CHAPTER

8 Measuring Justice and Fairness

Jason A. Colquitt *and* Jessica B. Rodell

Abstract

This chapter reviews the measurement approaches used in the justice literature. We begin by describing fundamental issues involved in constructing measures, such as item content, focus, context, and experience bracketing. We then introduce a 2 x 2 taxonomy wherein measurement approaches are distinguished by (a) whether they emphasize more descriptive perceptions of justice rule adherence or more evaluative perceptions of fairness, and (b) whether they distinguish among particular justice dimensions. The chapter concludes by reviewing a number of emerging measurement issues, including anticipations and expectations, within-person methodologies, the use of multiple sources, and the explicit operationalization of injustice.

Key Words: justice, fairness, measurement, construct validity, time

> "I often say that when you can measure what you are speaking about, and express it in numbers, you know something about it; but when you cannot measure it, when you cannot express it in numbers, your knowledge is of a meagre and unsatisfactory kind: it may be the beginning of knowledge, but you have scarcely, in your thoughts, advanced to the stage of science whatever the matter might be."
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> —*William Thomson* [Lord Kelvin], 1891, p. 80.

A number of scholars have theorized about why employees care about justice (Folger, 2001; Lind, 2001; Tyler & Lind, 1992), how cognitions and emotions shape justice perceptions (Barsky & Kaplan, 2007; Folger & Cropanzano, 2001; Lind, 2001), and how those perceptions impact subsequent attitudes and behaviors (Lind, 2001; Tyler & Blader, 2003). Without measurement, such theorizing remains just that: theoretical. Measuring justice by expressing it in numbers allows scholars to conduct empirical tests of conceptual propositions, thereby advancing our knowledge of the justice landscape.

If the ability to measure something does reflect what is known about a phenomenon, then scholars have increased their knowledge of justice across the decades. Early studies tended to use ad hoc scales with a handful of items (e.g., Earley & Lind, 1987; Folger, Rosenfield, Grove, & Corkran, 1979; Tyler, Rasinski & Spodick, 1985). Subsequent studies introduced more comprehensive measures that began to be widely used by other scholars (Moorman, 1991; Sweeney & McFarlin, 1993). More recently, scholars introduced additional scales that kept pace with conceptual developments and trends in the literature (Ambrose & Schminke, 2009; Blader & Tyler, 2003; Colquitt, 2001; Rupp & Cropanzano, 2002).

The purpose of this chapter is to review the measurement approaches used in the justice literature (see Colquitt & Shaw, 2005, for an earlier review). We begin by describing some of the fundamental issues involved in justice measurement, including item content, focus, context, and experience bracketing. Next, we introduce a taxonomy that distinguishes whether measures emphasize descriptive perceptions of justice rule adherence or evaluative perceptions of fairness, and whether measures distinguish between multiple dimensions. Finally, we conclude by reviewing emerging issues that affect the measurement of justice, including anticipations and expectations, within-person methodologies, the use of multiple sources, and the explicit operationalization of injustice.

Fundamental Issues in Measuring Justice

As with other constructs, measuring justice requires an understanding of construct definitions. Construct validity reflects the correspondence between a definition and a measure (Schwab, 1980), and a construct's definition can form the foundation for the generation of survey items (Hinkin, 1995, 1998). Reviews of the literature have tended to describe justice as the perceived fairness of decision events (e.g., Colquitt, 2012; Cropanzano & Greenberg, 1997; Greenberg, 2010). That definitional tradition illustrates that the terms *justice* and *fairness* tend to be used interchangeably in the literature. Thus, one measure may reference a condition assumed to evoke fairness (e.g., consistency, equity, respect, truthfulness), whereas another references perceptions of fairness themselves (Colquitt & Shaw, 2005). This same operational flexibility can be seen in the job satisfaction literature, where one measure may reference a condition that gives rise to satisfaction (e.g., interesting work, smart coworkers, knowledgeable supervisors, high pay) whereas another references satisfaction directly (Ironson, Smith, Brannick, Gibson, & Paul, 1989; Smith, Kendall, & Hulin, 1969).

Although the interchangeability of justice and fairness has served the literature well in many respects, we see value in distinguishing them definitionally in this chapter. After all, more and more scholars are operationalizing justice and fairness as separate constructs in their models (Ambrose & Schminke, 2009; Choi, 2008; Kim & Leung, 2007; Rodell & Colquitt, 2009). Thus, we define justice as the perceived adherence to rules that reflect appropriateness in decision contexts. Those rules are summarized in Table 8.1 and reflect procedural (Leventhal, 1980; Thibaut & Walker, 1975), distributive (Adams, 1965; Leventhal, 1976), interpersonal (Bies & Moag, 1986; Greenberg, 1993), and informational concepts (Bies & Moag, 1986; Greenberg, 1993). Fairness, in turn, is defined here as a global perception of appropriateness. In this formulation, fairness is theoretically "downstream" from justice (Ambrose & Schminke, 2009; Kim & Leung, 2007).

Regardless of whether scholars focus on justice or fairness, a certain degree of "convertibility" is often needed when constructing measures (Greenberg, 2010). Such conversions ensure that the measure matches the research question and the operative theoretical lens. The first conversion decision concerns the focus of the measure. Just as attitudes like commitment, perceived support, trust, obligation, and identification can be referenced to either an organization or a supervisor, so too can justice and fairness (Blader & Tyler, 2003; Colquitt, 2001; Rupp & Cropanzano, 2002). Thus, organization-focused justice reflects the degree to which one's company or top management is perceived to act consistently, equitably, respectfully, and truthfully in decision contexts. In contrast, supervisor-focused fairness reflects the degree to which one's manager is perceived to be fair.

