EQUITY SENSITIVITY VERSUS EQUITY PREFERENCE:
VALIDATING A NEW VIEWPOINT ON EQUITY SENSITIVITY

BY

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THESIS

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# ABSTRACT

Traditional research on equity sensitivity has defined the construct as a preference for increased work rewards and/or a preference for reduced work inputs. In contrast, I here define equity sensitivity as a dispositional tendency to perceive stimuli as fair versus unfair. This new definition does not explicitly involve an individual's assessment of outcome/input ratios. In Study 1, a content validity analysis of items from the two dominant equity sensitivity measures reveals that the vast majority of items from these measures assess input/reward preferences, rather than a dispositional tendency to perceive things fairly. In Study 2, I develop a Neutral Objects Equity Sensitivity (NOES) measure, which exhibits discriminant validity from past equity sensitivity measures via factor analysis. Study 3 further validates the NOES measure by demonstrating 3-month retest reliability and incremental validity over the classic equity sensitivity measure in predicting justice perceptions, both cross-sectionally and longitudinally. In addition, I investigate the hypothesized moderating effect of NOES equity sensitivity, showing that NOES magnifies the relationship between frequency of evaluative work events and justice perceptions. Study 4 replicates the results found in the previous studies and examines the relationship between NOES and various organizational outcomes. Results reveal NOES is the strongest predictor of justice perceptions, whereas the traditional equity preference measures better predict behavioral organizational outcomes such as organizational citizenship behavior and counterproductive work behavior. Finally, equity sensitivity is again shown to moderate/enhance the relationship between evaluative work events and justice perceptions.

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# CHAPTER 1

# INTRODUCTION

Perceptions of fairness at work can be formed in a variety of ways. Prominent theories of the etiology of justice perceptions have focused largely on comparisons of one's own rewards to the rewards received by others (Adams, 1965; Stouffer, Suchman, DeVinney, Star & Williams, 1949) and to the rewards one might have potentially received (Folger, 1993), alignment between rewards and social expectations (Blau, 1964; Homans, 1961), adherence to multiple allocation norms including equity, equality, and need (Deutsch, 1975; Leventhal, 1976), adherence to procedural rules and rules of interpersonal treatment (Bies & Moag, 1986; Leventhal, 1980), consistency with group values (Lind & Tyler, 1988; Tyler, 1989), and affect-inducing workplace events (Cropanzano, Byrne, Bobocel, & Rupp, 2001; Rupp & Spencer, 2006), to name a few. In contrast, individual difference approaches to justice perceptions—which characterize fairness perceptions as an outcome of stable individual personality traits—are somewhat less celebrated (cf. Ng & Sorensen, 2009; Scott & Colquitt, 2007; Shi, Lin, Wang, & Wang, 2009).

In the current work, I emphasize the possibility that two individuals who experience the same putative just or unjust event will perceive that event differently—due to an individual difference labeled *equity sensitivity*. Importantly, the current paper advances a new definition of equity sensitivity, offering a stark conceptual and empirical contrast to the classic and influential work on equity sensitivity by Huseman, Hatfield, and Miles (1985; see Scott & Colquitt, 2007). As discussed in detail below, Huseman et al.'s (1985) equity sensitivity construct was grounded in Adams' (1963) equity theory, which highlighted the extent to which individuals were concerned with the fairness of their outcomes in comparison to others'. This classic work gave

rise to a conceptualization of equity sensitivity that focused on an employee's desiring more rewards and rendering fewer contributions—in essence, the classic definition focused on employee self-interest rather than employee sensitivity to fairness.

In contrast, the present work highlights the surprisingly novel, albeit highly intuitive, notion that individuals may have varying sensitivity dispositions to unfair treatment, regardless of comparisons with others' outcomes and regardless of explicit outcome/input ratios. The concept of dispositional sensitivity to unfairness stems from theoretical work by Weitz (1952), who articulated that whether one is satisfied with one's job is related to how generally dissatisfied he or she is with everyday life. That is, Weitz (1952) theorized a dispositional *consistency in perception* that obtains across all (or most) objects in the personal life space. By extension, I assert that an individual's general sensitivity to unfairness in everyday life may provide insights into how one would react to injustice at work.

The current paper attempts to make three contributions to the study of equity sensitivity. First, I show that the content of established equity sensitivity measures, which were built upon equity theory and social exchange theory, focuses exclusively on wanting to extract more benefits/inducements from an employer and to render fewer employee contributions. Using a content validity analysis, I show that none of the established so-called *equity sensitivity* items is judged to measure dispositional sensitivity to fairness/unfairness. Established measures are uniformly judged to reflect equity preference, not equity sensitivity. Second, I develop and validate a newer measure of equity sensitivity based upon Weitz's (1952) theory of sensitivity to neutral objects. This neutral objects equity sensitivity (NOES) measure is shown to uniquely predict justice perceptions beyond existing measures of equity preference, in both concurrent and time-lagged data; whereas equity preference does not uniquely predict justice perceptions

beyond equity sensitivity. Third, I show that equity sensitivity moderates the relationship between evaluative events (i.e., job performance feedback and classroom grades) and perceptions of fairness, enhancing the association between events and justice perceptions.

