchange quality indicators therefore remain unclear. Our review sought to provide an updated quantitative synthesis of these linkages. We hypothesized the following:

Hypotheses 2a–2d: Justice is positively related to (a) trust, (b) organizational commitment, (c) POS, and (d) LMX.

Critical Questions in Exchange-Based Justice Research

Although there is some value in providing updated meta-analytic estimates of the relationships between justice and reciprocative behaviors and between justice and indicators of social exchange quality, the present review is more focused on tackling some critical questions that surround the application of contemporary social exchange theory in the justice literature. One of those questions is the degree to which relationships between justice variables and reciprocative outcomes are moderated by whether the focus of the justice matches the target of the outcome. For example, does supervisor-focused justice predict trust in one’s supervisor more than trust in one’s organization? Alternatively, does supervisor-focused justice predict OCB directed at one’s supervisor more than OCB directed at one’s organization?

In general, traditional theorizing on social exchange focused on one particular *other* or exchange partner (Blau, 1964; Foa & Foa, 1980; Holmes, 1981; Meeker, 1971). For example, Blau (1964) noted that “an individual who supplies rewarding services to another obligates him. To discharge this obligation, the second must furnish benefits to the first in turn” (p. 89). Similarly, Gouldner (1960) conceptualized the norm of reciprocity as people focusing on “those who have helped them” (p. 171). That focus on a particular other was maintained in the early wave of contemporary theorizing, as Organ and colleagues tended to focus on the organization as the exchange partner, with justice focused on employer policies and practices (Organ, 1988, 1990; Organ & Konovsky, 1989).

However, the relative straightforwardness of early applications of social exchange arguments tended to obscure some important complexities. For example, Organ and Konovsky’s (1989) study linked cognitions about pay to citizenship targeted to the organization (later

termed OCBO by L. J. Williams & Anderson, 1991), to the employee's supervisor (later termed OCBS by Malatesta & Byrne, 1997), and to the employee's coworkers (later termed OCBI by L. J. Williams & Anderson, 1991). The authors' measure of pay cognitions did not refer to the supervisor's role in determining pay, making it unclear whether the supervisor would be a valid target for reciprocation. Moreover, there was no reason, given the nature of the sample, to suspect coworkers to have any significant influence on pay levels. As another example, Moorman's (1991) study assessed the fairness of the organization's decision-making procedures and rewards, as well as the fairness of the supervisor's treatment of employees, with citizenship again targeted to the organization, supervisor, and coworker. As in Organ and Konovsky, it was not clear how social exchange arguments would support a relationship between, say, the fairness of one's supervisor and OCBI.

A subsequent study by Masterson et al. (2000) began to clarify some of these issues. The authors measured the fairness of the organization's performance appraisal process and the fairness of the supervisor's treatment of employees. However, their social exchange predictions were more nuanced than prior research had been. Specifically, organization-focused justice was expected to predict only organization-targeted social exchange quality (i.e., POS) and organization-targeted reciprocation (i.e., OCBO). Similarly, supervisor-focused justice was expected to predict only supervisor-targeted social exchange quality (i.e., LMX) and supervisor-targeted reciprocation (i.e., OCBS). Thus, all of the predicted relationships were focus matching, and coworker-targeted forms of reciprocation were excluded from the study. Following Masterson et al.'s lead, subsequent studies began to routinely tailor their choice of social exchange quality indicators and reciprocative behaviors to the focus of the justice dimensions included in the study (e.g., Aryee et al., 2002; Erdogan et al., 2006; Kernan & Hanges, 2002; Tekleab, Takeuchi, & Taylor, 2005; Wayne et al., 2002).

Rupp and Cropanzano's (2002) multifoci model of justice brought even more nuance to exchange-based theorizing. Drawing on Byrne (1999), Rupp and Cropanzano noted that all justice dimensions could be referenced to either formal organizational systems or informal aspects of a supervisor's leadership style (see also Blader & Tyler, 2003b; Colquitt, 2001). Like Masterson et al. (2000), the authors further suggested that organization-focused justice would predict organization-targeted social exchange quality and reciprocation, with supervisor-focused justice predicting supervisor-targeted social exchange quality and reciprocation. Following Rupp and Cropanzano's lead, subsequent studies included both supervisor- and organization-focused justice and both supervisor- and organization-targeted social exchange quality or reciprocation, with hypotheses predicting significant focus-matching relationships (Horvath & Andrews, 2007; Karriker & Williams, 2009; H. Liao & Rupp, 2005).

Theorizing by Lavelle, Rupp, and Brockner (2007) formalized the expectations that were evident in the studies by Masterson et al. (2000) and Rupp and Cropanzano (2002). Their target similarity model suggested that perceptions about the justice of a given target will best predict exchange quality with that target, which will in turn best predict reciprocation toward that target. Such target-similar (or focus-matching) effects should be stronger than so-called spillover effects that cross from one target to another. Although the conceptual precision offered by that prediction is appealing, two cautionary notes should be offered. First, the predicted pattern where focus-matching justice-outcome relationships are higher than non-focus-matching

justice-outcome relationships does not emerge as much as might be expected (Horvath & Andrews, 2007; Karriker & Williams, 2009; H. Liao & Rupp, 2005; Rupp & Cropanzano, 2002). Second, scholars have continued to link justice perceptions to reciprocative behaviors targeted to individual coworkers (i.e., OCBI) despite the fact that those coworkers are not responsible for the justice levels (e.g., Aryee et al., 2002; Fassina, Jones, & Uggerslev, 2008; Lavelle et al., 2009; Moorman et al., 1998; Wayne et al., 2002).

With those cautionary notes in mind, the first question in the exchange-based realm of the justice literature that our review examines is whether focus matching stands as a moderator of justice-outcome relationships, with focus-matching relationships being significantly stronger than non-focus-matching relationships. We examine this moderator possibility using both organization-targeted social exchange quality (e.g., trust in organization, organizational commitment, POS) and supervisor-targeted social exchange quality (e.g., trust in supervisor, LMX), along with citizenship directed at both of those entities (e.g., OCBO and OCBS). Given that CWB can also be targeted at specific entities (El Akremi, Vandenberghe, & Camerman, 2010; D. A. Jones, 2009; Kickul, Neuman, Parker, & Finkl, 2001; Lim, 2002), we also include deviance directed at both the organization (e.g., CWBO) and the supervisor (CWBS). Our examination of the effects of focus matching omits task performance, however. Although past work has tended to frame task performance as supervisor targeted because supervisors complete the assessment (Aryee et al., 2002; Masterson et al., 2000; Rupp & Cropanzano, 2002), the execution, maintaining, and serving of the firm's core mission have clear relevance to the organization as well. Thus, we tested the following predictions for the moderating effects of focus matching:

Hypothesis 3a: Organization-focused justice is more strongly related to trust in organization, organizational commitment, and POS than is supervisor-focused justice.

Hypothesis 3b: Supervisor-focused justice is more strongly related to trust in supervisor and LMX than is organization-focused justice.

Hypothesis 4a: Organization-focused justice is more strongly related to OCBO and CWBO than is supervisor-focused justice.

Hypothesis 4b: Supervisor-focused justice is more strongly related to OCBS and CWBS than is organization-focused justice.

Another key question relevant to the application of contemporary social exchange theory to the justice literature concerns the time horizon utilized in a particular study. In their narrative review of the justice literature, Cropanzano, Byrne, Bobocel, and Rupp (2001) distinguished between two kinds of justice studies. Studies focused on events reference justice perceptions to specific occurrences, such as a selection decision, a performance evaluation, the allocation of a raise, a conflict resolution, a layoff, or a specific organizational change. Thus, respondents are asked about their experiences with a single event or a definable cluster of closely related events. In contrast, studies focused on entities reference justice perceptions to some person or collective as a whole, such as a supervisor or organization. Thus, respondents are asked to make more global appraisals that aggregate across specific events. Such global appraisals will presumably be shaped by specific events in a bottom-up fashion, though

Cropanzano, Byrne, et al. also acknowledged that entity perceptions themselves could shape reactions to events in a more top-down manner. The question we explore in our review is whether relationships between justice variables and reciprocative outcomes are moderated by whether justice is conceptualized as an event or an entity.

George and Jones's (2000) discussion of the role of time in theorizing can provide some structure for an examination of this potential moderating influence. George and Jones argued that scholars should consider the issue of time aggregation when conceptualizing constructs. Such aggregation occurs through a bracketing process, where some length of time gets segmented into an episode that is given reflection and meaning. With events, that bracketing is more limited and defined, given that hiring events, performance evaluations, raise allocations, and so forth have some discrete beginning and end. With entities, however, that bracketing is more expansive, with a beginning and ending that are ill defined. George and Jones also suggested that scholars should consider how the past, present, and future elements of any time bracketing could impact relationships between constructs. Using an example from the leadership literature, the authors noted that the effects of a leader's current participatory behavior could vary according to whether she or he had used such styles in the past and might be expected to use such styles in the future.

Descriptions of contemporary social exchange theory highlight a number of temporal factors relevant to the event versus entity distinction. For example, high-quality social exchange relationships are believed to result from a recurring pattern of exchange sequences, with those sequences resulting in a deepened sense of trust, commitment, and supportiveness (Cropanzano & Byrne, 2000; Cropanzano & Mitchell, 2005; Cropanzano & Rupp, 2008; Cropanzano, Rupp, et al., 2001). Those indicators of exchange quality are shaped not just by the current resource or reciprocation but also by past experiences and anticipated futures with the exchange partner. For example, adherence to justice rules by one's supervisor should be more likely to trigger OCB on the part of the employee if the supervisor has been fair before and is expected to be fair again. Such past- and future-based considerations should be wrapped up in entity perceptions but may be bracketed out of event perceptions. Event perceptions may therefore be sampling a limited slice of the exchange dynamic, resulting in weaker relationships with reciprocative outcomes. Thus, we tested the following predictions for the moderating effects of event versus entity:

Hypothesis 5: Justice conceptualized as an entity is more strongly related to trust, organizational commitment, POS, and LMX than is justice conceptualized as an event.

Hypothesis 6: Justice conceptualized as an entity is more strongly related to OCB, task performance, and CWB than is justice conceptualized as an event.

A third key question that surrounds the application of contemporary social exchange theory to the justice literature concerns mediation. Does social exchange quality actually explain the linkages between justice and reciprocative behaviors in the manner suggested by contemporary exchange-based theorizing (Cropanzano & Byrne, 2000; Cropanzano & Mitchell, 2005; Cropanzano & Rupp, 2008; Cropanzano, Rupp, et al., 2001)? That is, does adhering to justice rules lead to beneficial workplace behaviors because it deepens a sense of trust, commitment, and supportiveness? Although studies have explicitly examined the mediating role of social exchange qual-

ity in justice-behavior relationships (Aryee et al., 2002; Aryee & Chay, 2001; Karriker & Williams, 2009; Konovsky & Pugh, 1994; Lavelle et al., 2009; Masterson et al., 2000; Moorman et al., 1998; Rupp & Cropanzano, 2002; Wayne et al., 2002), those studies leave a number of open questions.

For example, the unique relevance of the four justice dimensions to social exchange quality remains unclear because most studies have included only two justice dimensions (Konovsky & Pugh, 1994; Masterson et al., 2000; Rupp & Cropanzano, 2002; Wayne et al., 2002). There are, however, theoretical reasons to expect significant unique effects of all four justice dimensions on social exchange quality. Foa and Foa's (1980) description of resources provided three examples of symbolic and particularistic resources that could be transacted in social exchange relationships: (a) Status represents an evaluative judgment that conveys prestige, regard, and esteem; (b) love represents an expression of affection, warmth, and comfort; and (c) information subsumes advice, opinions, instruction, and enlightenment. The four justice dimensions seem differentially relevant to—or indicative of—those resource exemplars. Informational justice and interpersonal justice seem most indicative of information and love, respectively. Many of the outcomes associated with distributive justice, including promotions and job titles, have clear implications for status (Adams, 1965; J. Greenberg & Ormstein, 1983). For its part, procedural justice is believed to convey status for reasons that go beyond outcomes, by signaling that individuals are valued members of the collectives to which they belong (Lind & Tyler, 1988; Tyler & Lind, 1992).

As another example, few studies have examined trust, commitment, POS, or LMX as mediators of the justice-CWB relationship (for an exception, see El Akremi et al., 2010). Instead, research has focused on alternative beliefs and intentions as intervening mechanisms (D. A. Jones, 2009; Kickul et al., 2001; Lim, 2002). For example, D. A. Jones (2009) showed that the relationship between justice and CWB was mediated by a construct he termed *desire for revenge*. Together with Blau's (1964) omission of CWB-style forms of reciprocation, such gaps leave open the possibility that refraining from injury is a less exchange-relevant phenomena than the sort of helping exemplified by OCB. Our review examined these open questions in the course of testing the following hypothesis:

Hypothesis 7: The relationship between justice and reciprocative behaviors (e.g., OCB, task performance, CWB) is mediated by social exchange quality (e.g., trust, organizational commitment, POS, and LMX).

Beyond Social Exchange: The Emerging Importance of Affect

Although contemporary social exchange theory offers a compelling and nuanced explanation for justice effects, that explanation is largely cognitive, revolving around definitions of working relationships and reasoned assessments of social exchange quality. The increased attention paid to affect in recent years has the potential to balance those scales. Affect can be generally defined as a condition of feeling (Watson & Clark, 1994). State affect represents feelings at a particular point in time, whereas trait affect (or affectivity) represents a predisposition to experience certain feelings across situations. Our focus is on state affect as an outcome associated with justice (for a meta-analytic review of trait affectivity and justice and of state affect as an

antecedent of justice, see Barsky & Kaplan, 2007). Whether in its state or trait form, affect can be conceptualized according to its pleasantness and its activation, with activated positive affect typically reflecting enthusiasm, pride, or cheerfulness and activated negative affect typically reflecting anger, anxiety, or guilt (Larsen & Diener, 1992; Russell, 1980; Watson & Tellegen, 1985).

Although state affect has always had a place in the justice literature—for example, in Adams's (1965) discussion of equity distress, Folger and colleagues' work on resentment (e.g., Folger, Rosenfield, & Robinson, 1983), and Bies's (1987b) writings on moral outrage—it was not a central player in the models and paradigms that shaped the justice literature. As De Cremer (2007a) observed, “relatively little progress has been made in exploring the relationship between two concepts that, by their very nature, should have a friendly relationship, namely, justice and affect.” (p. 2). Similarly, Cropanzano et al. (2011) noted, “Given the natural affinity between (in)justice and affect, integrating the two literatures has been slower than one might expect.” (p. 3).