How are such focus decisions made, in practice? Sometimes the focus is dictated by the research question. For example, a study on the effects of large scale organizational changes on justice might focus measures on the organization (e.g., Brockner et al., 2007; Brockner, Wiesenfeld, & Martin, 1995; Daly & Geyer, 1994). A study on training managers to be more just would, instead, focus measures on the supervisor (Skarlicki & Latham, 1996, 1997). Sometimes the focus is dictated by the theoretical lens. For example, social exchange theory argues that beneficial treatment from one exchange partner will result in reciprocation on the part of the other exchange partner (Blau, 1964). That theoretical logic functions more seamlessly when the focus of the benefit matches the target of the reciprocation. Thus, organization-focused justice might be used to predict organization-targeted citizenship behavior, with supervisor-focused justice predicting supervisor-targeted citizenship behavior (Horvath & Andrews, 2007; Karriker & Williams, 2009; Lavelle et al., 2009; Liao & Rupp, 2005; Rupp & Cropanzano, 2002).

Although the practice of matching the focus of the justice to the target of the reciprocation is logical and attractive conceptually (Lavelle, Rupp, & Brockner, 2007), a recent meta-analysis suggests that it makes little difference empirically (Colquitt et al., 2013). Colquitt et al.'s (2013) review examined 36 justice-outcome relationships to see if "focus matching" correlations (e.g., supervisor-focused procedural justice and supervisor-targeted citizenship) were statistically significantly higher than non-focus-matching correlations (e.g., supervisor-focused procedural justice and organization-targeted citizenship). Only 3 of the 36 correlations revealed stronger effect sizes for "focus matching." Instead, the results suggested that supervisor-focused justice tends to be associated with stronger effects in general, regardless of whether the reciprocation is targeted at supervisors or organizations. Colquitt et al. (2013) speculated that supervisor-focused justice may simply be more salient, observable, and interpretable than the actions of the broader company or top management. Thus, when it comes to converting the source of a measure, the bottom line is that matching one's outcome has conceptual benefits that may not be realized empirically.

The second conversion decision concerns the context of the measure. In general, the rules summarized in Table 8.1 govern actions in some resource allocation or conflict resolution environment (Adams, 1965; Bies & Moag, 1986; Leventhal, 1976, 1980; Thibaut & Walker, 1975). Over the years, justice scholars have applied those rules in a number of specific contexts, including selection, performance evaluation, training, compensation, dispute, separation, and change contexts (Colquitt & Greenberg, 2003). In most cases, existing justice and fairness scales can be easily tailored to the context in question. Occasionally, however, the context introduces a new rule that captures some unique aspect of appropriateness. For example, Gilliland (1993) argued that selection tests were procedurally just not only when they were administered consistently and without bias but also when their content was job relevant. Subsequently, Bauer et al. (2001) introduced a measure of "selection procedural justice" that incorporated context-specific rules. Such context tailoring is similar to the emic (as opposed to etic) distinction in cross-cultural research, where some constructs wind up possessing different facets in non-U.S. cultures (e.g., Farh, Earley, & Lin, 1997).

The third conversion decision centers on the experience bracketing of the measure. In their discussion of time in theorizing, George and Jones (2000) noted that constructs are given meaning by a bracketing process wherein specific episodes

Table 8.1 Justice Rules

Type	Name	Description
Procedural[a]	Process Control	Procedures provide opportunities for voice
	Decision Control	Procedures provide influence over outcomes
	Consistency	Procedures are consistent across persons and time
	Bias Suppression	Procedures are neutral and unbiased
	Accuracy	Procedures are based on accurate information
	Correctability	Procedures offer opportunities for appeals of outcomes
	Representativeness	Procedures take into account concerns of subgroups
	Ethicality	Procedures uphold standards of morality
Distributive[b]	Equity	Outcomes are allocated according to contributions
	Equality	Outcomes are allocated equally
	Need	Outcomes are allocated according to need
Interpersonal[c]	Respect	Enactment of procedures are sincere and polite
	Propriety	Enactment of procedures refrain from improper remarks
Informational[c]	Truthfulness	Explanations about procedures are honest
	Justification	Explanations about procedures are thorough

[a] Rules taken from Thibaut and Walker (1975) and Leventhal (1980).
[b] Rules taken from Adams (1965) and Leventhal (1976).
[c] Rules taken from Bies and Moag (1986) and Greenberg (1993).

are aggregated into some time period that warrants reflection and exploration. Cropanzano, Byrne, Bobocel, and Rupp (2001) articulated a similar process with respect to justice, noting that measures can assess one-time events or a more extensive bracketing of multiple events. For example, a study might ask respondents to evaluate their most recent performance appraisal event, their most recent compensation event, or their most recent dispute resolution event. Alternatively, a study might ask respondents to evaluate performance appraisals in general, compensation in general, or dispute resolutions in general. As a third alternative, a study might ask respondents to consider decision-making about performance evaluations, compensation, and dispute resolution in aggregate. Here the employee would presumably be drawing on a very extensive bracketing of multiple events when assessing justice or fairness.