*Equity theory and equity sensitivity*

Traditionally, equity sensitivity has been conceptualized as an individual difference in preference for equity. Huseman et al. (1985) first introduced the construct and proposed that "individuals react in consistent but individually different ways to both perceived equity and inequity because they have different preferences for (i.e., are differentially sensitive to) equity." As mentioned above, the concept of equity/ inequity stems from Adams' (1963) equity theory. Drawing upon Festinger's (1957) cognitive dissonance theory, equity theory argues that imbalances between costs and benefits create distress. This distress motivates individuals to achieve balance and drives perceptions of fairness. The theory defines inequity as the perceptual discrepancy between one's own job inputs/outcomes ratio and others' inputs/outcomes ratios. Indeed, the ratio notion has heavily influenced the current definition of equity sensitivity, despite criticisms that equity theory places undue overemphasis on outcomes and utilities (Miner, 1984; Cropanzano & Folger, 1989; Yamaguchi, 2003).

To describe equity sensitivity, Huseman and his colleagues (1985) categorized individuals into three distinct groups on the basis of their preferences for outcome/input ratios: *Benevolents* prefer their ratio of outcomes/inputs to be less than others', *Entitleds* prefer their ratio to be greater than others', and *Equity Sensitives* prefer their ratio to be equal to others. The majority of the studies involving equity sensitivity adopted this categorization to explain differences in individuals' preference for their own inputs and outcomes relative to others'

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(Patrick & Jackson, 1991; King, Miles, & Day, 1993; Miles, Hatfield, & Huseman, 1994; Allen & White, 2002; Davison & Bing, 2008; Akan, Allen, & White, 2009; Roehling, Roehling, & Boswell, 2009). Subsequent research has focused on conceptualizing and refining these categories as well as the definition of the construct itself. Specifically, equity sensitivity was redefined as an individual's orientation toward exchange relationships (King et al., 1993; Miles et al., 1994). On the other hand, some have argued against the traditional view of equity sensitivity and emphasized that such categorization leads to loss of information, because trichotomization removes individual differences within each category and overemphasize the difference between the individuals with scores just above or below the cut-off scores (Sauley & Bedeian, 2000). Further, researchers have noted conceptual ambiguity of the equity sensitivity construct itself, due to disagreement on the definitions of the three classes of individuals as well as the factor structure of the measures (Scott & Colquitt, 2007; Shore & Strauss, 2008), as discussed below.

*Measurement of equity sensitivity*

Several attempts have been made to capture individual differences in preference for equity. To review the current measurement of equity sensitivity, I will consider the two dominant instruments in the literature: The Equity Sensitivity Index (ESI; Huseman, Hatfield, & Miles, 1985) and the Equity Preference Questionnaire (EPQ; Sauley & Bedeian, 2000). The ESI was originally developed by Huseman and his colleagues (1985), and it remains to date the most widely adopted measure of equity sensitivity. The ESI contains five items, and it asks participants to allocate 10 points between two options that respectively represent the respondent's outcome and respondent's input in each item (see Table 3). In the original article, the ESI demonstrated Cronbach's alpha of .81. Across studies, reliability of the measure has

ranged from .77 to .88 (Patrick & Jackson, 1991, as cited in Shore & Strauss, 2008). To validate the measure, King and Miles (1994) examined the discriminant and convergent validity of the ESI in five samples ($N = 2,399$) by correlating ESI scores with theoretically related constructs such as exchange ideology and social desirability. Their results showed that ESI scores were positively correlated with the perceptions of pay justice, altruism, social desirability, job satisfaction and organizational commitment, but negatively correlated with exchange ideology, locus of control, Machiavellianism, and non-Protestant work ethic. In addition, the measure was shown to be unrelated to self-esteem, thereby demonstrating discriminant validity from this individual characteristic.

More recent studies have raised questions regarding the psychometric properties of the ESI (Sauley & Bedeian, 2000; Scott & Colquitt, 2007; Shore & Strauss, 2008). For example, the content of the ESI items appears to measure self-interest versus helping the organization (Shore & Strauss, 2008). Others have questioned the sample-specific scoring procedures of the measure in classifying Benevolent, Equity Sensitive, or Entitled individuals, and concluded that such procedures are inadequate (Sauley & Bedeian, 2000). Furthermore, the forced choice item format has raised concerns about whether benevolence and entitlement represent two ends of a shared continuum (Davison & Bing, 2008).

To improve the shortcomings of the ESI, Sauley and Bedeian (2000) developed the equity preference questionnaire (EPQ). The EPQ contains 16 statements regarding preference for equity in the workplace (see Table 3). The authors reported Cronbach's alpha of .87 and .86 in two pilot studies, and test-retest reliability of .84 using a 5-week interval between two administrations. Consistent with the results found for the ESI, the authors reported that the EPQ scores were significantly related to external locus of control, Machiavellianism, and the

Protestant work ethic (correlations ranging from -.35 to .27), and the EPQ scores successfully predicted pay satisfaction and overall job satisfaction, demonstrating the criterion validity of the measure.