One study that seemed to trigger a deeper integration of justice and state affect is Weiss, Suckow, and Cropanzano's (1999) investigation of justice and discrete emotions. Their experiment revealed main and interactive effects of procedural justice and outcome favorability on four affective states: happiness, pride, anger, and guilt. To explain the effects of justice on state affect, Weiss et al. drew on appraisal theories, such as affective events theory (Weiss & Cropanzano, 1996) and cognitive-motivational-relational theory (Lazarus, 1991). Appraisal theories argue that events trigger two distinct appraisal processes. In primary appraisal, individuals consider whether an event is harmful or beneficial to relevant goals, with that process determining whether state affect is pleasant or unpleasant. Secondary appraisal then follows by examining the context and attributions for the event, along with the potential to cope with it, giving rise to specific discrete emotions.

Critical Questions in Affect-Based Justice Research

Weiss et al.'s (1999) study was followed by a more explicit focus on affect in justice theorizing and research. In particular, a number of studies have linked the violation of justice rules to state negative affect (e.g., Barclay, Skarlicki, & Pugh, 2005; Goldman, 2003; Krehbiel & Cropanzano, 2000; Rupp & Spencer, 2006). In appraisal theory terms, such results are consistent with the notion that injustice harms progress on relevant goals, triggering unpleasant affect (Lazarus, 1991; Weiss & Cropanzano, 1996). Despite such integration, some key questions remain unanswered about the affective implications of justice. One of those questions concerns the relationship between justice and state positive affect, which has received less empirical attention (Cohen-Charash & Byrne, 2008). Specifically, it remains unclear whether justice can make people feel good to the same degree that injustice can make people feel bad.

On the one hand, appraisal theories suggest that primary appraisal is triggered by events that change the person–environment relationship (Lazarus, 1991; Weiss & Cropanzano, 1996). Scholars have speculated that fair treatment represents a sort of expected steady state (Cropanzano et al., 2011; Organ, 1990; Rupp & Spencer, 2006). To the degree that this is so, the positive events that could trigger pleasant affect during primary appraisal may go unnoticed. On the other hand, appraisal theories emphasize the goal-relevance of events (Lazarus, 1991; Weiss & Cropanzano, 1996), and justice is believed to foster a

number of fundamental goals, including goals about meaning, self-regard, control, and belonging (Cropanzano et al., 2001). Consistent with this latter reasoning, empirical studies that have included positive affect have revealed positive relationships with justice. Given that past meta-analyses excluded positive affect and that only two included negative affect (Cohen-Charash & Spector, 2001; Skitka et al., 2003), our review sought to provide a quantitative synthesis of the relationships between justice and both affect forms. We hypothesized the following:

Hypotheses 8a–8b: Justice is positively related to (a) state positive affect and negatively related to (b) state negative affect.

Another key question in the literature integrating justice and affect concerns mediation. Do state positive affect and state negative affect explain the relationship between justice and behavioral outcomes, and does that mediation vary across outcomes? To understand the potential mediating role of state affect, it is important to understand the action tendencies associated with emotions. Lazarus (1991) described action tendencies as nonobservable impulses associated with specific feeling states. For example, the action tendency associated with anger is attack (Lazarus, 1991), which helps to explain relationships between state negative affect and CWB (e.g., Barclay et al., 2005; Fox, Spector, & Miles, 2001; K. Lee & Allen, 2002; Yang & Diefendorff, 2009). As another example, the action tendency associated with joy is outgoingness (Lazarus, 1991), which helps to explain relationships between state positive affect and spontaneous acts of helping, such as in OCB (e.g., George, 1991; K. Lee & Allen, 2002). The relevance of such action tendencies is less clear for task performance, given its less discretionary nature and its greater dependence on aptitude, resources, and the like. Notably, however, research has linked state affect to higher levels of task performance (e.g., Miner & Glomb, 2010; Tsai, Chen, & Liu, 2007), an effect that may be partially attributable to the impact of affect on both task attentional pull and off-task attentional demands (Beal, Weiss, Barros, & MacDermid, 2005). Our review therefore sought to provide a quantitative synthesis of the indirect effects of justice on behavior, through the mechanisms of both affect forms. We hypothesized the following:

Hypothesis 9: The relationship between justice and behavioral outcomes (e.g., OCB, task performance, CWB) is mediated by state positive affect and state negative affect.

Method

Literature Search

We followed a four-step process for finding relevant articles for our meta-analytic review. First, we conducted a PsycINFO search using terms adapted from previous justice meta-analyses (e.g., Barsky & Kaplan, 2007; Cohen-Charash & Spector, 2001; Colquitt et al., 2001; Fassina et al., 2008; Hauenstein, McGonigle, & Flinder, 2001; Skitka et al., 2003; Viswesvaran & Ones, 2002). Those terms included *(un)fairness* and *(in)justice*, along with terms referencing specific justice dimensions (e.g., *organizational*, *workplace*, *procedural*, *distributive*, *interpersonal*, *informational*, *interactional*). Those terms also included *(in)equity*, *(mis)treatment*, and *self-interest*. Second, we gathered the articles listed in the References sections of the previous justice meta-analyses. Third, we conducted a manual search of all of

the journals included in the References sections of those reviews, going back to 1999 (the cutoff date for the articles coded in Colquitt et al.'s, 2001, review). Fourth, we searched for and included justice-themed papers from recent Society for Industrial and Organizational Psychology and Academy of Management conferences to capture unpublished manuscripts. In general, the results of published studies converged with the results of unpublished studies, yielding little evidence of publication bias.

Our search efforts netted 1,155 total articles. We established seven exclusion rules for deciding which articles from our search pool would be coded. First, we excluded articles that were not empirical. Second, we excluded articles that were not relevant, meaning that they did not include a relationship either between justice dimensions or between a justice dimension and an outcome. Third, given our focus on social exchange theory in employee–authority relationships, we excluded articles that focused on how fairly someone else was treated. Fourth, for the same reason, we excluded articles that focused on coworker- or customer-focused justice. Fifth, given our desire to present results at the dimension level for justice, we excluded articles that utilized measures of overall fairness. Sixth, we excluded articles that did not report sufficient information for calculating a zero-order effect size. Seventh and finally, we excluded articles that reported only nested or unit-level results—such as studies on justice climate or studies utilizing experience-sampling methodology—as it may be inappropriate to combine those effect sizes with individual-level results (Ostroff & Harrison, 1999). These exclusions resulted in a final set of 413 codable manuscripts, representing 493 independent samples. To put that number in some context, the number of independent samples for the earlier reviews was 190 for Cohen-Charash and Spector (2001), 183 for Colquitt et al. (2001), and 89 for Skitka et al. (2003). The total number of samples was not given in Viswesvaran and Ones (2002) but appeared to be around 50.

Coding Procedures

The first coding decision focused on whether an article should be included or excluded based on the criteria described above. The next coding decisions focused on the relevant effect size information, along with accompanying details on sample size and reliability. We designed a coding sheet to enter our effect size, sample size, reliability, and moderator data into, complete with reminders about construct definitions and procedures for handling multiple operationalizations of a given variable. Multiple operationalizations were handled by computing a composite correlation for the relationship of interest, as opposed to simply averaging the multiple correlations (Hunter & Schmidt, 2004). The coding sheet included the formulas for calculating those composites and also included a link to a Google document where specific questions were posted to the group and judgment calls were discussed. To check reliability before our coding commenced, we had authors code a common set of 20 randomly selected articles, using the ICC(2) form of the intraclass correlation to reflect interrater reliability (Bliese, 2000). The decision to include or exclude an article from the review had an ICC(2) of .92. The actual effect size estimate that was pulled from the article had an ICC(2) of .98. Both of those values fall above the typical .70 hurdle for acceptable ICC(2) values (Bliese, 2000). Moreover, those values are comparable to recent meta-analyses published in the *Journal of Applied Psychology* (e.g., Hülsheger, Anderson, & Salgado, 2009; Humphrey, Nahrgang, & Morgeson, 2007; Ilies, Nahrgang, & Morgeson, 2007). Having dem-

onstrated adequate interrater reliability, coding commenced. Almost one third of the articles were coded with two authors working as a dyad, with the remaining 66% coded by authors working alone.

When coding the justice dimensions, we generally relied on seminal definitions and measurement discussions (e.g., Adams, 1965; Bies & Moag, 1986; Colquitt, 2001; J. Greenberg, 1993a; Leventhal, 1976, 1980). Consistent with Skitka et al. (2003), we did not use outcome favorability as an indicator of distributive justice, focusing instead on equity-based measures. We included both indirect measures of the justice dimensions (i.e., those that focus on specific justice rules or criteria) and direct measures of the justice dimensions (i.e., those that actually include the word *fair*). We coded the focus of the measure as either supervisor or organization when the items were clearly referenced to one of those sources. In some instances, the focus was unclear or varying, in which case the results were included in our overall summaries but not our focus breakdowns. We also coded the measure according to whether it focused on one specific event (e.g., a selection decision, a performance evaluation, a raise allocation, a conflict resolution, a layoff, an organizational change) or a more general entity (e.g., a supervisor or an organization).

With respect to the outcome variables, we coded trust measures that focused on either a willingness to be vulnerable (e.g., R. C. Mayer & Davis, 1999) or confident positive expectations (e.g., McAllister, 1995; K. H. Roberts & O'Reilly, 1974). We coded only the affective version of organizational commitment given its relevance to social exchange theorizing, with most measures based on N. J. Allen and Meyer's (1990) formulation or on Mowday, Steers, and Porter's (1979) conceptualization. POS was almost always assessed using Eisenberger et al.'s (1986) scale, with LMX typically assessed with some variant of the LMX-7 scale (Graen & Uhl-Bien, 1995). State positive affect and negative affect were commonly assessed with adjectival scales, such as the PANAS-X (Watson & Clark, 1994). Behaviors were coded as task performance if they reflected the fulfillment of job duties, often along the lines of L. J. Williams and Anderson's (1991) scale. Behaviors were coded as OCB if they reflected individual dimensions (e.g., altruism, civic virtue) or multiple dimensions of the construct, with attention paid to whether the behaviors were organization, supervisor, or coworker focused (e.g., K. Lee & Allen, 2002; Podsakoff, MacKenzie, Moorman, & Fetter, 1990; L. J. Williams & Anderson, 1991). Similarly, behaviors were coded as CWB if they reflected specific examples of active deviance or retaliation, such as theft (J. Greenberg, 1990) or sabotage (Ambrose, Seabright, & Schminke, 2002), or if they consisted of more diverse scales that were organization, supervisor, or coworker targeted (Aquino, Lewis, & Bradfield, 1999; Ball, Trevino, & Sims, 1994; R. J. Bennett & Robinson, 2000; Fox & Spector, 1999; Robinson & O'Leary-Kelly, 1998; Skarlicki & Folger, 1997). For the most part, such scales referenced rule breaking, misuse of resources, aggression, gossiping, sabotage, and theft, though a minority of items did sometimes assess more passive withdrawal-style behaviors (e.g., absenteeism, tardiness).

Meta-Analytic Calculations

We followed Hunter and Schmidt's (2004) guidelines for meta-analysis. Specifically, we used random-effects meta-analysis (as opposed to fixed-effects meta-analysis) because it not only allows for the possibility that parameters vary across studies but also allows one to estimate that variance. Our results include a weighted mean point

Table 1
Correlations Among the Justice Dimensions

Justice dimensions	1		2		3		4	
	<i>r</i> (95% CI) <i>k</i> (<i>N</i>)	<i>r_c</i> (80% CV) <i>SDr_c</i> (% <i>V_{art}</i>)	<i>r</i> (95% CI) <i>k</i> (<i>N</i>)	<i>r_c</i> (80% CV) <i>SDr_c</i> (% <i>V_{art}</i>)	<i>r</i> (95% CI) <i>k</i> (<i>N</i>)	<i>r_c</i> (80% CV) <i>SDr_c</i> (% <i>V_{art}</i>)	<i>r</i> (95% CI) <i>k</i> (<i>N</i>)	<i>r_c</i> (80% CV) <i>SDr_c</i> (% <i>V_{art}</i>)
1. Procedural justice	—	—						
2. Distributive justice	.51 (.49, .54) 184 (67,956)	.61 (.35, .88) .21 (4.65)	—	—				
3. Interpersonal justice	.50 (.46, .53) 67 (23,069)	.59 (.35, .82) .18 (6.96)	.37 (.33, .42) 46 (13,516)	.43 (.18, .68) .20 (7.89)	—	—		
4. Informational justice	.51 (.48, .55) 62 (22,594)	.66 (.31, 1.00) .27 (6.45)	.39 (.35, .43) 46 (13,261)	.53 (.07, .99) .36 (6.86)	.64 (.61, .68) 47 (17,954)	.74 (.55, .94) .15 (5.32)	—	—

Note. *r* = uncorrected population correlation; CI = confidence interval around uncorrected population correlation; *r_c* = corrected population correlation; CV = credibility interval around weighted corrected mean correlation; *k* = number of studies; *N* = cumulative sample size; %*V_{art}* = percentage of variance in *r_c* explained by study artifacts.

estimate of the study correlations (*r*) and a 95% confidence interval around the point estimate. That confidence interval expresses the amount of error in the point estimate of *r* that is due to sampling error and is used for statistical significance testing (Hunter & Schmidt, 2004). We also report the number of studies (*k*) and the cumulative sample size (*N*), along with the correlations after correcting for unreliability (*r_c*). Those corrections were performed using reliability as reported in each article or reliability that we calculated using a weighted average from all studies that did report data for that variable.