At some point, the bracketing of events becomes so extensive that measures begin assessing entities rather than events (Cropanzano et al., 2001). For example, a measure might ask about a supervisor's or organization's decision-making in general, without even evoking particular decision contexts. Alternatively, a measure might simply refer to the supervisor him/herself, or the organization itself, with no mentioning of decision-making at all. Here the focus is squarely on the supervisor and organization as beings or objects. To varying degrees, such entity approaches move the focus from the justice or fairness of "trees" to the justice or fairness of "forests." As with the other conversion decisions, the guiding question should be whether the experience bracketing matches the research question and the operative theoretical lens.

A Taxonomy of Measurement Approaches in the Justice Literature

Having described the fundamental issues involved in structuring and converting measures, we turn our attention to reviewing the most common approaches used in the literature. As shown in Table 8.2, those approaches can be contrasted by (a) whether they emphasize justice versus fairness, and (b) whether they distinguish between procedural, distributive, interpersonal, and informational dimensions.

Table 8.2 A Taxonomy of Measurement Approaches

	Assessing Justice	Assessing Fairness
Emphasizing Dimensional Distinctions	*Faceted Justice*	*Faceted Fairness*
Deemphasizing Dimensional Distinctions	*Latent Justice*	*Overall Fairness*

Faceted Justice

The first justice measure that wound up being widely used by other scholars was introduced by Moorman (1991) in his study of justice and citizenship behavior. Moorman's (1991) work occurred at a time in the literature when the distinctions in Table 8.1 were in a state of flux. Bies and Moag (1986) had introduced their "interactional justice" rules of respect, propriety, truthfulness, and justification, arguing that they stood apart from the procedural rules expressed by Thibaut and Walker (1975) and Leventhal (1980). However, Bies's subsequent work described respect, propriety, truthfulness, and justification as capturing the "interpersonal context of procedural justice" (Tyler & Bies, 1990; see also Folger & Bies, 1989; Greenberg, Bies, & Eskew, 1991).

Against this backdrop, Moorman (1991) introduced a "procedural justice" scale with two dimensions: formal procedures and interactional justice. As was common for the time, the latter focused on the organization with the former focused on the supervisor. The formal procedures scale assessed—for the most part—Leventhal's (1980) rules. The interactional justice scale assessed—for the most part—Bies and Moag's (1986) rules. Unfortunately, the formal procedures scale also assessed Bies and Moag's (1986) justification rule, with the interactional justice scale also assessing Thibaut and Walker's (1975) process control rule and Leventhal's (1980) bias suppression rule.

The "cross pollination" present in Moorman's (1991) formal and interactional dimensions would not have been problematic had the boundary between procedural and interactional justice remained soft. However, subsequent chapters offered compelling arguments for separating the two dimensions (Bies, 2001; Bobocel & Holmvall, 2001). Empirical studies also increasingly attempted to separate the dimensions. Unfortunately, the overlapping item content in Moorman's (1991) scales seemed to inflate the procedural-interactional correlations, with scholars sometimes forced to combine the dimensions in their modeling (e.g., Mansour-Cole & Scott, 1998; Skarlicki & Latham, 1997).

Colquitt (2001) introduced a new measure of faceted justice while attempting to bring some clarity to these issues. An adaptation of this measure—converted to be supervisor-focused and based in multiple contexts and events, is shown in Box 8.1. The procedural justice items focused solely on Thibaut and Walker's (1975) and Leventhal's (1980) rules. The interactional justice items focused solely on Bies and Moag's (1986) rules. A comparison of alternative measurement models supported the distinctiveness of procedural and interactional justice in two separate studies. In addition,

Box 8.1 A Supervisor-Focused, Multiple Event-Based Adaptation of Colquitt's (2001) Measure

Procedural Justice

The questions below refer to the procedures your **supervisor** uses to make decisions about *pay, rewards, evaluations, promotions, assignments, etc*. To what extent:

1. Are you able to express your views during those procedures?
2. Can you influence the decisions arrived at by those procedures?
3. Are those procedures applied consistently?
4. Are those procedures free of bias?
5. Are those procedures based on accurate information?
6. Are you able to appeal the decisions arrived at by those procedures?
7. Do those procedures uphold ethical and moral standards?

Distributive Justice

The questions below refer to the outcomes you receive from your **supervisor**, such as *pay, rewards, evaluations, promotions, assignments, etc*. To what extent:

1. Do those outcomes reflect the effort you have put into your work?
2. Are those outcomes appropriate for the work you have completed?
3. Do those outcomes reflect what you have contributed to your work?
4. Are those outcomes justified, given your performance?

Interpersonal Justice

The questions below refer to the interactions you have with your **supervisor** as decision-making procedures (about *pay, rewards, evaluations, promotions, assignments, etc.*) are implemented. To what extent:

1. Does he/she treat you in a polite manner?
2. Does he/she treat you with dignity?
3. Does he/she treat you with respect?
4. Does he/she refrain from improper remarks or comments?

Informational Justice

The questions below refer to the explanations your **supervisor** offers as decision-making procedures (about *pay, rewards, evaluations, promotions, assignments, etc.*) are implemented. To what extent:

1. Is he/she candid when communicating with you?
2. Does he/she explain decision-making procedures thoroughly?
3. Are his/her explanations regarding procedures reasonable?
4. Does he/she communicate details in a timely manner?
5. Does he/she tailor communications to meet individuals' needs?

Note. All items utilize a five point scale where 1 = *To a Very Small Extent*, 2 = *To a Small Extent*, 3 = *To a Moderate Extent*, 4 = *To a Large Extent*, 5 = *To a Very Large Extent*. The **boldfaced** portion is where conversions for focus are made. The *italicized* portion is where conversions for context and experience bracketing are made.