Although the EPQ was more rigorously developed in numerous validity assessment studies than the ESI, researchers have raised questions about the measure's internal consistency and dimensionality. For instance, Foote and Harmon (2006) found significantly lower Cronbach's alpha reliabilities for the EPQ than the ESI, which were as low as .27 for a student sample and .40 for a nonstudent sample. The authors suggested that the low internal consistency of the measure may imply multidimensionality. Whereas Sauley and Bedeian (2000) originally claimed that the EPQ measures a unidimensional construct, Foote and Harmon (2006) demonstrated that the EPQ may tap multiple dimensions, based on the results of a principal components analysis that yielded a three-factor solution. Miller (2009) further demonstrated the multidimensionality of the EPQ by comparing one-factor and two-factor models; he differentiated the two factors by grouping eight reverse-coded items as the *entitlement* factor and the other eight items as the *benevolence* factor. The confirmatory factor analytic results supported the two-factor model over the unidimensional model, and he found that the two dimensions were differentially related to other traits such as empathy, positive affectivity, and feminine gender role identity.

Likewise, for the ESI, Davison and Bing (2008) suggested differentiating between outcome-focused entitlement and input-focused benevolence as two oblique dimensions, yielding a 2 x 2 typology with four classifications of individuals: entitled, equity sensitive, benevolent, and equity indifferent. Taylor, Kluemper, and Sauley (2009) extended this view and modified the ESI to measure two independent dimensions of equity sensitivity without the forced choice

format. Their confirmatory factor analytic results supported the two-factor ESI, which

demonstrated greater predictive validity than the unidimensional ESI. In addition, the two

dimensions, input-focused and outcome-focused, interacted to predict various organizational

outcomes. Specifically, outcome focus moderated the relationship between input focus and

input-related criteria, such as task performance, OCB, and deviant behavior toward the

organization. Likewise, input focus moderated the relationship between outcome focus and

outcome-related criteria, such as job security satisfaction and social satisfaction.

Since the development of the EPQ, several studies have empirically compared the

validity of the ESI and the EPQ in an attempt to advance the measurement of equity sensitivity.

Some have noted the predominant use of the ESI over the EPQ in the literature yet found similar

results, such as adequate internal consistencies and group differences among the categorized

individuals (Wheeler, 2007). However, Foote and Harmon (2006) found little correlation

between the two measures: .11 for a student sample and -0.04 for a non-student sample. This

may indicate that the two dominant measures of equity sensitivity assess different constructs: for

example, the ESI correlated with input/output exchange but the EPQ did not.

Shore and Strauss (2008) extended the work of Foote and Harmon (2006) to further

compare the two instruments using a student sample. In contrast to the previous findings, their

results suggested that the EPQ may measure equity sensitivity more adequately than the ESI

does. They found nearly identical internal consistency for the two instruments (alpha of .85 for

the ESI and .86 for the EPQ) and greater validity evidence for the EPQ. Specifically, only the

EPQ scores were negatively related to exchange ideology and positively related to work locus of

control and felt obligation; moreover, the EPQ was positively related to conscientiousness and

agreeableness and negatively related to Machiavellianism, whereas the ESI was only marginally

related to Machiavellianism. Shore and Strauss's (2008) construct validity results for the ESI were inconsistent with the earlier study (King & Miles, 1994). However, consistent with Foote and Harmon's (2006) finding, results of Shore and Strauss's principal components analysis suggested a multidimensional (4-factor) solution for the EPQ, with a low internal consistency (.48) for the fourth factor.

The findings in the comparison studies cited above suggest that the ESI and the EPQ assess different constructs. Current consensus appears to promote the continued use of the original, forced-choice ESI, often as a continuous variable without classification (Sauley & Bedeian, 2000; Foote & Harmon, 2006; Akan, Allen, & White, 2009; Adams, Treadway, & Stepina, 2008; Restubog, Bordia, & Tang, 2007).

The current study proposes an alternative approach to understand equity sensitivity, focusing on individuals' differential dispositions of sensitivity to injustice, and independent of one's own outcome or perceptions of others' outcomes. Even in the absence of explicit notions of inputs and outcomes, I assert that one's sensitivity to injustice can be explained as a continuum, without the categorization of individuals. Rather, one's perception of equity may be influenced by individual differences such as needs, value, cultural context as well as numerous dispositional characteristics (Weick, Bougon, & Maruyama, 1976; Yamaguchi, 2003).

*Present Study*

The purpose of the current study is to provide an alternative more intuitive definition of equity sensitivity and to develop and validate a new measure of the construct that adequately captures individual differences in sensitivity to unfairness. I propose that equity sensitivity is a *dispositional tendency to perceive stimuli as unfair*. This view is different from the original

conceptualization in that it does not (a) focus on an individual's desired outcomes, (b) involve comparison with others and their outcomes, or (3) classify individuals into categories (e.g., Benevolents, Equity Sensitives, and Entitleds) as a part of either the measurement process or the analytic procedure. Instead, I consider equity sensitivity as a continuous, unidimensional individual difference that reflects a varying tendency to perceive things as unfair.