In order to detect cases where moderator variables may be operating, our review also reports variance information. Specifically, we include the standard deviation of the corrected meta-analytic correlation (*SDr_c*) and the 80% credibility interval. That credibility interval expresses that variance in *r_c* in this respect: Eighty percent of the values in the *r_c* distribution lay within the credibility interval (Hunter & Schmidt, 2004; Whitener, 1990). As a rule of thumb, moderators are likely operating when the credibility interval either is wide or includes zero (Whitener, 1990). Another approach to identifying cases

Table 2
Justice and OCB With Focus Breakdowns

Justice dimensions	OCB		OCBO		OCBS		OCBI	
	<i>r</i> (95% CI) <i>k</i> (<i>N</i>)	<i>r_c</i> (80% CV) <i>SDr_c</i> (% <i>V_{art}</i>)	<i>r</i> (95% CI) <i>k</i> (<i>N</i>)	<i>r_c</i> (80% CV) <i>SDr_c</i> (% <i>V_{art}</i>)	<i>r</i> (95% CI) <i>k</i> (<i>N</i>)	<i>r_c</i> (80% CV) <i>SDr_c</i> (% <i>V_{art}</i>)	<i>r</i> (95% CI) <i>k</i> (<i>N</i>)	<i>r_c</i> (80% CV) <i>SDr_c</i> (% <i>V_{art}</i>)
Procedural justice	.23 (.20, .26) 71 (16,864)	.30 (.07, .54) .18 (16.07)	.25 (.22, .29) 51 (12,225)	.32 (.13, .52) .15 (20.44)	.25 (.20, .30) 11 (1,708)	.33 (.23, .43) .08 (58.09)	.17 (.13, .21) 36 (8,309)	.20 (.03, .38) .14 (24.21)
Organization-focused	.20 (.17, .23) 46 (10,666)	.25 (.10, .40) .12 (33.06)	.23 (.19, .27) 35 (8,480)	.29 (.12, .46) .13 (24.86)	.21 (.09, .32) 2 (262)	.23 (.23, .23) .00 (100.00)	.13 (.09, .17) 24 (5,614)	.16 (.04, .27) .09 (41.73)
Supervisor-focused	.28 (.22, .34) 25 (5,862)	.37 (.07, .68) .24 (9.53)	.34 (.27, .40) 15 (3,068)	.40 (.23, .58) .14 (22.11)	.26 (.20, .32) 9 (1,446)	.35 (.24, .46) .08 (56.02)	.25 (.13, .36) 9 (2,027)	.29 (.06, .52) .18 (14.64)
Distributive justice	.17 (.14, .20) 36 (10,100)	.21 (.09, .33) .09(36.89)	.18 (.14, .22) 25 (8,106)	.22 (.09, .35) .10 (30.47)	.20 (.14, .26) 6 (2,261)	.25 (.15, .35) .08 (37.89)	.14 (.11, .18) 22 (6,256)	.17 (.08, .26) .07 (47.22)
Organization-focused	.15 (.12, .19) 23 (6,785)	.19 (.06, .31) .10 (35.33)	.17 (.12, .22) 19 (5,537)	.20 (.05, .35) .12 (26.17)	.14 (.06, .22) 3 (594)	.16 (.16, .16) .00 (100.00)	.13 (.09, .18) 14 (4,011)	.16 (.05, .26) .08 (41.69)
Supervisor-focused	.21 (.15, .27) 9 (1,895)	.24 (.15, .33) .07 (53.31)	.29 (.22, .35) 4 (883)	.33 (.33, .33) .00 (100.00)	.22 (.07, .37) 2 (337)	.25 (.12, .37) .10 (41.81)	.15 (.09, .21) 5 (1,243)	.18 (.02, .15) .02 (92.96)
Interpersonal justice	.32 (.24, .40) 13 (2,533)	.43 (.15, .71) .22 (12.79)	.30 (.21, .38) 9 (1,760)	.37 (.16, .59) .17 (19.46)	.39 (.28, .50) 4 (781)	.47 (.35, .60) .10 (35.90)	.26 (.16, .36) 4 (1,146)	.31 (.18, .43) .10 (29.77)
Organization-focused	.26 (.16, .36) 3 (516)	.31 (.31, .31) .00 (100.00)	.22 (.11, .33) 2 (299)	.29 (.29, .29) .00 (100.00)	.11 (.00, .22) 2 (299)	.12 (.12, .12) .00 (100.00)	— —	— —
Supervisor-focused	.32 (.22, .42) 11 (1,960)	.42 (.11, .74) .25 (10.95)	.30 (.20, .40) 8 (1,404)	.36 (.13, .58) .17 (18.11)	.44 (.34, .53) 4 (781)	.49 (.38, .61) .09 (34.54)	.21 (.10, .32) 3 (790)	.25 (.15, .35) .08 (42.89)
Informational justice	.30 (.24, .37) 8 (1,937)	.42 (.20, .65) .18 (16.68)	.26 (.20, .33) 8 (1,737)	.32 (.22, .42) .08 (48.24)	.40 (.22, .58) 3 (616)	.50 (.28, .72) .17 (15.80)	.26 (.20, .32) 5 (1,352)	.30 (.28, .33) .02 (92.18)
Organization-focused	.15 (.02, .28) 1 (231)	.21 (.21, .21) .00 (—)	.18 (.05, .31) 1 (231)	.23 (.23, .23) .00 (—)	.07 (−.05, .20) 1 (231)	.08 (.08, .08) .00 (—)	— —	— —
Supervisor-focused	.33 (.25, .40) 7 (1,581)	.45 (.20, .70) .19 (14.29)	.28 (.20, .36) 7 (1,381)	.33 (.23, .43) .08 (48.92)	.44 (.29, .58) 3 (616)	.52 (.31, .72) .16 (14.70)	.27 (.19, .35) 4 (996)	.32 (.28, .36) .03 (83.42)

Note. Boldfaced results represent significant differences across moderator breakdowns. Dashes indicate cells where the number of relevant studies is 0 (or 1 in the case of %*V_{art}* calculations). OCB = organizational citizenship behavior; OCBO = OCB targeted to the organization; OCBS = OCB targeted to the supervisor; OCBI = OCB targeted to coworkers; *r* = uncorrected population correlation; CI = confidence interval around uncorrected population correlation; *r_c* = corrected population correlation; CV = credibility interval around weighted corrected mean correlation; *k* = number of studies; *N* = cumulative sample size; %*V_{art}* = percentage of variance in *r_c* explained by study artifacts.

where moderators may be operating focuses on the percentage of variance explained by artifacts (V_{art}). Hunter and Schmidt (2004) suggested that moderators are likely present in a relationship if artifacts do not account for at least 75% of the variance in the correlations. However, Mathieu and Zajac (1990) revised this cutoff to 60% in circumstances where the correlations are not corrected for range restriction, as in the present review.

Results

Table 1 presents the meta-analytic relationships among procedural, distributive, interpersonal, and informational justice. Based on Cohen, Cohen, West, and Aiken's (2003) typology of effect sizes, where a correlation of .10 is weak, .30 is moderate, and .50 is strong, the relationships among all of the justice dimensions are strong, with an average r of .49 and an average r_c of .59. In general, the effect sizes are similar to those found in Colquitt et al. (2001), which also utilized a four-dimensional structure for the justice dimensions.

Results for Social Exchange Hypotheses

Hypotheses 1a–1c predicted that justice would be positively related to (a) OCB and (b) task performance and negatively related to (c) CWB. Table 2 presents the results for OCB. All tables include the overall results for the justice dimensions, as well as the results with more specific organization- and supervisor-focused breakdowns. In the case of OCB, results are presented at an aggregate level and for more specific OCBO, OCBS, and OCBI targets. The effect sizes for overall OCB were, in descending order, as follows: interpersonal justice ($r = .32$; $r_c = .43$), informational justice ($r = .30$; $r_c = .42$), procedural justice ($r = .23$; $r_c = .30$), and distributive justice ($r = .17$; $r_c = .21$).

Table 3 presents the results for task performance, with the effect sizes as follows: distributive justice ($r = .19$; $r_c = .26$), procedural justice ($r = .19$; $r_c = .24$), interpersonal justice ($r = .13$; $r_c = .16$), and informational justice ($r = .13$; $r_c = .16$). The procedural justice effect size was statistically significantly smaller than the effect size in Colquitt et al.'s (2001) review but significantly larger than the one reported by Cohen-Charash and Spector (2002).

Table 4 presents the results for CWB. As with the OCB results, the table includes composite results for CWB in general, along with breakdowns for studies that examined CWBO, CWBS, and CWBI. The results for overall CWB were as follows: informational justice ($r = -.23$; $r_c = -.29$), procedural justice ($r = -.23$; $r_c = -.28$), distributive justice ($r = -.22$; $r_c = -.26$), and interpersonal justice ($r = -.20$; $r_c = -.24$).

Hypotheses 2a–2d predicted that justice would be positively related to (a) trust, (b) organizational commitment, (c) POS, and (d) LMX perceptions. Tables 5 and 6 present the results relevant to these hypotheses, with those results again including organization- and supervisor-focused breakdowns. Focusing on the overall results, the tables reveal strong correlations between the justice dimensions and the indicators of social exchange quality. The average correlations between each justice dimension and the five social exchange quality indicators were, in descending order, procedural justice (average $r = .50$; average $r_c = .58$), interpersonal justice (average $r = .48$; average $r_c = .55$), informational justice (average $r = .45$; average $r_c = .54$), and distributive justice (average $r = .42$; average $r_c = .48$).

Hypotheses 3–4 examined whether focus matching was a significant moderator of the justice–outcome relationships. Of the 56 overall

Table 3
Justice and Task Performance With Focus Breakdowns

Justice dimensions	Task performance	
	r (95% CI) k (N)	r_c (80% CV) SDr_c (% V_{art})
Procedural justice	.19 (.15, .23) 57 (14,258)	.24 (–.01, .49) .20 (12.97)
Organization-focused	.17 (.12, .21) 42 (10,075)	.20 (–.02, .42) .17 (16.59)
Supervisor-focused	.20 (.13, .26) 13 (2,686)	.24 (.09, .39) .12 (33.03)
Distributive justice	.19 (.14, .24) 45 (11,336)	.26 (–.05, .57) .24 (8.97)
Organization-focused	.16 (.11, .22) 30 (6,990)	.20 (–.02, .42) .17 (17.81)
Supervisor-focused	.19 (.12, .25) 8 (1,866)	.23 (.11, .35) .09 (41.06)
Interpersonal justice	.13 (.07, .20) 11 (3,542)	.16 (.02, .29) .11 (26.19)
Organization-focused	—	—
Supervisor-Focused	.13 (.07, .20) 11 (3,542)	.16 (.02, .29) .11 (26.19)
Informational justice	.13 (.05, .20) 11 (3,124)	.16 (–.01, .34) .14 (22.91)
Organization-focused	.07 (.00, .14) 5 (1,848)	.09 (–.01, .19) .08 (42.82)
Supervisor-focused	.21 (.11, .30) 7 (1,462)	.26 (.10, .42) .13 (29.16)

Note. Dashes indicate cells where the number of relevant studies is 0 (or 1 in the case of % V_{art} calculations). r = uncorrected population correlation; CI = confidence interval around uncorrected population correlation; r_c = corrected population correlation; CV = credibility interval around weighted corrected mean correlation; k = number of studies; N = cumulative sample size; % V_{art} = percentage of variance in r_c explained by study artifacts.

effect sizes summarized in Tables 2–6, 50 revealed circumstances where artifacts explained less than 60% of the variance in the corrected correlations. Those same cells included 80% credibility intervals that exhibited a large spread in corrected correlation values. Such results point to the existence of some moderating variables (Hunter & Schmidt, 2004; Whitener, 1990). The question therefore turns to whether focus matching is itself one of the moderating variables that is creating that effect size heterogeneity. As Tables 2–6 reveal, however, the organization-focused and supervisor-focused effect sizes tended to mirror one another.

In terms of specific predictions, Hypothesis 3 predicted that organization-focused justice would be more strongly related to trust in organization, organizational commitment, and POS than supervisor-focused justice, with supervisor-focused justice being more strongly related to trust in supervisor and LMX than organization-focused justice. Of the 20 justice–outcome combinations relevant to this prediction, only one matched that pattern to a statistically significant degree, based on nonoverlapping confidence intervals. That result, shown in bold, was for procedural justice and trust in supervisor (.61 for supervisor-focused vs. .41 for organization-focused). These results offer little support for Hypothesis 3.

Hypothesis 4 predicted that organization-focused justice would be more strongly related to OCBO and CWBO than supervisor-focused justice, with supervisor-focused justice being more strongly related to OCBS and CWBS than organization-focused justice. Of the 16

Table 4
Justice and CWB With Focus Breakdowns

Justice dimensions	CWB		CWB0		CWB5		CWB1	
	<i>r</i> (95% CI) <i>k</i> (N)	<i>r_c</i> (80% CV) <i>SDr_c</i> (%V _{art})	<i>r</i> (95% CI) <i>k</i> (N)	<i>r_c</i> (80% CV) <i>SDr_c</i> (%V _{art})	<i>r</i> (95% CI) <i>k</i> (N)	<i>r_c</i> (80% CV) <i>SDr_c</i> (%V _{art})	<i>r</i> (95% CI) <i>k</i> (N)	<i>r_c</i> (80% CV) <i>SDr_c</i> (%V _{art})
Procedural justice	-.23 (-.28, -.18) 30 (6,455)	-.28 (-.47, -.09) .15 (22.47)	-.23 (-.28, -.18) 17 (4,656)	-.28 (-.38, -.17) .08 (42.44)	-.23 (-.28, -.17) 7 (1,232)	-.31 (-.39, -.24) .06 (73.99)	-.16 (-.24, -.07) 6 (1,703)	-.20 (-.32, -.07) .09 (35.87)
Organization-focused	-.26 (-.32, -.20) 18 (3,488)	-.32 (-.46, -.18) .11 (32.56)	-.24 (-.28, -.19) 12 (2,750)	-.29 (-.34, -.23) .04 (75.9)	-.19 (-.27, -.11) 2 (553)	-.24 (-.24, -.24) .00 (100.00)	-.13 (-.23, -.02) 3 (484)	-.16 (-.24, -.09) .06 (73.21)
Supervisor-focused	-.19 (-.28, -.10) 11 (2,816)	-.23 (-.46, -.01) .17 (15.57)	-.22 (-.32, -.13) 5 (1,906)	-.26 (-.41, -.12) .11 (20.63)	-.25 (-.32, -.18) 5 (679)	-.37 (-.37, -.37) .00 (100.00)	-.17 (-.29, -.05) 3 (1,219)	-.21 (-.34, -.08) .10 (25.07)
Distributive justice	-.22 (-.27, -.18) 24 (5,112)	-.26 (-.39, .14) .10 (39.33)	-.20 (-.26, -.13) 11 (2,931)	-.23 (-.37, -.08) .11 (27.68)	-.08 (-.41, .25) 4 (784)	-.10 (-.63, .44) .42 (4.32)	-.11 (-.24, .01) 5 (788)	-.15 (-.33, .03) .14 (31.43)
Organization-focused	-.22 (-.27, -.18) 17 (3,585)	-.27 (-.34, -.20) .05 (69.98)	-.18 (-.25, -.11) 9 (2,337)	-.21 (-.33, -.09) .09 (38.26)	-.17 (-.31, -.03) 2 (556)	-.20 (-.33, -.07) .10 (33.51)	-.11 (-.24, .01) 5 (788)	-.15 (-.33, .03) .14 (31.43)
Supervisor-focused	-.19 (-.39, .00) 4 (702)	-.22 (-.50, .05) .21 (13.77)	-.49 (-.61, -.37) 1 (160)	-.58 (-.58, -.58) .00 (-)	-.12 (-.64, .88) 2 (228)	-.16 (-.73, 1.00) .70 (2.87)	— —	— —
Interpersonal justice	-.20 (-.27, -.13) 10 (2,043)	-.24 (-.36, -.11) .10 (39.85)	-.16 (-.21, -.11) 6 (1,717)	-.19 (-.19, -.19) .00 (100.00)	-.28 (-.58, .02) 3 (638)	-.34 (-.74, .06) .31 (6.07)	-.12 (-.25, .01) 1 (231)	-.14 (-.14, -.14) .00 (-)
Organization-focused	-.16 (-.31, -.01) 1 (173)	-.17 (-.17, -.17) .00 (-)	-.19 (-.26, -.12) 3 (704)	-.21 (-.21, -.21) .00 (100.00)	— —	— —	— —	— —
Supervisor-focused	-.20 (-.28, -.13) 9 (1,870)	-.24 (-.38, -.11) .10 (37.28)	-.14 (-.20, -.08) 3 (1,013)	-.17 (-.17, -.17) .00 (100.00)	-.28 (-.58, .02) 3 (638)	-.34 (-.74, .06) .31 (6.07)	-.12 (-.25, .01) 1 (231)	-.14 (-.14, -.14) .00 (-)
Informational justice	-.23 (-.30, -.17) 9 (1,974)	-.29 (-.41, -.17) .09 (40.47)	-.18 (-.25, -.11) 5 (1,226)	-.22 (-.29, -.15) .06 (64.05)	-.25 (-.58, .08) 2 (526)	-.31 (-.68, .06) .29 (6.05)	-.18 (-.26, -.10) 2 (531)	-.29 (-.34, -.24) .04 (85.62)
Organization-focused	-.23 (-.28, .10) 3 (444)	-.28 (-.41, -.14) .10 (46.92)	-.23 (-.36, -.09) 3 (444)	-.28 (-.41, -.14) .10 (46.92)	— —	— —	— —	— —
Supervisor-focused	-.24 (-.31, -.17) 6 (1,530)	-.30 (-.41, -.18) .09 (38.13)	-.16 (-.22, -.09) 2 (782)	-.19 (-.19, -.19) .00 (100.00)	-.25 (-.58, .08) 2 (526)	-.31 (-.68, .06) .29 (6.05)	-.18 (-.26, -.10) 2 (531)	-.29 (-.34, -.24) .04 (85.62)