Colquitt (2001) tested a structure suggested by Greenberg (1993) wherein interactional justice was separated into its interpersonal (respect and propriety) and informational (truthfulness and justification) facets. Measurement model comparisons provided empirical support for that distinction as well, creating the four-dimensional structure shown in Table 8.1.

Subsequent studies using Colquitt's (2001) measure have provided factor-analytic support for the distinctiveness of interpersonal and informational justice (e.g., Ambrose, Hess, & Ganesan, 2007; Bell, Wiechmann, & Ryan, 2006; Camerman, Cropanzano, & Vandenberghe, 2007; Choi, 2008; Cole, Bernerth, Walter, & Holt, 2010; Colquitt & Rodell, 2011; El Akremi, Vandenberghe, & Camerman, 2010; Hausknecht, Sturman, & Roberson, 2011; Jawahar, 2007; Jones & Martens, 2009; Judge & Colquitt, 2004; Liao & Rupp, 2005; Mayer, Nishii, Schneider, & Goldstein, 2007; Rodell & Colquitt, 2009; Scott, Colquitt, & Zapata-Phelan, 2007; Streicher et al., 2008). Such studies illustrate that authorities can be respectful when communicating about decision events but not be truthful and candid, or vice-versa. Indeed, that distinction is foundational in the literature on explanations and causal accounts (Bobocel, Agar, Meyer, & Irving, 1998; Gilliland & Beckstein, 1996; Greenberg, 1994; Ployhart, Ryan, & Bennett, 1999). Ultimately, however, the handling of interpersonal and informational justice should be dictated by one's research question and operative theoretical lens. Thus, some studies have included only interpersonal justice or informational justice (e.g., Johnson, Selenta, & Lord, 2006; Judge, Scott, & Ilies, 2006; Karriker & Williams, 2009; Roberson & Stewart, 2006) whereas others have combined the two into a broader interactional variable (e.g., Ambrose & Schminke, 2003, 2009; Chiaburu, 2007; DeConinck, 2010; Klendauer & Deller, 2009; Neubert, Carlson, Kacmar, Roberts, & Chonko, 2009; Spell & Arnold, 2007).

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Regardless of the particular measure and the particular dimensionality, a strength of the faceted justice approach is that it grounds the phenomenon in a set of specific and actionable principles. If procedural justice is linked to lower turnover in a field study, and if an organization wants to become more procedurally just, the items in the scale embody the action steps: provide more control, be more consistent, use more accurate information, reduce sources of bias, and offer mechanisms for correction (Colquitt, 2001; Moorman, 1991). That grounding removes some of the mystery and ambiguity from the phenomenon. It also facilitates interventions, which are an important piece of the literature's DNA. Indeed, in his discussion of the "top ten reasons everyone should study justice," Greenberg (2006, pp. 323, 333) listed "justice concepts can be applied" as reason three. Studies illustrating that supervisors can be trained to be more just are one example of those applications (Skarlicki & Latham, 1996, 1997), as are field experiments that demonstrate the effects of justice concepts on key organizational outcomes (Greenberg, 1990; Schaubroeck, May, & Brown, 1994).

Latent Justice

The use of faceted justice measures has allowed the literature to explore a number of important questions. For example, scholars have been able to explore the conceptual distinctions among the rules and dimensions in Table 8.1. Scholars have argued that procedural justice is especially relevant to employees because systems stay in place, even as outcomes ebb and flow (Lind & Tyler, 1988). For their part, interpersonal and informational justice may be especially mutable because of the increased discretion authorities have over them, relative to procedures and outcomes (Scott, Colquitt, & Paddock, 2009). As another example, scholars have been able to compare the relative effects of the justice dimensions on attitudinal and behavioral outcomes. Those findings show that the various dimensions are often differentially predictive of key outcomes (Colquitt, Conlon, Wesson, Porter, & Ng, 2001). Finally, scholars have been able to investigate potential interaction effects among dimensions. Several studies have uncovered interactions between procedural justice and distributive justice, with appropriate procedures becoming more or less important depending on the outcomes (Brockner, 2002; Brockner & Wiesenfeld, 1996).

Although these studies represent a sizable portion of the justice literature—and will continue to do so—the faceted approach does come with some drawbacks. Statistically speaking, the justice dimensions are very highly correlated, potentially creating problematic levels of multicollinearity in structural models. Colquitt et al.'s (2013) meta-analytic review revealed correlations among the four dimensions ranging from 0.37 to 0.64, with an average of 0.49. Such correlations may be higher when all four dimensions focus on the same source and are bound in the same time frame and experience bracketing. As Ambrose and Arnaud (2005) noted, multicollinearity often causes scholars to focus on narrow slices of incremental variance-explained, taking the focus off of the total variance explained by justice, in general (see also Fassino, Jones, & Uggerslev, 2008). Multicollinearity also inflates the standard errors associated with path coefficients, potentially resulting in "bouncing betas" from one study to the next (Cohen, Cohen, West, & Aiken, 2003; Schwab, 2005). Conceptually speaking, many studies do not draw distinctions between justice dimensions in their hypothesis development, focusing their theorizing, instead, on a more overarching level of abstraction. If studies expect the same pattern of findings for procedural, distributive, interpersonal, and informational justice, what becomes the reason for the separate operationalization?