*Neutral Objects Equity Sensitivity Questionnaire*

The Neutral Objects Equity Sensitivity (NOES) questionnaire was developed as a new measure of equity sensitivity. The NOES attempts to assess an individual's general perceptions of fairness in everyday life. In other words, individuals who score high in the NOES view the world to be fairer in general than those who score lower. The development of the NOES is based upon Weitz's (1952) theory of neutral objects. According to Weitz (1952), the intensity of one's dispositional tendency to be satisfied or dissatisfied with everyday life can be represented as the common variance in satisfaction reactions across a wide and discrepant set of neutral objects in one's life space (see Judge & Hulin, 1993; Judge & Bretz, 1993). These neutral objects can be broadly sampled from the universe of potential stimulus objects, as pointedly demonstrated in Weitz's (1952) 'Gripe Index,' which asked respondents to report how satisfied they were with their house or apartment, food prices, the local weather, popular music, their telephone number, 8 ½ X 11 inch paper, and a variety of other seemingly randomly-selected attitude objects. The psychometric interpretation of a composite of satisfaction ratings across a wide range of unrelated target objects is that such an index would reflect more about the rater herself, than about the target or stimulus per se. That is, the common variance between one's satisfaction with music, satisfaction with one's telephone number, and satisfaction with notebook paper is one's *general dispositional tendency to be satisfied with things*. Weitz (1952) noted, "that some

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individuals generally gripe more than others; in that case the number of dissatisfactions with the job should be placed in its proper background – namely, some "gripe index" of the individual (p. 203)."

In other words, some individuals may consistently complain about various matters in life, and these type of employees may report many sources of dissatisfaction in the workplace. Thus, Weitz (1952) concluded that a general dissatisfaction measure was needed to properly address the question. In the original article, he found that the number of general dissatisfactions reported was significantly correlated with the number of specific job dissatisfaction sources ($r = .39$). Similarly, this idea could be applied to the study of fairness.

In many regards, the NOES instrument that is developed in the current paper mirrors the Neutral Objects Satisfaction Questionnaire (NOSQ; Judge & Bretz, 1993). Judge and Bretz (1993) developed the NOSQ to assess individual affective disposition, incorporating Weitz's (1952) original instrument. Instructions for the NOSQ ask participants to circle the response that best represents their feeling (1 = *dissatisfied*, 2 = *neutral*, and 3 = *satisfied*) about each of 25 objects. The items/objects include neutral phrases and terms such as "The city in which you live", "Television programs", and "8 ½ x 11 inch paper." Because the items reflect a wide range of domains, the measure was expected to capture a continuum of affective dispositions that apply across all stimuli in an individual's everyday life. Following Weitz's (1952) logic, one's average satisfaction across a diverse array of otherwise unrelated objects should reflect an aspect of that individual's general satisfaction level.

To develop the NOES, I theorized that an individual's average perceptions of the *fairness* of a set of generic and neutral objects would be expected to capture individual differences in

dispositional fairness perceptions. The instrument was developed following the standard test development procedures specified by the APA (1999) and the procedures suggested by Hinkin (1998), as described in the following sections.

Four independent studies were conducted to develop and validate the new measure of equity sensitivity. In Study 1, a content validity analysis of the ESI and the EPQ was conducted to examine the classic measures of equity sensitivity. In Study 2, I developed the Neutral Objects Equity Sensitivity (NOES) measure and empirically demonstrated its construct validity. Study 3 examined the measure's internal consistency and incremental predictive validity. Finally, Study 4 replicated the results of Study 3 and provided further validity evidence for the new measure of equity sensitivity.

# CHAPTER 2

# STUDY 1

A fundamental concern for equity sensitivity involves a lack of consensus on the formal

definition and theoretical implications of the construct, and this has led to repeated changes in

conceptualization and measurement (King et al., 1993; Miles et al., 1994; Scott & Colquitt,

2007; Davison & Bing, 2008; Taylor et al., 2009). The classic measures of equity sensitivity

appear to assess multiple, distinct constructs (Foote & Harmon, 2006; Shore & Strauss, 2008).

Based on the definitions of equity sensitivity provided in the original articles, the classic

measures of equity sensitivity were designed to put more emphasis on measuring one's

*preference* for inputs and outcomes, rather than one's general sensitivity to injustice. As such,

the two established measures of equity sensitivity (the ESI and the EPQ) should show patterns

consistent with measuring equity preference, not equity sensitivity. The following section

simultaneously examines the items in the ESI and the EPQ to reveal such tendencies.

> *Hypothesis 1:* Items in the ESI will be judged to measure input and reward preferences
> (equity preference), more strongly than they are judged to measure one's tendency to
> perceive things fairly versus unfairly (equity sensitivity).

> *Hypothesis 2:* Items in the EPQ will be judged to measure input and reward preferences
> (equity preference), more strongly than they are judged to measure one's tendency to
> perceive things fairly versus unfairly (equity sensitivity).

## 2.1 Method

*Content validity assessment*

I conducted a content validity study (Anderson & Gerbing, 1991; Hinkin, 1998;

Schriesheim et al., 1993) to evaluate the previously established measures of equity sensitivity:

the ESI (Huseman et al., 1985) and the EPQ (Sauley & Bedeian, 2000). A panel of 15 content experts (Ph.D. students and professors in industrial/organizational psychology, from a large Midwestern university) participated in the study. All participants were blind to the study hypotheses.

Procedurally, the participants were asked to categorize *each item* from the ESI and the EPQ instruments as belonging to one of the following five construct definition categories: (a) preference to <u>reduce</u> work inputs (e.g., to work less), (b) preference to <u>increase</u> work rewards and outcomes (e.g., to get more), (c) preference to BOTH reduce work inputs AND increase work rewards/outcomes, (d) general tendency to perceive things as fair or unfair, and (e) does not fit into the categories above. The instructions and the items are listed in Appendix A.