Note. Boldfaced results represent significant differences across moderator breakdowns. Dashes indicate cells where the number of relevant studies is 0 (or 1 in the case of %V_{art} calculations). CWB = counterproductive work behavior; CWB0 = CWB targeted to the organization; CWB5 = CWB targeted to the supervisor; CWB1 = CWB targeted to coworkers; *r* = uncorrected population correlation; CI = confidence interval around uncorrected population correlation; *r_c* = corrected population correlation; CV = credibility interval around weighted corrected mean correlation; *k* = number of studies; *N* = cumulative sample size; %V_{art} = percentage of variance in *r_c* explained by study artifacts.

Table 5
Justice and Trust With Focus Breakdowns

Justice dimensions	Trust in supervisor		Trust in organization	
	<i>r</i> (95% CI) <i>k</i> (<i>N</i>)	<i>r_c</i> (80% CV) <i>SDr_c</i> (% <i>V_{art}</i>)	<i>r</i> (95% CI) <i>k</i> (<i>N</i>)	<i>r_c</i> (80% CV) <i>SDr_c</i> (% <i>V_{art}</i>)
Procedural justice	.56 (.49, .64) 31 (7,877)	.65 (.36, .93) .22 (4.98)	.54 (.48, .60) 22 (5,898)	.63 (.44, .82) .15 (10.62)
Organization-focused	.41 (.33, .50) 8 (1,743)	.48 (.30, .65) .14 (18.30)	.55 (.47, .62) 17 (5,032)	.63 (.45, .82) .15 (9.60)
Supervisor-focused	.61 (.52, .69) 23 (6,134)	.69 (.41, .97) .22 (4.33)	.42 (.35, .49) 3 (547)	.49 (.49, .49) .00 (100.00)
Distributive justice	.40 (.35, .46) 26 (7,085)	.45 (.26, .65) .15 (12.32)	.47 (.41, .52) 20 (6,409)	.54 (.37, .71) .13 (13.01)
Organization-focused	.39 (.33, .44) 12 (2,708)	.42 (.32, .52) .08 (39.04)	.47 (.41, .54) 15 (5,459)	.54 (.38, .72) .13 (11.59)
Supervisor-focused	.40 (.31, .49) 10 (2,336)	.44 (.25, .63) .15 (14.94)	.42 (.33, .50) 2 (403)	.47 (.47, .47) .00 (100.00)
Interpersonal justice	.51 (.45, .57) 8 (3,588)	.59 (.48, .70) .09 (18.05)	.49 (.42, .56) 7 (1,967)	.60 (.48, .73) .10 (22.28)
Organization-focused	.47 (.44, .50) 1 (1,944)	.54 (.54, .54) .00 (—)	.50 (.40, .61) 2 (1,043)	.66 (.63, .70) .03 (67.97)
Supervisor-focused	.55 (.47, .64) 7 (1,644)	.65 (.52, .79) .11 (21.17)	.45 (.34, .56) 4 (780)	.51 (.38, .65) .11 (26.82)
Informational justice	.54 (.44, .65) 9 (2,000)	.65 (.42, .88) .18 (9.19)	.45 (.39, .51) 5 (1,730)	.55 (.53, .58) .02 (88.15)
Organization-focused	—	—	.42 (.36, .49) 3 (1,238)	.54 (.54, .54) .00 (100.00)
Supervisor-focused	.54 (.44, .65) 9 (2,000)	.65 (.42, .88) .18 (9.19)	.50 (.40, .60) 2 (492)	.58 (.51, .66) .06 (47.11)

Note. Boldfaced results represent significant differences across moderator breakdowns. Dashes indicate cells where the number of relevant studies is 0 (or 1 in the case of %*V_{art}* calculations). *r* = uncorrected population correlation; CI = confidence interval around uncorrected population correlation; *r_c* = corrected population correlation; CV = credibility interval around weighted corrected mean correlation; *k* = number of studies; *N* = cumulative sample size; %*V_{art}* = percentage of variance in *r_c* explained by study artifacts.

justice–outcome combinations relevant to this prediction, only two revealed that pattern to a statistically significant degree. Both results are shown in bold and include interpersonal justice and OCBS (.44 for supervisor-focused vs. .11 for organization-focused) and informational justice and OCBS (.44 for supervisor-focused vs. .07 for organization-focused). Thus, as with the social exchange quality results, little support is offered for Hypothesis 4.

Hypotheses 5–6 examined whether event versus entity was a significant moderator of the justice–outcome relationships. As Tables 7, 8, 9, 10, and 11 reveal, however, the event versus entity distinction did not seem to be reliably associated with differences in effect sizes. Hypothesis 5 predicted that justice conceptualized as an entity would be more strongly related to trust, organizational commitment, POS, and LMX than would justice conceptualized as an event. Of the 20 justice–outcome combinations relevant to this prediction, only two matched that pattern to a statistically significant degree. Both results are shown in bold, and include distributive justice and POS (.48 for entity vs. .29 for event) and informational justice and POS (.53 for entity vs. .37 for event).

Hypothesis 6 predicted that justice conceptualized as an entity would be more strongly related to OCB, task performance, and CWB than would justice conceptualized as an event. Of the 36 justice–outcome combinations relevant to this prediction, only two revealed that pattern to a statistically significant degree. Both results are shown in bold and include interpersonal justice and CWBS (–.45 for entity vs. .05 for event) and informational justice and CWBS (–.37 for entity vs. .23 for event).

Hypothesis 7 predicted that the relationship between organizational justice and reciprocative behaviors would be mediated by the social exchange quality indicators. Testing this hypothesis required the use of meta-analytic structural equation modeling (SEM), where a correlation matrix is derived and input into an SEM package (Viswesvaran & Ones, 1995). Given the lack of support for our focus-matching and event versus entity predictions, as well as concerns about missing cells or cells with low sample sizes, we constructed this matrix in a manner that collapsed across those moderators. Table 12 reveals the portion of this matrix that has not already been presented in Tables 1–11, with all correlations representing corrected values. We should note that Table 12 represents 28 additional meta-analyses that were conducted using the 493 independent samples in our review. In some cases, existing meta-analyses had already been published on a given relationship (e.g., Berry, Ones, & Sackett, 2007; Colquitt, Scott, & LePine, 2007; Dalal, 2005; Dirks & Ferrin, 2002; Gerstner & Day, 1997; Ilies et al., 2007; LePine, Erez, & Johnson, 2002; Meyer, Stanley, Herscovitch, & Topolnitsky, 2002; Podsakoff, MacKenzie, Paine, & Bachrach, 2000; Rhoades & Eisenberger, 2002). We believed it was still worthwhile to conduct our own meta-analyses of those relationships for two reasons. First, doing so ensured that all of the cells in our meta-analytic matrix were based on the same population of articles (i.e., articles in the justice literature). Second, in many cases, the number of studies and cumulative sample sizes for our meta-analyses were higher than their published analogues.

We tested Hypothesis 7 by creating a structural model where the four justice dimensions had both direct and indirect effects on task

Table 6
Justice and Organizational Commitment, POS, and LMX With Focus Breakdowns

Justice dimensions	Organizational commitment		POS		LMX	
	<i>r</i> (95% CI) <i>k</i> (<i>N</i>)	<i>r_c</i> (80% CV) <i>SDr_c</i> (% <i>V_{art}</i>)	<i>r</i> (95% CI) <i>k</i> (<i>N</i>)	<i>r_c</i> (80% CV) <i>SDr_c</i> (% <i>V_{art}</i>)	<i>r</i> (95% CI) <i>k</i> (<i>N</i>)	<i>r_c</i> (80% CV) <i>SDr_c</i> (% <i>V_{art}</i>)
Procedural justice	.45 (.42, .48) 105 (43,723)	.53 (.32, .74) .17 (7.41)	.51 (.45, .57) 29 (11,072)	.59 (.38, .80) .16 (6.96)	.43 (.35, .50) 17 (4,351)	.50 (.28, .71) .17 (11.82)
Organization-focused	.44 (.40, .47) 76 (31,581)	.52 (.29, .75) .18 (6.49)	.49 (.42, .56) 22 (9,006)	.57 (.35, .79) .17 (6.32)	.39 (.29, .48) 10 (3,118)	.45 (.24, .67) .17 (10.72)
Supervisor-focused	.45 (.40, .49) 20 (7,518)	.51 (.38, .64) .10 (18.72)	.43 (.19, .66) 4 (856)	.49 (.17, .81) .25 (6.53)	.47 (.35, .59) 6 (1,088)	.55 (.33, .76) .17 (13.90)
Distributive justice	.40 (.37, .43) 77 (41,773)	.49 (.27, .72) .17 (5.51)	.45 (.38, .52) 17 (7,085)	.51 (.31, .71) .16 (7.55)	.37 (.30, .44) 16 (4,096)	.42 (.21, .62) .16 (13.38)
Organization-focused	.41 (.37, .44) 55 (35,030)	.50 (.28, .73) .18 (4.59)	.43 (.34, .51) 12 (5,764)	.48 (.29, .67) .15 (7.78)	.32 (.23, .42) 9 (2,753)	.37 (.17, .57) .16 (12.92)
Supervisor-focused	.48 (.41, .55) 10 (1,813)	.54 (.39, .70) .12 (23.29)	.52 (.45, .58) 3 (670)	.56 (.51, .60) .04 (67.91)	.45 (.33, .57) 6 (1,223)	.50 (.33, .67) .13 (19.35)
Interpersonal justice	.35 (.27, .40) 23 (11,808)	.41 (.23, .58) .14 (9.81)	.52 (.47, .57) 8 (3,785)	.60 (.49, .72) .09 (14.51)	.51 (.38, .64) 5 (1,351)	.57 (.41, .72) .12 (15.33)
Organization-focused	.42 (.30, .53) 6 (5,196)	.48 (.29, .67) .15 (4.80)	.56 (.49, .62) 2 (2,221)	.66 (.61, .71) .04 (28.72)	.61 (.54, .68) 1 (283)	.65 (.65, .65) .00 (—)
Supervisor-focused	.28 (.25, .31) 13 (6,007)	.33 (.27, .38) .04 (55.36)	.47 (.38, .56) 4 (1,258)	.52 (.40, .65) .10 (20.85)	.48 (.33, .63) 4 (1,068)	.55 (.38, .71) .13 (15.09)
Informational justice	.32 (.29, .36) 16 (8,572)	.38 (.28, .49) .08 (23.47)	.50 (.05, .58) 6 (1,845)	.58 (.51, .64) .05 (47.49)	.45 (.23, .67) 4 (1,037)	.53 (.25, .82) .22 (7.22)
Organization-focused	.29 (.22, .36) 7 (3,126)	.35 (.22, .48) .10 (20.95)	.46 (.33, .59) 3 (1,230)	.54 (.39, .68) .11 (14.78)	.25 (.11, .39) 1 (186)	.31 (.31, .31) .00 (—)
Supervisor-focused	.34 (.31, .37) 9 (5,515)	.39 (.36, .43) .03 (71.41)	.49 (.38, .61) 3 (639)	.56 (.49, .63) .05 (57.37)	.45 (.23, .68) 4 (1,037)	.54 (.26, .82) .22 (7.32)

Note. Dashes indicate cells where the number of relevant studies is 0 or 1 in the case of %*V_{art}* calculations). POS = perceived organizational support; LMX = leader–member exchange; *r* = uncorrected population correlation; CI = confidence interval around uncorrected population correlation; *r_c* = corrected population correlation; CV = credibility interval around weighted corrected mean correlation; *k* = number of studies; *N* = cumulative sample size; %*V_{art}* = percentage of variance in *r_c* explained by study artifacts.

performance, OCB, and CWB, with the indirect effects flowing through social exchange quality. Given the strong correlations among the social exchange quality indicators in Table 12 and their similar relationships with the justice dimensions in Tables 5–6 and 10–11, we used them as indicators of a second-order social exchange quality latent variable. We also allowed the disturbance terms for the three dependent variables to covary, to account for unmeasured common causes, such as a higher order job performance factor (Rotundo & Sackett, 2002). Consistent with past reviews, we used the harmonic mean sample size from the correlation matrix as the sample size in the analysis (Viswesvaran & Ones, 1995). The resulting model had an acceptable fit to the data: $\chi^2(33, N = 1,700) = 2,224.41$; comparative fit index (CFI) = .90; incremental fit index (IFI) = .90; standardized root-mean-square residual (SRMR) = .056. The factor loadings for the social exchange quality indicators ranged from .68 to .81, with an average of .76.²

The resulting path coefficients are shown in Figure 1. All four justice dimensions had significant unique effects on social exchange quality, with specific coefficients in descending order as follows: interpersonal justice ($\beta = .36$), procedural justice ($\beta = .35$), distributive justice ($\beta = .20$), and informational justice ($\beta = .11$). The social exchange quality latent variable had a significant relationship with OCB ($\beta = .54$) and task performance ($\beta = .35$), but not CWB ($\beta = .08$). We tested our mediation predictions by gauging the significance of the indirect effects of the justice dimensions on the outcomes when direct effects were also modeled (MacKinnon, Lockwood, Hoffman, West, & Sheets, 2002). Those effects are summarized in Table 13,

which presents the effect decomposition results from our SEM. We should note that some of the direct effects of the justice dimensions are negative, despite the fact that their zero-order correlations are positive. Such results often occur in the presence of multicollinearity (Cohen et al., 2003) and can be seen in Colquitt et al.'s (2001) results as well.