One solution to these issues is to model justice as a second-order latent variable, with procedural, distributive, interpersonal, and informational justice as lower-order indicators. Colquitt and Shaw (2005) demonstrated this approach with 16 samples utilizing Colquitt's (2001) scales. The second-order structure fit the data well, with the loadings of the dimensions onto the latent justice factor ranging from 0.64 to 0.86. This conceptualization is consistent with the "latent model" formulation in Law, Wong, and Mobley's (1998) discussion of multidimensional constructs (see also Wong, Law, & Huang, 2008). The latent model formulation is appropriate when the construct can be defined by the common variance shared by the multiple dimensions, when the dimensions are highly correlated, and when the dimensions are functionally similar and more or less substitutable. As noted by Colquitt (2012), exchange-based explanations for justice effects do tend to view the dimensions as functionally similar in their ability to breed reciprocation. Moreover, cognitive models of the formation of justice perceptions do view dimensions as substitutable, with the emphasis being on rule-relevant data that can be easily encountered and interpreted (Lind, 2001).

Put simply, if faceted justice represents the stable portion of a "measurement approach portfolio," latent justice promises to be a "growth stock" down the road. One example of this approach is Liao's (2007) study of the perceived justice of customer service employees as they handled customer complaints about service failures. Liao (2007) modeled procedural, distributive, interpersonal, and informational justice as indicators of a latent justice variable, with the factor loadings ranging from 0.76 to 0.95 and the measurement model providing an adequate fit to the data. This measurement approach was appropriate because none of the hypotheses referenced specific justice dimensions (or unique aspects of the justice dimensions). Moreover, the correlations among the four justice dimensions and the outcome variables were consistent, suggesting that the aggregation to latent justice did not collapse across important nuances.

Overall Fairness

Like latent justice, overall fairness does not consider the distinctions among procedural, distributive, interpersonal, and informational facets. Unlike latent justice, however, overall fairness does so with a single scale that focuses on a global perception of appropriateness (Ambrose & Schminke, 2009; Choi, 2008; Colquitt, Long, Rodell, & Halvorsen-Ganepola, in press; Kim & Leung, 2007; Masterson, 2001; Rodell & Colquitt, 2009; Zapata-Phelan, Colquitt, Scott, & Livingston, 2009). For example, overall fairness scales include items like, "Overall, I'm treated fairly by my organization" (Ambrose & Schminke, 2009), "My supervisor is a fair person" (Choi, 2008), and "Does your supervisor behave like a fair person would?" (Colquitt et al., in press).

If latent justice has the potential to be a growth stock in a measurement approach portfolio down the road, overall fairness is realizing that growth already. A number of recent studies have included overall fairness, often in tandem with measures of the justice dimensions (Bobocel, 2013; Holtz & Harold, 2009; Jones & Martens, 2009). Overall fairness is the subject of another chapter in this volume (by Ambrose, Wo, & Griffith), so we will devote little discussion to it here. However, we should note that many overall fairness scales are easily convertible between supervisor and organizational foci, as the sample items in the previous paragraph illustrate. In terms of context and experience bracketing, overall fairness scales tend to be structured as "entity" measures that transcend particular contexts or events (Cropanzano et al., 2001). That need not be the case if the research question demands a different structure, however. One could envision items like "Overall, I was treated fairly by my organization during my last performance evaluation" (Ambrose & Schminke, 2009) or "Does your supervisor behave like a fair person would during performance evaluations?" (Colquitt et al., in press). Both items embed overall fairness in a performance evaluation context while varying the experience bracketing.

Faceted Fairness

The final cell in our taxonomy of measurement approaches is faceted fairness, where dimensional distinctions are examined but items focus on global perceptions of appropriateness rather than specific justice rules. The first scale in this category that became widely used by other scholars is Price and Mueller's (1986) measure of distributive fairness. This measure opens with the following instructions: "Fairness in the following questions means the extent to which a person's contributions to the hospital are related to the rewards received. Money, recognition, and physical facilities are examples of rewards." The measure then includes six items, including "To what extent are you fairly rewarded considering the *responsibilities* that you have?" and "To what extent are you fairly rewarded for the *amount of effort* that you have put forth?" (1 = *rewards are not distributed at all fairly* to 5 = *rewards are very fairly distributed*). Although the items implicitly evoke the equity rule from Table 8.1 (Adams, 1965; Leventhal, 1976), both the items and the anchors explicitly refer to fairness. Not surprisingly, the items are bounded in a compensation context, with extensive experience bracketing being used as opposed to one event.

Price and Mueller's (1986) index wound up inspiring and/or being incorporated into other widely used measures (Colquitt, 2001; McFarlin & Sweeney, 1992; Moorman, 1991; Sweeney & McFarlin, 1993). One of those was used in two field studies by Sweeney and McFarlin that sought to differentiate the effects of procedural and distributive fairness on outcomes like job satisfaction and organizational commitment (McFarlin & Sweeney, 1992; Sweeney & McFarlin, 1993). The authors crafted four procedural fairness items that mimicked some aspects of Price and Mueller's (1986) formatting. Specifically, respondents were asked "How fair or unfair are the *procedures* used to evaluate performance?" "How fair or unfair are the *procedures* used to communicate performance feedback?" "How fair or unfair are the *procedures* used to determine promotions?" and "How fair or unfair are the *procedures* used to determine salary increases?" (1 = *very unfair* to 5 = *very fair*). Thus, the items assessed multiple contexts with extensive experience bracketing. It should be noted that the "communicate performance feedback" item could evoke the interpersonal and informational rules in Table 8.1 (Bies & Moag, 1986; Greenberg, 1993). The studies occurred at a time when interactional concepts were often subsumed under the procedural umbrella (Folger & Bies, 1989; Greenberg et al., 1991; Tyler & Bies, 1990), making such cross-pollination unproblematic for the times.