2.2 Results and Discussion

The results from the content validity analysis revealed that most participants judged the ESI items to measure either input and reward preferences, or both (see Table 1). Specifically, all of the participants agreed that items 1, 2, and 3 from the ESI do not measure one's tendency to perceive things fairly (i.e., 0% of respondents assigned these items to the *equity sensitivity* content category), and only one participant reported that the items 4 and 5 seem to measure such a tendency (see Appendix A for items.)

For the EPQ items, as expected, participants agreed that items EPQ1 (100%) and EPQ12 (80%) measure preference to both reduce work inputs and increase work rewards/outcomes, and items EPQ2 (100%), EPQ3 (93.3%), EPQ4 (100%), and EPQ6 (80%) were each consistently judged to measure preferences to reduce work inputs. Furthermore, there were no EPQ items for

which more than 1 in 4 (26.7%) of participants reported that the item measures the tendency to perceive things fairly (i.e., equity sensitivity; see Table 1).

In sum, the ESI and EPQ items were consistently perceived to measure *equity preference* (i.e., desire for more outcomes and fewer inputs), as categorized by 74.3% of respondents, on average (Table 1). Further, items from these two classic equity sensitivity instruments were only rarely judged (by only 7.6% of respondents) to reflect the conceptual definition, "General tendency to perceive things as fair or unfair."

Overall, the results supported the prediction that traditional measures of equity sensitivity (the ESI and the EPQ) measure one's preferences for inputs and outcomes, rather than one's tendency to perceive things fairly. To assess individuals' general tendency to perceive stimuli as fair/unfair, I needed to develop and validate the NOES instrument in Study 2. Specifically, the construct validity of the NOES was evaluated in Study 2 via factor analysis.

# CHAPTER 3

## STUDY 2

*Initial Scale Development*

Study 2 attempted to develop an original measure of dispositional equity sensitivity, which could be thought to fit the definition, "general tendency to perceive things as fair or unfair." By beginning with a different theoretical definition of equity sensitivity, I anticipated that the new measure would ultimately demonstrate discriminant validity from previous measures (i.e., the ESI and EPQ).

> *Hypothesis 3:* The NOES items will reflect a distinct construct from the constructs reflected by the ESI and EPQ items.

*Item Generation Procedure*

Because the current conceptualization of equity sensitivity departs from the previous theoretical definition, an inductive method (Locke, 2007; Hinkin, 1998; Bennett & Robinson, 2000) was used to generate new items for the NOES. The goal was to produce neutral terms and objects that were similar in theme to the neutral objects from the NOSQ (Judge & Hulin, 1993; Judge & Bretz, 1993; Weitz, 1952; e.g., "8 ½ x 11 inch paper," "your phone number"), and yet which would be possible to think of in terms of fairness/unfairness.

A group of psychology graduate and undergraduate students ($N = 10$) generated a list of 99 neutral objects and terms which reflect a wide range of domains in everyday life. These items were produced through an open brainstorming procedure (cf. Diehl & Stroebe, 1987; Mullen, Johnson, Salas, 1991; Kerr & Tindale, 2004) during a research meeting. The resulting 99 items

(i.e., neutral objects) appear in Table 2. The items were arranged in a randomized order. Also, whereas the NOSQ used a 3-point scale, the NOES uses a 5-point scale ranging from 1 = *extremely unfair* to 5 = *extremely fair*, because Likert format reliability has been shown to increase when using a 5-point scale (Lissitz & Green, 1975).

In the subsequent section, the number of items in the NOES was reduced using various techniques. I also examine the dimensionality of the reduced measure as well as the construct validity in relation to the traditional measures of equity sensitivity. Based on the theoretical definition and content analysis results, the NOES is posited to measure a different construct from that assessed by the ESI and the EPQ. Several a priori multifactor models of the equity sensitivity measures will be compared, based on previous findings regarding the dimensionality of the ESI and the EPQ (Foote & Harmon, 2006; Shore & Strauss, 2008).

3. 1 Method

*Sample*

Surveys were delivered to a total of 545 employees from a multi-organizational sample, using the online Mechanical Turk website (www.mturk.com) administered by Amazon.com (Buhrmester, Kwang, & Gosling, 2011; Paolacci, Chandler, Ipeirotis. 2010). This survey service allows individuals from throughout the world to fill out surveys for a small incentive (30 cents, in the current design), and like other web-based approaches, this method allows researchers to collect and manage data efficiently. On the other hand, researchers have noted occasional problems such as data quality issues due to uncertainty regarding participant characteristics (Paolacci, Chandler, Ipeirotis. 2010). To overcome potential drawbacks related to online surveys, recent studies have examined various ways to improve overall data quality. Barger and Sinar

(2011) empirically demonstrated that providing participant incentives (i.e., additional payment for successfully completing the task or warning of no compensation for submitting low quality data.) and including quality control questions in the MTurk questionnaires significantly improved the quality of responses

In the current study, several attempts were made to improve the overall data quality. First, I included a specific instruction regarding the content inspection to provide incentives for completing the survey with quality responses. The following sentence was highlighted at the end of the instruction: "Please keep in mind that we will be examining all data line-by-line, and participants who respond carelessly will not be paid for their assignment." This instruction was expected to motivate respondents to answer the questions carefully to receive the compensation. Second, an open-ended question was added in the beginning of the questionnaire to evaluate the respondent's ability to read and comprehend the questions in English. The question asked, "What are your professional goals with your current employer?" I chose the question based on the following criteria: (a) it is an open-ended question that could generate a full-sentence response, and (b) it is concise, clear, and relatively easy to comprehend for employees from a multi-organizational sample. Responses from those who did not answer this open-ended question, or from respondents who gave unclear responses were excluded from analysis.