Consistent with Hypothesis 7, all justice dimensions had significant indirect effects on task performance: procedural justice (.12), interpersonal justice (.12), distributive justice (.07), and informational

² Although we viewed the four social exchange quality indicators as having a functionally equivalent role in our theorizing, we did explore the feasibility of separating trust, commitment, POS, and LMX in our SEM. Unfortunately, the extreme multicollinearity present in Table 12—where POS and trust in organization correlated at .79 and LMX and trust in supervisor correlated at .90—made such an analysis impractical. Indeed, the covariance matrix for the analysis wound up being “not positive definite.” Moreover, tests of our model that operationalized social exchange quality solely by trust, solely by commitment, solely by POS, and solely by LMX revealed results that were functionally identical to the model with four indicators. In addition, our results revealed few significant differences in the justice–social exchange quality relationships across exchange quality indicators. That is, the 95% confidence interval for the procedural justice–commitment effect size tended to overlap with the 95% confidence interval for the procedural justice–POS effect size, the procedural justice–LMX effect size, and so forth. The same pattern tended to be evident for the other justice dimensions. It therefore does not seem that exchange quality indicator serves as an important moderator of the justice–social exchange quality relationship, lending further justification to our decision to employ a second-order social exchange quality latent variable.

Table 7
Justice and OCB With Entity Versus Event Breakdowns

Justice dimensions	OCB		OCBO		OCBS		OCBI	
	<i>r</i> (95% CI) <i>k</i> (<i>N</i>)	<i>r_c</i> (80% CV) <i>SDr_c</i> (% <i>V_{art}</i>)	<i>r</i> (95% CI) <i>k</i> (<i>N</i>)	<i>r_c</i> (80% CV) <i>SDr_c</i> (% <i>V_{art}</i>)	<i>r</i> (95% CI) <i>k</i> (<i>N</i>)	<i>r_c</i> (80% CV) <i>SDr_c</i> (% <i>V_{art}</i>)	<i>r</i> (95% CI) <i>k</i> (<i>N</i>)	<i>r_c</i> (80% CV) <i>SDr_c</i> (% <i>V_{art}</i>)
Procedural justice	.23 (.20, .26) 71 (16,864)	.30 (.07, .54) .18 (16.07)	.25 (.22, .29) 51 (12,225)	.32 (.13, .52) .15 (20.44)	.25 (.20, .30) 11 (1,708)	.33 (.23, .43) .08 (58.09)	.17 (.13, .21) 36 (8,309)	.20 (.03, .38) .14 (24.21)
Entity-based	.24 (.20, .28) 44 (11,114)	.31 (.06, .57) .20 (13.63)	.25 (.21, .30) 34 (8,062)	.33 (.12, .54) .17 (18.12)	.27 (.22, .33) 8 (1,295)	.36 (.28, .45) .07 (65.82)	.22 (.15, .28) 20 (3,881)	.26 (.07, .45) .15 (23.74)
Event-based	.21 (.16, .26) 27 (5,750)	.28 (.08, .48) .16 (23.12)	.25 (.20, .31) 17 (4,163)	.31 (.16, .46) .12 (28.78)	.19 (.10, .28) 3 (413)	.23 (.23, .23) .00 (100.00)	.13 (.08, .18) 16 (4,428)	.15 (.03, .28) .10 (32.34)
Distributive justice	.17 (.14, .20) 36 (10,100)	.21 (.09, .33) .09 (36.89)	.18 (.14, .22) 25 (8,106)	.22 (.09, .35) .10 (30.47)	.20 (.14, .26) 6 (2,261)	.25 (.15, .35) .08 (37.89)	.14 (.11, .18) 22 (6,256)	.17 (.08, .26) .07 (47.22)
Entity-based	.17 (.13, .21) 20 (5,582)	.21 (.11, .31) .08 (45.36)	.19 (.14, .23) 17 (5,079)	.24 (.12, .35) .09 (36.97)	.23 (.17, .30) 6 (2,525)	.29 (.18, .41) .09 (28.10)	.15 (.11, .19) 14 (3,828)	.17 (.10, .25) .06 (62.83)
Event-based	.17 (.12, .22) 16 (4,518)	.21 (.07, .34) .11 (29.42)	.17 (.10, .24) 8 (3,027)	.20 (.06, .34) .11 (22.15)	.16 (.04, .28) 1 (265)	.18 (.18, .18) .00 (—)	.14 (.09, .20) 9 (2,957)	.16 (.06, .27) .08 (36.44)
Interpersonal justice	.32 (.24, .40) 13 (2,533)	.43 (.15, .71) .22 (12.79)	.30 (.21, .38) 9 (1,760)	.37 (.16, .59) .17 (19.46)	.39 (.28, .50) 4 (781)	.47 (.35, .60) .10 (35.90)	.26 (.16, .36) 4 (1,146)	.31 (.18, .43) .10 (29.77)
Entity-based	.28 (.20, .37) 8 (1,941)	.37 (.13, .62) .19 (13.50)	.28 (.21, .35) 5 (1,257)	.36 (.19, .54) .13 (23.52)	.35 (.26, .43) 2 (448)	.46 (.46, .46) .00 (100.00)	.26 (.16, .36) 4 (1,146)	.31 (.18, .43) .10 (29.77)
Event-based	.44 (.32, .56) 5 (592)	.62 (.36, .87) .20 (19.60)	.34 (.15, .52) 4 (503)	.40 (.11, .69) .23 (15.45)	.45 (.25, .66) 2 (333)	.50 (.31, .69) .15 (17.00)	— —	— —
Informational justice	.30 (.24, .37) 8 (1,937)	.42 (.20, .65) .18 (16.68)	.26 (.20, .33) 8 (1,737)	.32 (.22, .42) .08 (48.24)	.40 (.22, .58) 3 (616)	.50 (.28, .72) .17 (15.80)	.26 (.20, .32) 5 (1,352)	.30 (.28, .33) .02 (92.18)
Entity-based	.28 (.22, .34) 6 (1,583)	.36 (.26, .46) .08 (48.95)	.26 (.19, .33) 5 (1,246)	.33 (.24, .42) .07 (54.78)	.26 (.16, .36) 2 (351)	.34 (.34, .34) .00 (100.00)	.26 (.20, .32) 5 (1,352)	.30 (.28, .33) .02 (92.18)
Event-based	.40 (.27, .54) 2 (354)	.70 (.40, 1.00) .24 (14.28)	.26 (.11, .42) 3 (491)	.30 (.17, .43) .10 (40.03)	.58 (.50, .66) 1 (265)	.71 (.71, .71) .00 (—)	— —	— —

Note. Dashes indicate cells where the number of relevant studies is 0 (or 1 in the case of %*V_{art}* calculations). OCB = organizational citizenship behavior; OCBO = OCB targeted to the organization; OCBS = OCB targeted to the supervisor; OCBI = OCB targeted to coworkers; *r* = uncorrected population correlation; CI = confidence interval around uncorrected population correlation; *r_c* = corrected population correlation; CV = credibility interval around weighted corrected mean correlation; *k* = number of studies; *N* = cumulative sample size; %*V_{art}* = percentage of variance in *r_c* explained by study artifacts.

justice (.04). All four dimensions also had significant indirect effects on OCB: interpersonal justice (.20), procedural justice (.19), distributive justice (.11), and informational justice (.06). In contrast, none of the four justice dimensions had a significant indirect effect on CWB, with indirect effects ranging from .01 to .03. The effects of procedural, distributive, and informational justice on CWB were almost entirely direct and not transmitted through social exchange quality. These results therefore offer partial support for Hypothesis 5.

Results for Affect Hypotheses

Hypotheses 8a–8b predicted that justice would be positively related to (a) state positive affect and negatively related to (b) state negative affect. Tables 14 and 15 provide the results for state affect. Although no focus-matching or event versus entity predictions were offered for state affect, the tables include those breakdowns to make our results as informative as possible. As with our exchange-based results, the moderators exerted few significant effects. In general, the results for justice and state affect revealed moderate relationships. The results for positive affect were as follows: procedural justice (*r* = .39; *r_c* = .45), distributive justice (*r* = .34; *r_c* = .39), informational justice (*r* = .32; *r_c* = .36), and interpersonal justice (*r* = .29; *r_c* = .32). The results for state negative affect were as follows: distributive justice (*r* = -.32; *r_c* = -.37), procedural justice (*r* = -.29; *r_c* = -.34), interpersonal justice (*r* = -.27; *r_c* = -.30), and informational justice (*r* = -.23; *r_c* = -.27).

Hypothesis 9 predicted that the relationship between organizational justice and behavioral outcomes would be mediated by state positive

affect and state negative affect. As with Hypothesis 7, this prediction was tested with meta-analytic SEM (Viswesvaran & Ones, 1995). Table 16 reveals the portion of the meta-analytic correlation matrix not already presented in Tables 1–11 and 14–15, with all correlations representing corrected values. The table represents 10 additional meta-analyses that were conducted using the samples in our review. Note that we could not compare these additional effect sizes to existing meta-analyses because the only relevant one we uncovered combined state affect with trait affectivity (Dalal, 2005).

We tested Hypothesis 9 using the same procedures described for Hypothesis 7, with the resulting model having an acceptable fit to the data: $\chi^2(1, N = 1691) = 292.89$; CFI = .97; IFI = .97; SRMR = .069. The path coefficients are shown in Figure 2. Procedural justice ($\beta = .29$) and distributive justice ($\beta = .17$) had significant unique effects on state positive affect. All four justice dimensions had significant unique effects on state negative affect, with specific coefficients in descending order as follows: distributive justice ($\beta = -.26$), interpersonal justice ($\beta = -.17$), procedural justice ($\beta = -.14$), and informational justice ($\beta = .08$). State positive affect was a significant predictor of task performance ($\beta = .27$), OCB ($\beta = .64$), and CWB ($\beta = -.19$). State negative affect was a significant predictor of OCB ($\beta = .16$), and CWB ($\beta = .45$). As in Figure 1, we should note that some of these results reveal small unique effects that are in the opposite direction from their zero-order relationships, which often occurs in the presence of multicollinearity (Cohen et al., 2003).

The results of our mediation tests are shown in Table 17. Procedural justice (.07) and distributive justice (.04) had significant indirect

Table 8
Justice and Task Performance With Entity Versus
Event Breakdowns

Justice dimensions	Task performance	
	<i>r</i> (95% CI) <i>k</i> (<i>N</i>)	<i>r_c</i> (80% CV) <i>SDr_c</i> (% <i>V_{art}</i>)
Procedural justice	.19 (.15, .23) 57 (14,258)	.24 (-.01, .49) .20 (12.97)
Entity-based	.18 (.10, .25) 22 (7,062)	.25 (-.08, .58) .26 (6.37)
Event-based	.15 (.10, .20) 36 (8,918)	.18 (-.01, .37) .15 (20.71)
Distributive justice	.19 (.14, .24) 45 (11,336)	.26 (-.05, .57) .24 (8.97)
Entity-based	.19 (.11, .26) 17 (6,339)	.28 (-.07, .64) .28 (5.17)
Event-based	.14 (.09, .20) 30 (8,340)	.17 (-.03, .37) .16 (17.30)
Interpersonal justice	.13 (.07, .20) 11 (3,542)	.16 (.02, .29) .11 (26.19)
Entity-based	.19 (.11, .28) 6 (1,867)	.23 (.09, .36) .10 (27.44)
Event-based	.07 (.01, .12) 5 (1,675)	.08 (.04, .11) .03 (86.58)
Informational justice	.13 (.05, .20) 11 (3,124)	.16 (-.01, .34) .14 (22.91)
Entity-based	.19 (.06, .32) 4 (1,127)	.24 (.05, .43) .15 (18.18)
Event-based	.09 (.01, .17) 7 (1,997)	.12 (-.02, .26) .11 (33.31)

Note. *r* = uncorrected population correlation; CI = confidence interval around uncorrected population correlation; *r_c* = corrected population correlation; CV = credibility interval around weighted corrected mean correlation; *k* = number of studies; *N* = cumulative sample size; %*V_{art}* = percentage of variance in *r_c* explained by study artifacts.

effects on task performance. Similarly, procedural justice (.17) and distributive justice (.06) had significant indirect effects on OCB. Three justice dimensions had significant indirect effects on CWB: distributive justice (-.15), procedural justice (-.11), and interpersonal justice (-.08). When comparing these results to the results in Table 13, it appears that the relationship between justice and CWB may be more explainable by affect than by social exchange quality. Taken together, these results offer partial support for Hypothesis 9.

Discussion

The decade of research since the flurry of meta-analytic reviews has witnessed the rise of social exchange theory as the dominant lens for examining justice–outcome relationships and the emergence of affect as an alternative lens for justice effects. The purpose of this review was to use meta-analytic methods to examine critical questions that remain with both lenses and to gauge their adequacy as theoretical guides for future research. As the discussion below illustrates, some of our findings seem to go against the popular consensus in the literature, with important implications for how justice research is conceptualized, planned, and executed. Other findings hint at the potential value in integrating exchange-based research on justice with affect-based research on justice—something that unfortunately remains all too rare.

Implications for Exchange-Based Theorizing

With respect to social exchange theory, our results yielded strong relationships between the justice dimensions and indicators of social exchange quality, and moderate relationships between the justice dimensions and reciprocative behaviors. Surprisingly, however, such relationships did not seem to be moderated by the degree to which the focus of the justice matched the target of the reciprocation. Beginning with studies by Masterson et al. (2000) and Rupp and Cropanzano (2002) and continuing with the theorizing in the target similarity model (Lavelle et al., 2007), the consensus in the literature has been that organization-focused justice would be more strongly related to organization-targeted outcomes, with supervisor-focused justice being more strongly related to supervisor-targeted outcomes. Of the 36 justice–outcome combinations relevant to such a prediction, the expected pattern was only uncovered to a significant degree in three cases. Notably, all three of those cases involved supervisor-focused justice and supervisor-targeted outcomes.

One reason why the focus-matching predictions were supported more frequently for supervisor-focused justice may be that that focus was associated with stronger relationships in general, regardless of whether the outcome was supervisor or organization targeted. Such stronger relationships allowed the predicted advantages for supervisor-focused justice on supervisor-targeted outcomes to emerge in a few cases, while preventing the predicted advantages for organization-focused justice to manifest with organization-targeted outcomes. Why might supervisor-focused justice be more predictive than organization-focused justice? It may be that supervisor-focused justice is viewed as more discretionary and intentional than organization-focused justice, making it more deserving of reciprocation. That premise would be consistent with theorizing by Scott, Colquitt, and Paddock (2009), who suggested that justice-relevant actions have more discretion when they are not constrained by organizational systems, when they are not limited to formal exchange events, and when they are not observable by the larger organization. Alternatively, it may be that supervisor-focused justice is simply more salient, observable, and interpretable than organization-focused justice. That premise would be consistent with Lind’s (2001) theorizing that individuals look to more interpretable and quickly encountered justice-relevant data when making decisions about cooperating with authorities.