As the distinctiveness of procedural and interactional concepts began to be sorted out, subsequent studies introduced additional measures of procedural and distributive fairness. For example, Rupp and Cropanzano (2002) reported a measure of procedural fairness that could be easily converted between supervisor and organization foci. Items included "I can count on [my supervisor] to have fair policies," and "[The organization's] procedures and guidelines are fair." As another example, Blader and Tyler (2003) introduced a measure of distributive fairness that asked "How fairly are resources (e.g., salary, bonuses, etc.) allocated among employees where you work?" and "Overall, how fair is the salary you receive at work?" Blader and Tyler (2003) also introduced procedural scales, but they included both fairness items ("The rules and procedures are equally fair to everyone") and justice items ("The rules ensure that decisions are based on facts, not personal biases and opinions"). Relative to the structure shown in Table 8.2, such scales represent hybrids that cross the justice-fairness cells.

What is noteworthy about these subsequent scales is that they did not attempt to measure interactional concepts using fairness items. Rupp and Cropanzano (2002) included interactional justice items like "[My supervisor] keeps me informed of why things happen in the way they do," and "[The organization] treats me with dignity and respect." Blader and Tyler's (2003) interactional justice items included "I am treated with dignity by [this organization]," and "[My supervisor] respects my rights as a person." Why is there a general absence of interactional fairness items, relative to procedural and distributive fairness items? One reason is that the border between interactional/interpersonal fairness and overall fairness can be quite blurry. Consider the following three items:

"Overall, I'm treated fairly by [my supervisor]."
"In general, I don't think [my supervisor] treats me fairly."
"All in all, [my supervisor] treats me fairly."

The first item is an overall fairness item from Ambrose and Schminke's (2009) scale; the third item is an overall fairness item from Kim and Leung's (2007) work. In contrast, the middle item is from Aquino (1995) and was used to measure interpersonal fairness. The blurriness between interpersonal fairness and overall fairness results from the multiple meanings of the word *treat.* The *Oxford English Dictionary*'s definitions for *treat* include "To deal kindly with; to show kindness or respect to . . ." That usage supplies the sentiments that Aquino (1995) was seeking to assess with interpersonal fairness. However, the dictionary also includes definitions like "To deal with, behave or act towards in some specified way . . ." and "To manage, rule, govern; to lead, induce; to conduct oneself, behave." Those usages match the sentiments that Ambrose and Schminke (2009) and Kim and Leung (2007) were seeking to assess with overall fairness, given that they can embody all the concepts in Table 8.1. That blurriness seems to have stalled momentum for faceted fairness approaches, especially given the increasing visibility of overall fairness in the literature. Thus, of the four approaches in Table 8.2, faceted fairness seems to have the most limited "growth potential."

Summary

Having reviewed all the measurement approaches, the operative question becomes "when should each of them be used?" Colquitt and Shaw (2005) offered some discussion of these issues already, and many of the same decision rules apply. First and foremost, faceted justice and latent justice are more appropriate as independent variables than as mediators or outcomes, with some exceptions. Consider a study arguing that idealized influence on the part of a leader (Bass & Avolio, 1995) results in citizenship behavior because it makes employees perceive higher levels of justice/fairness. Leaders who exhibit idealized influence talk about important values, emphasize the collective, and consider the ethical consequences of their actions (Bass & Avolio, 1995). There are good reasons to expect those behaviors to trigger a global sense of appropriateness, making fairness scales a logical choice. In contrast, there are many rules in Table 8.1 that should be unaffected by those behaviors, making justice approaches less optimal. Just as importantly, the "considering ethical consequences" aspect of idealized influence itself taps some of the same content as the ethicality and truthfulness rules in Table 8.1. It might, therefore, be more appropriate to label idealized influence and justice as exogenous covarying predictors than to label one an independent variable and the other a dependent variable.

Thus, in field studies, fairness approaches could often be used as mediators of some independent variable's effects, whether justice or otherwise. In this way, fairness could be acting as one of the sentiments that encourages reciprocation in exchange-based theorizing (Blau, 1964). Similarly, fairness approaches would represent appropriate manipulation checks in laboratory work. Most laboratory studies in the justice domain manipulate one or more of the rules in Table 8.1, most commonly process control, accuracy, consistency, equity, respect, or justification. Such studies might utilize one justice item as a manipulation check, to ensure—for example—that a manipulation of consistency did register as a difference in perceived consistency. However, such studies should also use measures of fairness to ensure that the manipulation of consistency also triggered differential fairness perceptions (see Zapata-Phelan et al., 2009, for an example of this dual approach for manipulation checks).

The exception to the independent-variable rule for faceted and latent justice is when a study is explicitly focused on predicting adherence to the rules in Table 8.1. A number of scholars have turned their attention to predicting justice rule adherence in recent years, using organization, supervisor, and employee-centered predictors (Gilliland & Schepers, 2003; Korsgaard, Roberson, & Rymph, 1998; Mayer et al., 2007; Patient & Skarlicki, 2010; Schminke, Ambrose, & Cropanzano, 2000; Scott, Garza, Conlon, & Kim, in press; Scott et al., 2009; Scott, Colquitt, & Zapata-Phelan, 2007; Zapata, Olsen, & Martins, 2013). For example, Zapata et al. (2013) linked a supervisor's assessment of employee trustworthiness to increased adherence to interpersonal and informational justice rules. The authors were focused on predicting the act of being respectful, proper, truthful, and candid, making a justice-based measurement approach the appropriate choice, even as a dependent variable.