A total of 516 responses were used for analysis after removing participants who failed or omitted the open-ended question. This sample included 60% men and 40% women. 67% of participants were between 18 and 30 years of age, 27% were in their thirties and forties, and 5% were in their fifties or older. Average length of employment of the participants with the current employer was 3 years and 6 months. The majority of participants (74%) held bachelors or graduate degrees. As previous literature has noted, a significant number of the MTurk

respondents (76%) were from countries other than the U.S.; 61% were of the participants were from India, and the rest reported a broad range of nationalities including the U.S., U.K., Mexico, Singapore, Pakistan, Ukraine, Romania, South Africa, Macedonia, Norway, and France. Race/Ethnicity distribution was as follows: Asian (66%), Caucasian (24%), African American (2%), Hispanic (1%), and other (5%). Finally, 68% of the respondents reported to have a full-time job, 25% held a part-time job, and 5% were unemployed.

*Procedure*

A series of questionnaires was administered to only those who met the qualification of a Human Intelligence Task (HIT) approval rating of 95% or higher, meaning that MTurk users whose work was approved by surveyors in 95% of the previous surveys they had undertaken prior to participation in the current study were granted a chance to participate in this study. Participants were offered $0.35 for completing the survey, which took about half an hour on average.

*Measures*

*Equity Sensitivity*.Three measures were included to assess equity sensitivity. The ESI (Huseman, et al., 1985) and the EPQ (Sauley & Bedeian, 2000) were included to examine the traditional definition of the construct (i.e., equity preference), and the NOES (Table 3) was included to examine the current, alternative approach to defining and assessing equity sensitivity. An example ESI item stem is, "It would be more important for me to," and then participants are asked to divide 10 points between two options: "A. Help others," and "B. Watch out for my own good." The EPQ includes 16 items, such as "I prefer to do as little work as possible at work while getting as much as I can from my employer." Respondents were asked to rate each item on a 5-point scale ranging from 1 (*disagree strongly*) to 5 (*agree*

*strongly*). The NOES used the following instructions: "Below is a list of different topics. Please rate the extent to which you believe the following items/topics are *fair* versus *unfair*." Respondents were then asked to rate the fairness of 99 items such as "Traffic laws" and "Student loans" (see Table 1) on a scale from 1 (extremely unfair) to 5 (extremely fair). The internal consistencies of the three equity sensitivity measures in the current study were .76 (ESI), .83 (EPQ), and .96 (NOES), respectively.

*Analysis*

*Preliminary Factor Analyses and initial item reduction*

The data from all 516 respondents were divided into two subsamples, an exploratory factor analysis subsample and a holdout sample for confirmatory factor analysis. To achieve quasi-random assignment to subsamples, I split the original sample into odd-numbered and even-numbered respondents. I first conducted an exploratory factor analysis (EFA) using responses from even-numbered participants ($N = 258$) to assess the dimensionality of the NOES and to further reduce the number of items in the measure. Next, based on the EFA findings for the NOES and on past factor-analytic results for the ESI and EPQ, I conducted a confirmatory factor analysis (CFA) on the responses from odd-numbered participants ($N = 258$) to investigate the construct validity of the revised NOES measure. I compared several *a priori* factor models to examine dimensionality of the three equity sensitivity measures, using LISREL 8.71 (Joreskog & Sorbom, 1993).

3.2 Results and Discussion

Results from the EFA (principal axis factoring with promax rotation) and inspection of the scree plot for factor extraction (Figure 1, see Cattell, 1966) clearly suggested a two-factor solution for the 99-item NOES. The two-factor solution was contrary to our *a priori* expectation that there would emerge a dominant single factor (cf. the first eigenvalue only accounted for 21.19% of the total variance amongst the 99 items). Inspection of the rotated factor pattern matrix yielded a highly intuitive interpretation (see Table 2): the first factor seemed to include *neutral* items (e.g., traffic lights, toys, foreign cars), whereas the second factor consisted of *negative* items (items that are potentially related to negative consequences; e.g., cancer, pollution, tornadoes, pain). The items and the corresponding factor loadings are presented in Table 2. Given our goal of producing a neutral objects questionnaire, I only retained items that loaded onto the first factor (i.e., the neutral objects factor), and discarded items that loaded primarily onto the second factor (i.e., the negative objects factor). For item reduction to form the revised neutral objects equity sensitivity questionnaire (NOES), I first discarded any first-factor items with standardized factor loadings smaller than .4 (Ford, MacCallum, & Tait, 1986), yielding 54 retained items. Finally, the Spearman-Brown prophecy formula (Brown, 1910; Spearman, 1910) was used to solve for the number of items needed to achieve Cronbach's alpha of .80. This step resulted in the final 10 items (see Table 2, Appendix B). The ten items with the highest loadings on the neutral objects factor were selected for the revised scale, with a single exception. The neutral item "Your paycheck" was removed and replaced by the item "Federal employment," because the paycheck item may be judged by future readers to directly reflect distributive justice itself, rather than equity sensitivity. The internal consistency reliability of the 10 items in the exploratory subsample was .83.