Regardless, these results suggest that justice scholars could often explain more variance in outcomes of interest by referencing all four justice dimensions to supervisors, rather than the more modal practice of referencing procedural and distributive justice to the organization and interpersonal and informational justice to the supervisor. These results also suggest that less attention should be paid to whether operationalizations of social exchange quality or reciprocation are supervisor versus organization targeted. That is, a given study may not be limited just because it pairs supervisor-focused justice with POS or supervisor-focused justice with OCBO. Indeed, research by Eisenberger et al. (2010) revealed that many employees perceive high levels of supervisor’s organizational embodiment, meaning that supervisors are viewed as sharing the organization’s characteristics and sharing an identity with it. When such embodiment is high, exchange-based relationships should be more robust to differences in focus/target (Eisenberger et al., 2010). Indeed, our suggestion that less attention should be paid to focus matching is further supported by the findings that relationships with OCBI and CWBI were similar in

Table 9
Justice and CWB With Entity Versus Event Breakdowns

Justice dimensions	CWB		CWB0		CWB5		CWB10		CWB15	
	r (95% CI) k (N)	r_c (80% CV) SDr_c (% V_{art})	r (95% CI) k (N)	r_c (80% CV) SDr_c (% V_{art})	r (95% CI) k (N)	r_c (80% CV) SDr_c (% V_{art})	r (95% CI) k (N)	r_c (80% CV) SDr_c (% V_{art})	r (95% CI) k (N)	r_c (80% CV) SDr_c (% V_{art})
Procedural justice	-.23 (-.28, -.18) 30 (6,455)	-.28 (-.47, -.09) .15 (22.47)	-.23 (-.28, -.18) 17 (4,656)	-.28 (-.38, -.17) .08 (42.44)	-.23 (-.28, -.17) 7 (1,232)	-.31 (-.39, -.24) .06 (73.99)	-.23 (-.28, -.17) 20 (2,232)	-.31 (-.39, -.24) .06 (73.99)	-.16 (-.24, -.07) 6 (1,703)	-.20 (-.32, -.07) .09 (35.87)
Entity-based	-.21 (-.28, -.15) 17 (4,212)	-.26 (-.42, -.11) .12 (27.55)	-.20 (-.25, -.15) 7 (2,432)	-.24 (-.29, -.19) .04 (71.58)	-.20 (-.28, -.13) 3 (671)	-.25 (-.25, -.25) .00 (100.00)	-.20 (-.25, -.15) 4 (1,457)	-.25 (-.25, -.25) .00 (100.00)	-.15 (-.20, -.09) 4 (1,457)	-.19 (-.19, -.19) .00 (100.00)
Event-based	-.25 (-.35, .16) 13 (2,243)	-.31 (-.55, -.07) .18 (18.64)	-.15 (-.24, -.06) 10 (3,631)	-.18 (-.40, .03) .17 (13.13)	-.25 (-.33, -.18) 4 (561)	-.39 (-.42, -.35) .03 (95.12)	-.25 (-.33, -.18) 4 (561)	-.39 (-.42, -.35) .03 (95.12)	-.23 (-.59, .13) 2 (246)	-.26 (-.61, .10) .28 (11.49)
Distributive justice	-.22 (-.27, -.18) 24 (5,112)	-.26 (-.39, .14) .10 (39.33)	-.20 (-.26, -.13) 11 (2,931)	-.23 (-.37, -.08) .11 (27.68)	-.08 (-.41, .25) 4 (784)	-.10 (-.63, .44) .42 (4.32)	-.20 (-.31, -.03) 2 (556)	-.10 (-.63, .44) .42 (4.32)	-.11 (-.24, .01) 5 (788)	-.15 (-.33, .03) .14 (31.43)
Entity-based	-.20 (-.27, -.14) 16 (3,329)	-.24 (-.40, -.09) .12 (31.31)	-.16 (-.25, -.08) 6 (1,764)	-.19 (-.30, -.07) .09 (35.48)	-.17 (-.31, -.03) 2 (556)	-.20 (-.33, -.07) .10 (33.51)	-.17 (-.31, -.03) 2 (556)	-.20 (-.33, -.07) .10 (33.51)	-.10 (-.25, .05) 4 (659)	-.14 (-.34, .07) .16 (27.18)
Event-based	-.08 (-.20, .03) 9 (3,100)	-.08 (-.35, .19) .21 (8.84)	-.06 (-.20, .08) 6 (2,779)	-.06 (-.33, .21) .21 (7.32)	-.12 (-.64, .88) 2 (228)	-.16 (-.73, 1.00) .70 (2.87)	-.12 (-.64, .88) 2 (228)	-.16 (-.73, 1.00) .70 (2.87)	-.19 (-.36, -.02) 1 (129)	-.21 (-.21, -.21) .00 (-)
Interpersonal justice	-.20 (-.27, -.13) 10 (2,043)	-.24 (-.36, -.11) .10 (39.85)	-.16 (-.21, -.11) 6 (1,717)	-.19 (-.19, -.19) .00 (100.00)	-.28 (-.58, .02) 3 (638)	-.34 (-.74, .06) .31 (6.07)	-.28 (-.58, .02) 3 (638)	-.34 (-.74, .06) .31 (6.07)	-.12 (-.25, .01) 1 (231)	-.14 (-.14, -.14) .00 (-)
Entity-based	-.20 (-.29, -.12) 7 (1,669)	-.24 (-.39, -.09) .12 (30.23)	-.14 (-.20, -.08) 3 (1,013)	-.17 (-.17, -.17) .00 (100.00)	-.45 (-.53, -.37) 1 (424)	-.54 (-.54, -.54) .00 (-)	-.45 (-.53, -.37) 1 (424)	-.54 (-.54, -.54) .00 (-)	-.12 (-.25, .01) 1 (231)	-.14 (-.14, -.14) .00 (-)
Event-based	-.20 (-.30, -.10) 3 (374)	-.23 (-.23, -.23) .00 (100.00)	-.19 (-.26, -.12) 3 (704)	-.21 (-.21, -.21) .00 (100.00)	.05 (-.25, .35) 2 (214)	.06 (-.26, .38) .25 (20.15)	.05 (-.25, .35) 2 (214)	.06 (-.26, .38) .25 (20.15)	— —	— —
Informational justice	-.23 (-.30, -.17) 9 (1,974)	-.29 (-.41, -.17) .09 (40.47)	-.18 (-.25, -.11) 5 (1,226)	-.22 (-.29, -.15) .06 (64.05)	-.25 (-.58, .08) 2 (526)	-.31 (-.68, .06) .29 (6.05)	-.25 (-.58, .08) 2 (526)	-.31 (-.68, .06) .29 (6.05)	-.18 (-.26, -.10) 2 (531)	-.29 (-.34, -.24) .04 (85.62)
Entity-based	-.23 (-.31, -.15) 5 (1,441)	-.29 (-.42, -.17) .10 (33.79)	-.16 (-.22, -.09) 2 (782)	-.19 (-.19, -.19) .00 (100.00)	-.37 (-.45, -.29) 1 (424)	-.45 (-.45, -.45) .00 (-)	-.37 (-.45, -.29) 1 (424)	-.45 (-.45, -.45) .00 (-)	— —	— —
Event-based	-.24 (-.36, -.13) 4 (533)	-.29 (-.40, -.18) .09 (54.97)	-.23 (-.36, -.09) 3 (444)	-.28 (-.41, -.14) .10 (46.92)	.23 (.05, .41) 1 (102)	.30 (.30, .30) .00 (-)	.23 (.05, .41) 1 (102)	.30 (.30, .30) .00 (-)	-.18 (-.26, -.10) 2 (531)	-.29 (-.34, -.24) .04 (85.62)

Note. Dashes indicate cells where the number of relevant studies is 0 (or 1 in the case of % V_{art} calculations). CWB = counterproductive work behavior; CWB0 = CWB targeted to the organization; CWB5 = CWB targeted to the supervisor; CWB10 = CWB targeted to coworkers; CWB15 = CWB targeted to coworkers; r = uncorrected population correlation; CI = confidence interval around uncorrected population correlation; r_c = corrected population correlation; CV = credibility interval around weighted corrected mean correlation; k = number of studies; N = cumulative sample size; % V_{art} = percentage of variance in r_c explained by study artifacts.

Table 10
Justice and Trust With Entity Versus Event Breakdowns

Justice dimensions	Trust in supervisor		Trust in organization	
	<i>r</i> (95% CI) <i>k</i> (<i>N</i>)	<i>r_c</i> (80% CV) <i>SDr_c</i> (% <i>V_{art}</i>)	<i>r</i> (95% CI) <i>k</i> (<i>N</i>)	<i>r_c</i> (80% CV) <i>SDr_c</i> (% <i>V_{art}</i>)
Procedural justice	.56 (.49, .64) 31 (7,877)	.65 (.36, .93) .22 (4.98)	.54 (.48, .60) 22 (5,898)	.63 (.44, .82) .15 (10.62)
Entity-based	.53 (.43, .62) 14 (4,218)	.61 (.36, .86) .19 (6.14)	.43 (.27, .58) 5 (1,802)	.54 (.29, .80) .20 (6.85)
Event-based	.61 (.50, .72) 17 (3,659)	.69 (.37, 1.00) .24 (4.14)	.56 (.49, .63) 16 (3,870)	.64 (.44, .83) .15 (10.51)
Distributive justice	.40 (.35, .46) 26 (7085)	.45 (.26, .65) .15 (12.32)	.47 (.41, .52) 20 (6,409)	.54 (.37, .71) .13 (13.01)
Entity-based	.41 (.34, .48) 17 (5,436)	.46 (.25, .67) .17 (9.09)	.44 (.36, .52) 6 (2,138)	.54 (.40, .68) .11 (17.82)
Event-based	.38 (.31, .45) 9 (1,649)	.42 (.31, .53) .09 (39.49)	.48 (.41, .55) 14 (4,271)	.54 (.36, .72) .14 (11.42)
Interpersonal justice	.51 (.45, .57) 8 (3,588)	.59 (.48, .70) .09 (18.05)	.49 (.42, .56) 7 (1,967)	.60 (.48, .73) .10 (22.28)
Entity-based	.51 (.45, .60) 7 (3,323)	.60 (.48, .71) .09 (16.48)	.46 (.40, .53) 5 (1,734)	.58 (.47, .69) .09 (25.19)
Event-based	.43 (.33, .53) 1 (265)	.51 (.51, .51) .00 (—)	.68 (.61, .75) 2 (233)	.77 (.77, .77) .00 (100.00)
Informational justice	.54 (.44, .65) 9 (2,000)	.65 (.42, .88) .18 (9.19)	.45 (.39, .51) 5 (1,730)	.55 (.53, .58) .02 (88.15)
Entity-based	.56 (.44, .68) 8 (1,735)	.66 (.42, .91) .19 (7.71)	.43 (.35, .51) 3 (1,373)	.54 (.50, .59) .03 (67.82)
Event-based	.44 (.34, .54) 1 (265)	.58 (.58, .58) .00 (—)	.51 (.43, .59) 2 (357)	.59 (.59, .59) .00 (100.00)

Note. Boldfaced results represent significant differences across moderator breakdowns. Dashes indicate cells where the number of relevant studies is 0 (or 1 in the case of %*V_{art}* calculations). *r* = uncorrected population correlation; CI = confidence interval around uncorrected population correlation; *r_c* = corrected population correlation; CV = credibility interval around weighted corrected mean correlation; *k* = number of studies; *N* = cumulative sample size; %*V_{art}* = percentage of variance in *r_c* explained by study artifacts.

magnitude to their authority-targeted counterparts, despite the fact that coworkers should not be responsible in any way for justice levels. It may be that employees do not view reciprocation in terms that are as nuanced as contemporary exchange theorizing would suggest. That is, they may view reciprocation in coarse terms like “be a good employee,” which would include positive behaviors directed at a number of different targets.

Our results also suggest that exchange-based findings are robust to Cropanzano, Byrne, et al.’s (2001) distinction between events and entities. Drawing on George and Jones’s (2000) discussion of time aggregation and bracketing, we had reasoned that perceptions of entities would be more imbued with past instances of fair treatment, as well as anticipations of future justice rule adherence, relative to perceptions of events. Given that the social exchange dynamic is deepened by perceptions of the past and the future (Cropanzano & Byrne, 2000; Cropanzano & Mitchell, 2005; Cropanzano & Rupp, 2008; Cropanzano, Rupp, et al., 2001), that more expansive bracketing could have resulted in stronger relationships with indicators of exchange quality and reciprocative behaviors. Instead, justice conceptualized as an event yielded similar relationships to justice conceptualized as an entity. Those findings lend support to the notion that individuals form global justice judgments quickly, using whatever information is available and easily interpreted (Lind, 2001). To the degree that this is so, the fairness of relevant events will wind up functioning as a powerful indicator of the fairness of relevant entities.

Moving beyond the focus-matching and event versus entity issues, our results did support the premise that indicators of social exchange

quality mediate the relationships between justice and reciprocative behaviors. That premise is a core aspect of contemporary theorizing on justice and social exchange (Cropanzano & Mitchell, 2005; Cropanzano & Rupp, 2008; Cropanzano, Rupp, et al., 2001), as evidenced in a number of empirical studies (e.g., Konovsky & Pugh, 1994; Masterson et al., 2000; Moorman et al., 1998; Rupp & Cropanzano, 2002). Two aspects of our results stand out, however. First, although the justice dimensions had indirect effects on OCB and task performance through social exchange quality, no such effects were observed for CWB. That lack of an indirect effect is largely due to the weaker relationships between the exchange quality indicators and CWB, relative to task performance and (especially) OCB. Such results echo the view that OCB and CWB are not merely opposite ends of the same discretionary continuum (Dalal, 2005) and suggest that CWB may arise from an altogether different type of mediator.