Emerging Measurement Issues

A handful of emerging topics in the justice literature have implications for the measurement of justice and fairness. In this section, we review recents trends of justice scholars to consider anticipations and expectations, within-person methodologies, the use of multiple sources to assess justice, and the operationalization of injustice. In addition to providing novel insights into the theoretical and practical importance of justice and fairness, these emerging issues represent refinements in the way scholars measure the constructs.

Anticipations and Expectations

Regardless of whether they emphasize single events, multiple events, or entities, the measurement approaches in the justice literature have one thing in common: they assess the past. That is, the research questions in justice studies focus on some past experience or the accumulation of experiences with a supervisor or organization. As important as such "experienced" justice has been shown to be when predicting attitudes and behaviors (Colquitt et al., 2013), Shapiro and Kirkman (1999; 2001) pointed out that employees may consider the justice or fairness of events before they actually occur. For example, with an impending merger looming in the future, employees may wonder if there will be layoffs and begin to make conclusions about how their supervisor will make such decisions.

This concept, labeled either "anticipatory justice" (Shapiro & Kirkman, 1999, 2001) or "justice expectations" (Bell, Ryan, & Wiechmann, 2004; Bell, Wiechmann, & Ryan, 2006), captures the extent to which employees believe that they will or will not experience justice in some future situation. Much like experienced justice, justice anticipations can be of a distributive, procedural, interpersonal, or informational nature. Given that employees do not have full information about future situations, justice scholars have theorized that employees create justice anticipations from information that they already possess (Shapiro & Kirkman, 2001). Drawing from the literature on expectations, this information may include personal experiences, vicarious experiences, and relevant individual differences (Bell et al., 2004). Empirical research has supported this theorizing by demonstrating that preexisting perceptions (i.e., prior experiences) and employee race (relevant individual differences) predict anticipations of justice (Bell et al., 2006; Ritter, Fischbein, & Lord, 2005; Rodell & Colquitt, 2009).

Once formed, anticipations about justice and fairness may be especially powerful. As Shapiro and Kirkman (2001) pointed out in their seminal theorizing, employees are likely to experience whatever it is that they expect, regardless of the eventual reality of a situation. Indeed, anticipatory justice tends to be moderately positively correlated with experienced justice (Bell et al., 2006; Rodell & Colquitt, 2009). Anticipatory justice also predicts a variety of employee attitudes and behaviors, including self-esteem, acceptance of change, and commitment (Bell et al., 2006; Ritter et al., 2005; Rodell & Colquitt, 2009; Shapiro & Kirkman, 1999). Such work illustrates that justice or fairness measures can be converted in yet another way: to capture future time horizons rather than past events and experiences.

Within-Person Methodologies

Traditionally, scholars have examined justice and fairness on a between-individuals basis, linking variations to between-person differences in job attitudes and behaviors. Such studies are, in the end, based on averages. That is, employees who feel more justly treated are, on average, more likely to engage in, say, citizenship behavior. Although such findings are robust and practically significant, between-individual conclusions do not tell the entire story. What this focus specifically overlooks is the dynamic nature of justice. Not only do some employees have meaningfully different perceptions of justice than others (between-individual variation), their own perceptions of justice may vary from day to day or week to week (within-individual variation). How likely is it that employees think that their supervisor is open to input, consistent, accurate, equitable, and respectful with *every* decision event? Employing within-person methodologies (as in experience sampling studies) enables scholars to capture variations in justice and fairness within individuals over time.

The appropriate time frame to explore within-individual variation in justice and fairness may depend on the relevant dimensions or foci. Greenberg (1993) classified the justice dimensions according to their structural and social natures—suggesting that the more structural dimensions should be more stable over time and the more social dimensions should be more variable over time. Thus, procedural and distributive justice should be more stable over time, especially when focused on the organization. Although perceptions of these dimensions may oscillate over time, they seem likely to evolve less frequently and at a slower pace. Recent examinations of within-individual procedural and distributive justice demonstrated significant variance over periods of four weeks (Holtz & Harold, 2009) and three months (Hausknecht et al., 2011). In contrast, interpersonal and informational justice are considered social in nature, especially when focused on supervisors. They should, therefore, evolve more frequently and at a faster rate. Indeed, aside from evidence of weekly and monthly variation in interpersonal and information justice (Hausknecht et al., 2011; Holtz &

Harold, 2009), these dimensions have also been shown to vary from day-to-day (Judge, Scott, & Ilies, 2006; Loi, Yang, & Diefendorff, 2009).

Within-individual methodologies also allow scholars to capture different experience bracketing for justice and fairness. Adopting a within-individual methodology allows for perceptions of events and entities to be examined simultaneously, and provides insights into the relationship between justice as experienced in a particular event and more general perceptions of an entity. For example, Loi et al. (2009) demonstrated the impact of procedural and distributive justice perceptions about the organization (between-individual) on employees' reactions to day-to-day perceptions of interpersonal and informational justice (within-individual). This methodology also affords scholars the opportunity to examine the hierarchical structure of experience bracketing. That is, do a series of justice events "add up" to create some overall perception of an entity as suggested in the literature (Cropanzano et al., 2001)? In conducting this research, scholars should be careful to keep the contexts consistent. If events reference a compensation context, then measures of entity perceptions might also reference that same context so as to not confound context with bracketing.