Results from the confirmatory factor analyses (CFA) are reported in Tables 3 and 4. All specified models exhibited statistically significant chi-square values (p < .05). However, because it is well known that in large samples, chi-square can signal even trivial departures from good fit, I chose to interpret indices of practical fit (Hu & Bentler, 1999). Based upon practical fit indices, all models were judged to exhibit adequate fit, with the strongest support for the 5-factor oblique model (see Table 4) that included the ESI, NOES, and the three EPQ dimensions suggested by Foote and Harmon (RMSEA = .044; CFI = .95; SRMR = .064; NNFI = .95). Factor loadings appear in Table 3. Foote and Harmon (2006) previously labeled the three EPQ subfactors *conscientiousness* (R), *work ethic*, and *duty*. To avoid overlap with existing personality measures, I provide an alternative label for the first EPQ dimension "equity preference," resulting in three EPQ subfactor labels: (a) equity preference, (b) work ethic, and (c) duty. The equity preference factor was moderately correlated with work ethic ($\phi = .45$) but not with duty ($\phi = .17$). The latter two factors showed a higher standardized correlation ($\phi = .58$). The three EPQ subfactors were correlated $\phi = -.18, -.07,$ and $-.23$) with the ESI. The NOES was correlated $\phi = -.20$ with the ESI and $\phi = .08, .26,$ and $.31$ with the three EPQ subfactors, respectively. Overall, results are consistent with previous findings showing that the EPQ taps a multidimensional construct, whereas the ESI assesses a unidimensional construct.

In addition, all items from the NOES loaded onto one latent factor (all factor loadings $\lambda > .40$; average factor loading $\lambda = .56$). The latent factor correlations amongst the five equity sensitivity/equity preference constructs varied from $\phi = -.07$ to $\phi = .58$. This CFA result implies that the NOES assesses a new unidimensional construct of equity sensitivity, separate from the traditional measures. These results further indicate that the ESI, EPQ, and NOES assess different constructs from one another (supporting Hypothesis 3).

All in all, the results suggest adequate psychometric properties of the NOES. In Study 3, the

construct validity of the NOES measure is examined longitudinally, to assess both internal

consistency and incremental criterion validity over the classic equity sensitivity measure in

predicting justice perceptions. As further construct validity evidence, I also examine whether

equity sensitivity, as theoretically defined and measured by the NOES, actually makes an

individual more or less sensitive to justice-related events, consistent with the construct label

*equity sensitivity*.

# CHAPTER 4

# STUDY 3

Criterion-related validity of the NOES was examined using an independent sample as a part of the construct validation process. Huseman and his colleagues (1987) originally suggested that equity sensitivity (measured by the ESI) may moderate the relationship between perceptions of equity and job satisfaction. Numerous studies since have demonstrated the moderating role of the construct (Blakely, Andrews, Moorman, 2005; Restubog, Bordia, & Tang, 2007; Akan et al., 2009; Colquitt, 2004). However, the direct predictive validity of equity sensitivity has been examined less often. Similarly, Sauley and Bedeian (2002) hypothesized in their validation study of the EPQ that equity sensitivity and reward condition will interact to predict pay and overall satisfaction. However, they discovered that equity sensitivity alone predicted both pay and overall satisfaction beyond the reward condition, such that higher EPQ composite scores were associated with lower satisfaction levels. Subsequent studies did not further investigate the predictive value of the construct.

Such lack of evidence could be attributed to the conceptual and methodological ambiguity associated with the traditional equity sensitivity construct. Therefore, the purpose of Study 3 is to establish the criterion-related validity of equity sensitivity assessed with the NOES. I predict that equity sensitivity will demonstrate criterion-related validity in predicting justice perceptions, for the simple reason that individuals who tend to consistently perceive neutral objects as unfair will likely also tend to see their jobs as unfair (see Weitz, 1952). The next section examines whether equity sensitivity (as defined and indexed by the NOES) predicts

justice perceptions, even after controlling for equity preference (as defined and indexed by the ESI; Huseman et al., 1985), and also controlling for related personal characteristics.

For completeness, the current study included several constructs which are conceptually similar to equity sensitivity. For example, Colquitt and colleagues (2006) found that personality characteristics such as trust propensity, risk aversion, and trait morality have similar moderating effects as equity sensitivity on the relationship between justice perceptions and behavioral outcomes. The authors argued that each characteristic may represent the core ideas behind major theories of organizational justice. Specifically, trust propensity is a critical component in fairness heuristic theory (Lind, 2001), risk aversion could be a factor of uncertainty management theory (Lind & Van den Bos, 2002), and trait morality may relate to the deontic component of fairness theory (Folger & Cropanzano, 2001). Colquitt et al. (2006) also noted that equity sensitivity (as measured by the ESI) is differentiated from the other characteristics because the construct is limited to input-outcome equity/distributive justice. However, because the NOES does not explicitly consider outcomes/distributive fairness (another feature that distinguishes the NOES from the traditional ESI equity preference measure), I do not consider a focus on distributive justice to be a distinguishing feature of the NOES. Nonetheless, I do expect the NOES to uniquely predict justice perceptions beyond trust propensity, risk aversion, and trait morality, as none of these constructs specifically taps the dispositional tendency to perceive stimuli as fair/unfair.