Second, our mediation results revealed a number of direct effects of justice on behavior—effects that were not mediated by social exchange quality. Not surprisingly, three of those direct effects center on CWB, with procedural, distributive, and informational justice having negative direct linkages with such behaviors. In addition, distributive justice seemed to foster task performance for reasons that went beyond exchange quality, and the informational justice–OCB relationship also seemed to be explained by some other mechanism. Such results suggest that, even if social exchange theory is the most predictively valid theoretical guide for explaining justice reactions, it need not be the only guide used for that purpose. Indeed, our results

Table 11
Justice and Organizational Commitment, POS, and LMX With Entity Versus Event Breakdowns

Justice dimensions	Organizational commitment		POS		LMX	
	<i>r</i> (95% CI) <i>k</i> (<i>N</i>)	<i>r_c</i> (80% CV) <i>SDr_c</i> (% <i>V_{art}</i>)	<i>r</i> (95% CI) <i>k</i> (<i>N</i>)	<i>r_c</i> (80% CV) <i>SDr_c</i> (% <i>V_{art}</i>)	<i>r</i> (95% CI) <i>k</i> (<i>N</i>)	<i>r_c</i> (80% CV) <i>SDr_c</i> (% <i>V_{art}</i>)
Procedural justice	.45 (.42, .48) 105 (43,723)	.53 (.32, .74) .17 (7.41)	.51 (.45, .57) 29 (11,072)	.59 (.38, .80) .16 (6.96)	.43 (.35, .50) 17 (4,351)	.50 (.28, .71) .17 (11.82)
Entity-based	.46 (.43, .50) 54 (26,098)	.55 (.35, .74) .15 (7.62)	.53 (.47, .59) 22 (9,017)	.61 (.41, .80) .16 (6.52)	.41 (.31, .51) 11 (2,839)	.47 (.24, .69) .17 (10.74)
Event-based	.43 (.38, .48) 49 (17,044)	.50 (.26, .74) .19 (7.24)	.41 (.31, .51) 7 (2,055)	.51 (.29, .73) .17 (10.80)	.44 (.35, .54) 7 (1,787)	.53 (.35, .71) .14 (15.43)
Distributive justice	.40 (.37, .43) 77 (41,773)	.49 (.27, .72) .17 (5.51)	.45 (.38, .52) 17 (7,085)	.51 (.31, .71) .16 (7.55)	.37 (.30, .44) 16 (4,096)	.42 (.21, .62) .16 (13.38)
Entity-based	.42 (.39, .46) 44 (27,796)	.54 (.33, .74) .16 (5.48)	.48 (.41, .56) 13 (5,915)	.54 (.36, .72) .14 (7.78)	.37 (.30, .45) 11 (2,864)	.43 (.26, .59) .13 (18.90)
Event-based	.35 (.30, .40) 33 (13,977)	.41 (.18, .63) .17 (7.67)	.29 (.19, .39) 4 (1,170)	.34 (.18, .50) .12 (21.13)	.36 (.22, .51) 6 (1,420)	.42 (.16, .68) .20 (9.55)
Interpersonal justice	.35 (.27, .40) 23 (11,808)	.41 (.23, .58) .14 (9.81)	.52 (.47, .57) 8 (3,785)	.60 (.49, .72) .09 (14.51)	.51 (.38, .64) 5 (1,351)	.57 (.41, .72) .12 (15.33)
Entity-based	.35 (.29, .40) 19 (10,701)	.40 (.23, .58) .13 (9.61)	.52 (.47, .57) 8 (3,785)	.60 (.49, .72) .09 (14.51)	.51 (.38, .64) 5 (1,351)	.57 (.41, .72) .12 (15.33)
Event-based	.37 (.22, .51) 4 (1,107)	.41 (.20, .63) .17 (10.86)	—	—	—	—
Informational justice	.32 (.29, .36) 16 (8,572)	.38 (.28, .49) .08 (23.47)	.50 (.05, .58) 6 (1,845)	.58 (.51, .64) .05 (47.49)	.45 (.23, .67) 4 (1,037)	.53 (.25, .82) .22 (7.22)
Entity-based	.33 (.29, .37) 10 (7,036)	.39 (.30, .47) .07 (25.15)	.53 (.49, .58) 4 (1,496)	.60 (.60, .60) .00 (100.00)	.48 (.20, .75) 3 (851)	.56 (.26, .86) .24 (5.35)
Event-based	.30 (.21, .40) 6 (1,536)	.37 (.20, .54) .13 (21.80)	.37 (.28, .46) 2 (349)	.46 (.46, .46) .00 (100.00)	.32 (.19, .45) 1 (186)	.41 (.41, .41) .00 (—)

Note. Boldfaced results represent significant differences across moderator breakdowns. Dashes indicate cells where the number of relevant studies is 0 (or 1 in the case of %*V_{art}* calculations). POS = perceived organizational support; LMX = leader–member exchange; *r* = uncorrected population correlation; CI = confidence interval around uncorrected population correlation; *r_c* = corrected population correlation; CV = credibility interval around weighted corrected mean correlation; *k* = number of studies; *N* = cumulative sample size; %*V_{art}* = percentage of variance in *r_c* explained by study artifacts.

for state positive and negative affect hint at a complementary lens for explaining justice reactions.

Implications for Affect-Based Theorizing

Turning to affect, our review provides an extensive meta-analytic summary of the relationship between justice and both positive and negative state affect. Scholars have pointed to the relative lack of integration of justice and affect with some surprise, given the intuitive connections between the two literatures (Cropanzano et al., 2011; De Cremer, 2007a). Our results revealed that justice was moderately positively related to state positive affect and moderately negatively related to state negative affect. Put simply, justice seems to make

people feel good to the same degree that injustice makes them feel bad. The similar magnitude of the relationship goes against the notion that fair treatment is merely a steady state (Organ, 1990; Rupp & Spencer, 2006) that would not be noticeable enough to trigger the primary appraisal described by affect theories. That similarity in magnitude also belies the literature’s focus on the negative, given that twice as many justice studies have included negative affect as positive affect.

Importantly, our results also revealed that several justice–behavior relationships were mediated by state affect. Specifically, the relationships between procedural and distributive justice and task performance were mediated by state positive affect. Similarly, the relation-

Table 12
Correlations Among Social Exchange Quality Indicators and Behavioral Outcomes

Variable	1	2	3	4	5	6	7	8
1. POS	—							
2. LMX	.54 (7, 2444)	—						
3. Organizational commitment	.64 (21, 8038)	.43 (10, 2921)	—					
4. Trust in organization	.79 (4, 2926)	.57 (3, 818)	.57 (17, 6630)	—				
5. Trust in supervisor	.48 (4, 1171)	.90 (2, 453)	.51 (15, 4238)	.53 (7, 2063)	—			
6. Task performance	.13 (7, 2296)	.36 (10, 2550)	.23 (20, 4995)	.19 (3, 1372)	.32 (5, 749)	—		
7. OCB	.40 (10, 2850)	.38 (10, 2831)	.38 (30, 8966)	.29 (8, 3027)	.48 (10, 2355)	.58 (20, 5144)	—	
8. CWB	-.13 (3, 616)	-.14 (2, 453)	-.24 (3, 659)	-.25 (2, 232)	-.21 (2, 453)	-.47 (5, 933)	-.51 (10, 2384)	—

Note. Table contents: *r_c* (*k*, *N*). POS = perceived organizational support; LMX = leader–member exchange; OCB = organizational citizenship behavior; CWB = counterproductive work behavior; *r_c* = corrected population correlation; *k* = number of studies; *N* = cumulative sample size.

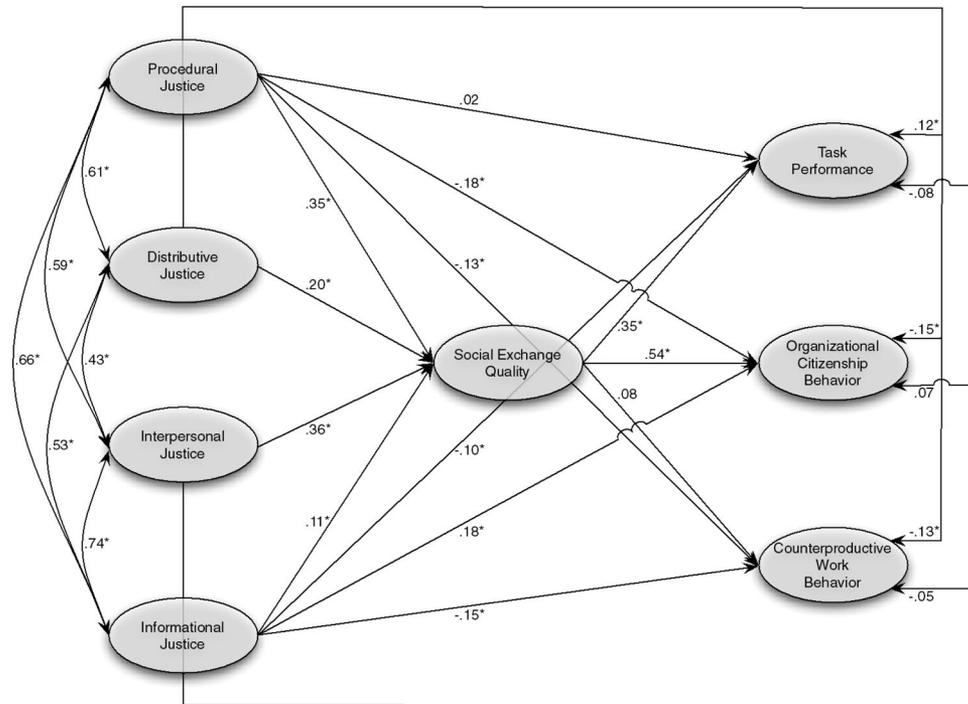


Figure 1. Structural equation modeling results with social exchange quality. * $p < .05$.

ships between those two justice dimensions and OCB were mediated by state positive affect and (to a lesser extent) state negative affect. Most interestingly, our results yielded significant indirect effects of procedural, distributive, and interpersonal justice on CWB through state affect. It may be that the justice–CWB relationship is not as cold and calculating as exchange-based explanations would suggest but is instead explained by more hot or spontaneous instances of affect-induced deviance (e.g., Fox et al., 2001; Goldman, 2003; Judge, Scott, & Ilies, 2006). Affect-based justice research may therefore stand as an important complement to exchange-based justice research.

Suggestions for Research Integrating Social Exchange and Affect

Unfortunately, potential synergies between exchange-based justice research and affect-based justice research remain unknown because justice scholars tend to choose one lens or the other when planning and executing their work. One explanation for that dearth of integra-

tive work is the relatively recent focus on affect in the justice literature. Another explanation, however, is practical. Exchange-based work tends to focus on relationships with entities, often in the field and often using survey measures that reference an extended time period. Affect-based work tends to focus on events and occurs either in the lab or with experience-sampling methodology studies that focus on the here and now. Indeed, if we were to try to combine the meta-analytic correlation matrices in Tables 12 and 16, in an effort to test an integrative mediating model, three of the 10 affect–social exchange quality cells would be empty, and another four would be based on a single study.

We see a number of promising avenues for creating more of an intersection between work on justice and social exchange and work on justice and affect. Figure 3 summarizes many of those avenues. On the one hand, the process of engaging in exchange transactions can trigger a number of emotions, ranging from pride and gratitude to anger and shame (Lawler &

Table 13
Tests of Mediation for Social Exchange Quality

Justice dimensions	Task performance			OCB			CWB		
	Total effect	Direct effect	Indirect effect	Total effect	Direct effect	Indirect effect	Total effect	Direct effect	Indirect effect
Procedural justice	.14*	.02	.12*	.01	-.18*	.19*	-.10*	-.13*	.03
Distributive justice	.19*	.12*	.07*	-.04	-.15*	.11*	-.11*	-.13*	.02
Interpersonal justice	.04	-.08	.12*	.26*	.06	.20*	-.02	-.05	.03
Informational justice	-.06	-.10	.04*	.24*	.18*	.06*	-.14*	-.15*	.01

Note. $N = 1,606$. OCB = organizational citizenship behavior; CWB = counterproductive work behavior.
* $p < .05$.

Table 14
Justice and Affect With Focus Breakdowns

Justice dimensions	Positive affect			Negative affect		
	<i>r</i> (95% CI) <i>k</i> (<i>N</i>)	<i>r_c</i> (80% CV) <i>SDr_c</i> (% <i>V_{art}</i>)		<i>r</i> (95% CI) <i>k</i> (<i>N</i>)	<i>r_c</i> (80% CV) <i>SDr_c</i> (% <i>V_{art}</i>)	
Procedural justice	.39 (.27, .50) 15 (2,943)	.45 (.14, .76) .24 (8.14)		-.30 (-.38, -.22) 35 (7,318)	-.35 (-.69, -.04) .26 (7.48)	
Organization-focused	.37 (.23, .51) 9 (2,120)	.43 (.13, .73) .23 (7.60)		-.30 (-.42, -.20) 24 (4,949)	-.36 (-.74, .03) .30 (5.92)	
Supervisor-focused	.43 (.24, .62) 6 (823)	.53 (.17, .83) .26 (9.34)		-.30 (-.46, -.15) 8 (1,071)	-.35 (-.64, -.05) .23 (13.86)	
Distributive justice	.34 (.28, .41) 11 (2,678)	.39 (.25, .53) .11 (26.93)		-.32 (-.40, -.25) 21 (5,447)	-.37 (-.62, -.12) .19 (10.09)	
Organization-focused	.32 (.22, .43) 5 (1,721)	.36 (.23, .49) .10 (23.02)		-.32 (-.43, -.20) 10 (3,055)	-.35 (-.59, -.11) .19 (8.98)	
Supervisor-focused	.35 (.24, .45) 4 (620)	.39 (.27, .50) .09 (45.30)		-.32 (-.50, -.14) 5 (689)	-.38 (-.66, -.09) .22 (15.08)	
Interpersonal justice	.29 (.10, .49) 2 (472)	.32 (.15, .49) .13 (20.62)		-.27 (-.42, -.12) 8 (2,622)	-.30 (-.60, -.01) .23 (5.94)	
Organization-focused	—	—		-.84 (-.91, -.77) 1 (76)	-.93 (-.93, -.93) .00 (—)	
Supervisor-focused	.29 (.10, .49) 2 (472)	.32 (.16, .49) .13 (20.62)		-.21 (-.38, -.05) 6 (1,869)	-.24 (-.54, .05) .23 (6.75)	
Informational justice	.32 (.13, .52) 2 (472)	.36 (.17, .53) .14 (17.02)		-.23 (-.30, -.17) 5 (1,734)	-.27 (-.33, -.22) .04 (63.37)	
Organization-focused	—	—		-.17 (-.28, -.10) 1 (788)	-.20 (-.20, -.20) .00 (—)	
Supervisor-focused	.32 (.13, .52) 2 (472)	.36 (.17, .54) .14 (17.02)		-.29 (-.35, -.23) 4 (946)	-.33 (-.33, -.33) .00 (100.00)	

Note. Boldfaced results represent significant differences across moderator breakdowns. Dashes indicate cells where the number of relevant studies is 0 (or 1 in the case of %*V_{art}* calculations). *r* = uncorrected population correlation; CI = confidence interval around uncorrected population correlation; *r_c* = corrected population correlation; CV = credibility interval around weighted corrected mean correlation; *k* = number of studies; *N* = cumulative sample size; %*V_{art}* = percentage of variance in *r_c* explained by study artifacts.