Multiple Sources

The modal field study in the justice literature has tended to utilize two sources. Employees rate either justice or fairness while also reporting on relevant mediators. Supervisors, in turn, rate outcome variables such as citizenship behavior, task performance, or counterproductive behavior. Although a widely utilized design in a number of literatures, that homogeneity of method has impacted the literature in at least two ways. First, we know surprisingly little about whether employee perceptions of justice and fairness match the views of their supervisors. Second, justice → mediator linkages in most field studies may be subject to dispositional sources of common method bias, such as trait affectivity (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003).

Zapata et al.'s (2013) study of employee trustworthiness and supervisor justice rule adherence offers data on the first question. The authors included typical measures of interpersonal and informational justice by asking employees to respond to Colquitt's (2001) scales. However, they also asked supervisors to rate their own adherence to interpersonal and informational justice rules, again using Colquitt's (2001) scales. That is, supervisors were asked, "Do you treat this subordinate in a polite manner?" and "Are you candid when communicating with this subordinate?" Notably, employee and supervisor ratings of interpersonal justice were correlated at 0.26, with the corresponding informational justice correlation being 0.46. Such convergent validities reveal some correspondence but more slippage when it comes to adhering to justice rules. That slippage represents an important area for future research, especially given that supervisors' understanding of their own justice reputations is likely relevant to their motivations to improve their rule adherence (Skarlicki & Latham, 1996; 1997).

If employees and supervisors disagree about justice levels, how then could justice → mediator linkages be tested in a way that is not source bound? One promising direction would be to rely on co-worker reports of justice. Research on justice climate has revealed that co-worker assessments of a supervisor or organization's justice rule adherence can converge enough to justify aggregation (Colquitt, Noe, & Jackson, 2002; Ehrhart, 2004; Moon, Kamdar, Mayer, & Takeuchi, 2008; Mossholder, Bennett, & Martin, 1998; Naumann & Bennett, 2000; Roberson, 2006; Simons & Roberson, 2003). That convergence points to the possibility of asking co-workers to supply ratings of justice in a study in which the focal employee reports the mediators and the supervisors report the outcomes. This strategy could be especially effective if co-workers are asked to focus on a supervisor's or organization's treatment of the focal employee, as opposed to the co-worker's own treatment. This strategy may be less appropriate with fairness measures, as fairness is more evaluative than descriptive, with "the beholder" looming larger.

Operationalizing Injustice

Despite the fact that the literature is most typically described by the "organizational justice" moniker, a number of scholars have argued that it is actually *injustice* that "moves the needle" on relevant attitudes and behaviors (Bies, 2001; Cropanzano, Stein, & Nadisic, 2011; Gilliland, 2008; Organ, 1990; Rupp & Spencer, 2006). For example, Rupp and Spencer (2006) speculated that "In the absence of injustice, fairness becomes a camouflaged phenomenon . . . Fairness often implies simple adherence to expected norms, which observers tend to take for granted and hence fail to notice . . . Thus, a study in justice must use injustice as the dominant theme because it is more salient to those who experience it or observe it" (p. 972). Although such speculations are intuitive, they remain largely untested. One exception is work by Gilliland, Benson, and Schepers (1998), who conducted three studies where students were asked to react to a layoff scenario. The studies varied both justice (termed "nonviolations," and indicated by the provision of a severance package) and injustice (termed "violations," and indicated by the absence of advance notice), with one of the outcomes being whether the students would recommend the company for an ethics-based award. Their results showed that violations were a stronger predictor of recommendation intentions than nonviolations.

Unfortunately, it becomes difficult to follow up on Gilliland et al.'s (1998) results in the field because most measures of justice reflect the degree of adherence to the rules in Table 8.1. Colquitt's (2001) items ask about the extent to which authorities are consistent, accurate, unbiased, equitable, respectful, and truthful using a scale from 1 = *To a Very Small Extent* to 5 = *To a Very Large Extent*. Similarly, Moorman's (1991) items ask whether authorities have all sides represented, hear concerns, provide feedback, and show kindness using a scale from 1 = *Strongly Disagree* to 5 = *Strongly Agree*. That emphasis on the degree or extent of rule adherence creates a certain "continuum truncation," with measures sampling only a portion of the full range of experiences associated with justice (and sometimes the less relevant portion).

Colquitt, Long, Rodell, and Halvorsen-Ganepola (in press) examined this issue by supplementing Colquitt's (2001) original items with items focused on justice rule violations. Those new items included "Are those procedures based on faulty information?" (procedural justice), "Are those outcomes inconsistent with the effort you have put into your work?" (distributive justice), "Does he/she treat you in a rude manner?" (interpersonal justice) and "Is he/she secretive about decision-making procedures?" (informational justice). A field study then revealed that an "untruncated" or "full-range" measure (i.e., one using Colquitt's original items alongside reversed versions of the new items) explained more variance in state affect, trust, focus of attention, self-esteem, social exchange perceptions, and counterproductive behavior. Thus, a more frequent operationalization of rule violation may prove to be valuable in future work, especially when predicting deviant or counterproductive outcomes.

Conclusion

If being able to express justice and fairness in numbers shows that scholars know something about them, then it is safe to say that the literature has amassed significant knowledge about the phenomena. The fundamental issues involved in constructing and tailoring measures are well-understood, and four approaches for operationalizing justice and fairness have emerged. Those approaches give scholars choices as they seek to match their measures to their research questions and to their operative theoretical lens. Of course, measurement in any literature remains a living, dynamic, and fluid enterprise. As questions, theories, and points of emphasis change, so, too, will measures of justice and fairness. The studies on anticipations, within-person methodologies, multiple sources, and injustice represent some examples of that fluidity, and the years to come will certainly bring additional examples.

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