Table 15
Justice and Affect With Entity Versus Event Breakdowns

Justice dimensions	State affect					
	Positive affect			Negative affect		
	<i>r</i> (95% CI) <i>k</i> (<i>N</i>)	<i>r_c</i> (80% CV) <i>SDr_c</i> (% <i>V_{art}</i>)		<i>r</i> (95% CI) <i>k</i> (<i>N</i>)	<i>r_c</i> (80% CV) <i>SDr_c</i> (% <i>V_{art}</i>)	
Procedural justice	.39 (.27, .50) 15 (2,943)	.45 (.14, .76) .24 (8.14)		-.30 (-.38, -.22) 35 (7,318)	-.35 (-.69, -.04) .26 (7.48)	
Entity-based	.32 (.15, .48) 3 (713)	.37 (.20, .55) .14 (20.09)		-.27 (-.38, -.17) 10 (2,646)	-.32 (-.56, -.08) .19 (11.21)	
Event-based	.41 (.28, .54) 12 (2,230)	.48 (.14, .82) .26 (7.07)		-.30 (-.41, -.20) 26 (4,812)	-.35 (—, —) .26 (6.37)	
Distributive justice	.34 (.28, .41) 11 (2,678)	.39 (.25, .53) .11 (26.93)		-.32 (-.40, -.25) 21 (5,447)	-.37 (-.62, -.12) .19 (10.09)	
Entity-based	.33 (.24, .42) 6 (1,962)	.36 (.24, .48) .09 (26.57)		-.23 (-.30, -.16) 6 (2,184)	-.26 (-.37, -.15) .09 (28.94)	
Event-based	.39 (.28, .50) 5 (716)	.45 (.30, .60) .12 (33.65)		-.38 (-.48, -.28) 16 (3,401)	-.43 (-.71, -.15) .22 (9.32)	
Interpersonal justice	.29 (.10, .49) 2 (472)	.32 (.15, .49) .13 (20.62)		-.27 (-.42, -.12) 8 (2,622)	-.30 (-.60, -.01) .23 (5.94)	
Entity-based	.29 (.10, .49) 2 (472)	.32 (.15, .49) .13 (20.62)		-.28 (-.46, -.10) 6 (1,758)	-.31 (-.63, .01) .25 (5.76)	
Event-based	—	—		-.26 (-.51, -.01) 2 (864)	-.29 (-.54, -.04) .19 (6.53)	
Informational justice	.32 (.13, .52) 2 (472)	.36 (.17, .53) .14 (17.02)		-.23 (-.30, -.17) 5 (1,734)	-.27 (-.33, -.22) .04 (63.37)	
Entity-based	.32 (.13, .52) 2 (472)	.36 (.17, .53) .14 (17.02)		-.29 (-.36, -.22) 3 (786)	-.33 (-.33, -.33) .00 (100.00)	
Event-based	—	—		-.09 (-.33, .15) 2 (948)	-.11 (-.36, .14) .20 (7.05)	

Note. Dashes indicate cells where the number of relevant studies is 0 (or 1 in the case of %*V_{art}* calculations). *r* = uncorrected population correlation; CI = confidence interval around uncorrected population correlation; *r_c* = corrected population correlation; CV = credibility interval around weighted corrected mean correlation; *k* = number of studies; *N* = cumulative sample size; %*V_{art}* = percentage of variance in *r_c* explained by study artifacts.

Table 16
Correlations Among State Affect and Behavioral Outcomes

Variable	1	2	3	4	5
1. Positive affect	—				
2. Negative affect	-.52 (10, 2298)	—			
3. Task performance	.33 (3, 1312)	-.19 (6, 2408)	—		
4. OCB	.62 (2, 1117)	-.22 (2, 1117)	.58 (20, 5144)	—	
5. CWB	-.14 (2, 447)	.55 (9, 1607)	-.47 (5, 933)	-.51 (10, 2384)	—

Note. Table contents: $r_c(k, N)$. OCB = organizational citizenship behavior; CWB = counterproductive work behavior; r_c = corrected population correlation; k = number of studies; N = cumulative sample size.

Thye, 1999). Such theorizing can be supported by qualitative data illustrating that the process of forming exchange relationships in teams is associated with both positive affect (e.g., interest, fun, excitement, and comfort) and negative affect (frustration, annoyance, anxiety, and fear; Tse & Dasborough, 2008). On the other hand, the positive and negative affect created by discrete transaction events may go on to change perceptions of social exchange quality moving forward (Ballinger & Rockman, 2010). Such changes may become long lasting to the degree that the affect becomes encoded in memories of the events (Ballinger & Rockman, 2010). Thus, there are theoretical reasons to expect a nonrecursive relationship between social exchange quality and state affect. Moreover, the behaviors in which an individual engages in the context of an exchange relationship may themselves feed back to influence exchange quality and state affect. One’s own behaviors can trigger a number of self-focused emotions, including pride and guilt (Lazarus, 1991), and individuals could also use their own

behaviors as post hoc evidence of their exchange quality perceptions.

Examining the types of linkages featured in Figure 3 would require the removal of the design boundaries that may have helped separate research on social exchange from research on affect. We see three possibilities for removing such boundaries. First, laboratory studies could operationalize social exchange quality by creating an authority figure who could be supportive and trusted and who could serve as the target of commitment and exchange quality perceptions. Second, exchange quality perceptions could be built into experience-sampling methodology studies, given that past research has revealed daily within-person variation in both justice and reciprocative behaviors (Dalal, Lam, Weiss, Welch, & Hulin, 2009; Loi, Yang, & Diefendorff, 2009). Third, affect could be operationalized using a somewhat longer time horizon, allowing it to be incorporated into traditional field studies. For example, Fox et al. (2001) asked participants about the emotions they felt at work during

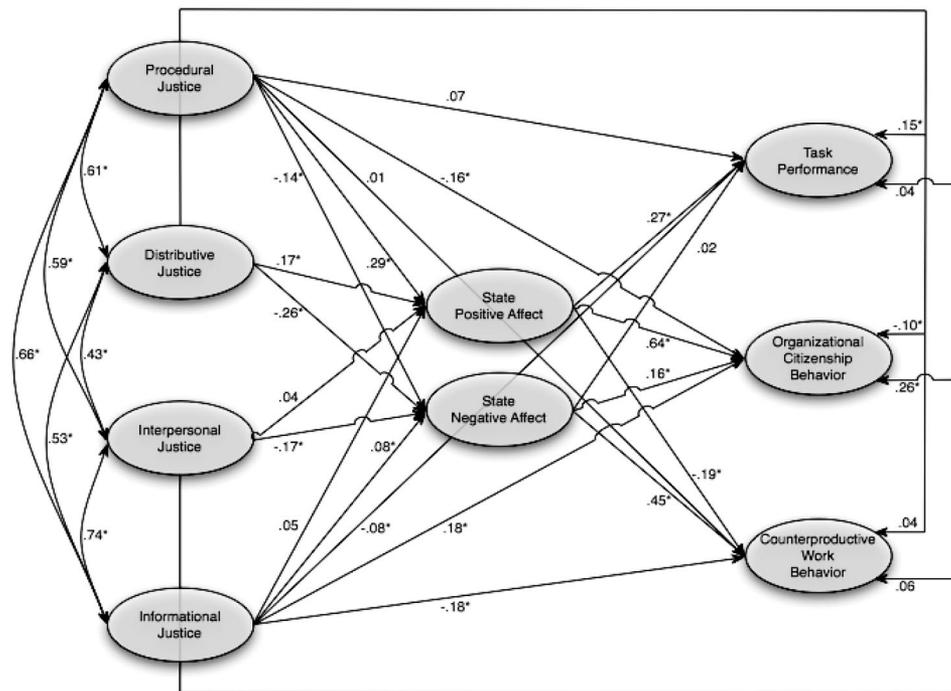


Figure 2. Structural equation modeling results with affect. * $p < .05$.

Table 17
Tests of Mediation for State Affect

Justice dimensions	Task performance			OCB			CWB		
	Total effect	Direct effect	Indirect effect	Total effect	Direct effect	Indirect effect	Total effect	Direct effect	Indirect effect
Procedural justice	.14*	.07	.07*	.01	-.16*	.17*	-.10*	.01	-.11*
Distributive justice	.19*	.15*	.04*	-.04	-.10*	.06*	-.11*	.04	-.15*
Interpersonal justice	.04	.04	.00	.26*	.26*	.00	-.02	.06	-.08*
Informational justice	-.06	-.08*	.02	.24*	.18*	.04	-.14*	-.18*	.04

Note. $N = 1,691$. OCB = organizational citizenship behavior; CWB = counterproductive work behavior.
 * $p < .05$.

the past 30 days, with their scales assessing enthusiasm, pride, happiness, anger, fear, and sadness. Any of these three options would allow scholars to examine social exchange and affect as simultaneous mediators of justice effects, while gaining a more nuanced look at the interplay of exchange quality, feeling states, and behaviors.

Limitations and Practical Implications

This review has some limitations that should be noted. As with any meta-analysis, it retains the limitations of the primary studies it summarizes. For example, many of the studies linking justice to the social exchange quality indicators used self-report variables collected at the same point in time. Thus, some of the relationships included in our meta-analyses may be inflated by common method bias (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). In addition, although our review represents the largest of its type in the justice literature, some justice–outcome breakdowns are based on a small number of studies and may be subject to second-order sampling error (Hunter & Schmidt, 2004). Other relationships were not investigated frequently enough to be included in our review. For example, psychological contract breach is another plausible indicator of social exchange relationships that could be meta-analyzed once enough research has been conducted (Cropanzano & Byrne, 2000; Cropanzano, Rupp, et al., 2001; Robinson & Rousseau, 1994). Future syntheses could also include indicators of economic exchange relationships, to explore whether they too serve as mediators of justice–outcome relationships. Potential indicators could include the metaphor of the ledger (Lim, 2002), the narrowness of one's role definition (Tepper, Lockhart, & Hoobler, 2001), or direct measures of economic exchange (Shore et al., 2006).

In addition, our results revealed significant heterogeneity in effect sizes, with most credibility intervals being quite wide and artifacts such as unreliability and sampling error unable to explain most of the effect size variation. Given that our focus-matching and event versus entity results yielded few significant contrasts, our review is largely unable to explain why justice effects differ from study to study with exchange- and affect-based outcomes.³ Part of that variation may be explained by interactions among the justice dimensions, which have been shown to be significant on a number of occasions (e.g., Masterson, 2001; Skarlicki & Folger, 1997). However, that variation may also be explained by a number of individual differences that do not vary on a between-study basis. The justice literature has identified three potentially relevant variables, including equity sensitivity (Huseman, Hatfield, & Miles, 1987), sensitivity to befallen injustice

(Schmitt, Neumann, & Montada, 1995), and justice orientation (H. Liao & Rupp, 2005). Other relevant variables can be found in the social exchange and affect literatures, including exchange ideology (Eisenberger et al., 1986) and affect intensity (Larsen & Diener, 1987). In many ways, this discussion echoes the admonitions of Nowakowski and Conlon (2005) who—after reflecting on the earlier meta-analytic reviews of the justice literature—encouraged scholars to attend more closely to environmental and individual moderators of justice effects.

Despite those limitations, our review offers important practical implications. Such implications often revolve around redesigning formal policies to be more consistent, accurate, equitable, or correctable. Although our review supports the value of such initiatives, our results suggest that more attention should be paid to fostering justice as a component of a supervisor's leadership style. Not only does supervisor-focused justice seem more mutable than organization-focused justice, it also tended to yield stronger effects on attitudes and behaviors in our review. A variety of human resources components could be leveraged to increase the general fairness of a company's supervisors. From a selection perspective, traits that predict the adherence to justice rules—such as emotional stability or empathy (Masterson, Byrne, & Hao, 2005; D. M. Mayer, Nishii, Schneider, & Goldstein, 2007)—could be considered when making placement decisions for supervisory employees. From a training perspective, new supervisors could be given training in justice principles, which has been shown to be an effective way of increasing fairness perceptions (Skarlicki & Latham, 2005). In terms of performance management, the various justice rules could be incorporated as performance dimensions in either formal appraisal systems or more developmental multisource feedback, on-the-job coaching, and executive coaching sys-

³ In response to a comment from an anonymous reviewer, we explored three additional moderators. First, we contrasted contexts in which an employee was uniquely affected (e.g., selection, performance evaluation, and reward contexts) with those in which a larger group was affected (e.g., layoff, restructuring, and organizational change contexts). Second, we contrasted contexts in which an employee could potentially gain something positive (e.g., selection, performance evaluation, and reward contexts) with those in which an employee could potentially avoid something negative (e.g., layoff and conflict resolution contexts). Third, we contrasted contexts in which the formation of justice judgments were likely to be in an early phase of development (e.g., selection contexts) with those where the judgments would be more stable (e.g., performance evaluation and rewards contexts). Unfortunately, those three moderators could only be tested in a subset of our relationships and also failed to yield many statistically significant differences, based on overlapping confidence intervals.

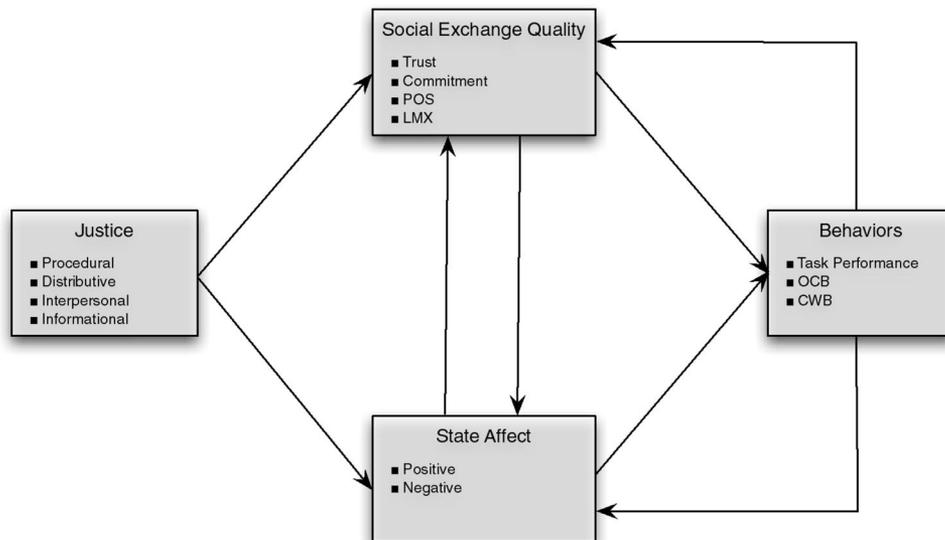


Figure 3. Conceptual model of suggested integration of justice, social exchange, and affect. CWB = counterproductive work behavior; LMX = leader-member exchange; OCB = organizational citizenship behavior; POS = perceived organizational support.

tems (Smither, 2012). Finally, annual attitude surveys could be supplemented with standard justice measures (e.g., Colquitt, 2001; Moorman, 2001) to track general levels of fairness and identify units most in need of the steps described above. Taken together, these practices and initiatives offer a number of approaches for fostering a more just environment within organizations.

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