Finally, in addition to the incremental validity of NOES for predicting justice perceptions, I will also look into whether NOES actually makes individuals more sensitive to evaluative work events. Along these lines, Rupp and Paddock (2010) suggested that justice-related events experienced at the individual level may serve as antecedents to justice perceptions.

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This yields a possibility that those who are highly sensitive to injustice may react differently to given events, and thus perceive the same events differently from those who are less sensitive. I therefore propose and examine an interaction effect between events and equity sensitivity in predicting justice perceptions.

> *Hypothesis 4:* Equity sensitivity (measured with the NOES) will predict justice perceptions above and beyond equity preference (measured with the ESI), trust propensity, risk aversion, and trait morality.

> *Hypothesis 5:* Equity sensitivity (measured with the NOES) will moderate/enhance the relationship between events and justice perceptions. Specifically, individuals who are more dispositionally prone to see things as fair will exhibit a more positive relationship between frequency of events and justice perceptions, whereas those dispositionally prone to see things as unfair will exhibit a more negative relationship between frequency of events and justice perceptions.

4.1 Method

*Sample*

Data for Study 3 were collected from undergraduate students at a large Midwestern research university (*N*=110), with surveys administered at two points in time separated by 2 months (response rate at time 1 = 90%; response rate at time 2 = 89%). All participants were enrolled in one of two sections of an upper-level psychology class. Mean age of the participants was 20.53 years with 61% female and 39% male. Race/Ethnicity distribution was: Caucasian (65%), Asian (22%), Hispanic (6%), African American (1%), and other (5%). Attrition was not a major concern in this study as only 2 participants dropped out from Time 1 to Time 2.

*Procedure*

Two survey sessions were held in an advanced psychology course as an optional extra credit opportunity, over one academic semester. The first session was held two months into the

semester, and the second session was held toward the end of the semester with an approximately two-month interval between observations. By the second session, students had plenty of opportunities to interact with the instructor regarding their learning process and performance on graded assignments. In each of the two data collection sessions, participants were asked to voluntarily complete a set of questionnaires after a lecture.

*Measures*

*Equity Sensitivity*. Two measures were included to assess equity dispositions. The NOES was used to measure equity sensitivity, and the ESI was used to measure equity preference. The EPQ was not administered in Study 3, in part because the data for Study 2 and Study 3 were collected concurrently (thus I was not aware that the EPQ items would load onto a separate factor from the ESI items at the time Study 3 was conducted), and due to strong conceptual redundancy between the ESI and EPQ (see Table 1); plus I were attempting to reduce respondent burden by limiting the number of items on the longitudinal survey. Both NOES and ESI measures showed adequate internal consistencies in Study 3 (ESI = .89 at Time 1, .89 at Time 2; NOES = .83 at Time 1, .77 at Time 2).

*Trust propensity, Risk aversion, Trait morality*.  Personal characteristics measures which may function similarly to equity sensitivity and equity preference were included. I used the reduced version of each measure as in Colquitt et al. (2006). Trust propensity was measured using 5 items from the revised version of the NEO Personality Inventory (NEO-PI-R; Costa & McCrae, 1992), and risk aversion was assessed with 6 items developed by Jackson (1994) in a part of a longer measure, Jackson Personality Inventory-Revised (JPI; Jackson, 1994). Finally, I measured trait morality using 6 items from Abridged Big Five-dimensional Circumplex model (AB5C) developed by Hofstee, de Raad, & Goldberg (1992). Participants were asked to rate 17

statements on a scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). Trust propensity was measured with items such as "I suspect hidden motives in others," risk aversion included items such as "I seek adventure" (R), and trait morality was examined with items such as "I scheme against others" (R). Reliabilities of the measures at each time point are presented in Table 5.

*Justice Perceptions*. I measured individual perceptions of justice in the classroom with 22 items from procedural justice measures by Colquitt, Noe, and Jackson (2002); Naumann and Bennett (2000, 2002); and Niehoff and Moorman (1993); with wording adapted to fit the classroom context. Participants were asked to rate the statements on a scale from 1 (*to a small extent*) to 5 (*to a large extent*). Items were modified to fit the classroom setting as follows: "Consistent rules and procedures are used for grading," "Our input and opinions about grading procedures are obtained prior to grading," "The reasons behind the grading procedures are explained," "Grading is carried out by the instructor in an unbiased manner," "All grading procedures are applied consistently across all students in the class," "Accurate information is used when assigning grades," and "Students are allowed to challenge or appeal grades made by the instructor." "Has your class been able to express its views and feelings related to grading?," "Has your class had influence over the way grades are assigned (e.g., through questioning how points are awarded for exams or other written work)?," The reliability of the measure was estimated as .91 at Time 1 and .93 at Time 2.

*Events*. A three-item events measure was developed to describe justice-related events typical of the classroom situation. Participants were instructed to indicate the number of times they encountered each event during the semester in the particular course. The measure included the following items: (1) "I discussed questions about assignments with the instructor," (2) "I

discussed grades or grading procedures with the instructor," and (3) "I asked the instructor a question about my grade after receiving a grade." Because 44% of students reported never having discussed a grade or assignment with the instructor, but a few students reported talking with the instructor about grades with high frequency, these items had positively skewed distributions (skewness = 3.48 for item 1, 2.27 for item 2, and 2.44 for item 3). Thus, to avoid the possibility that our results would be driven by a few outliers who spoke with the instructor more than 10 times each, prior to the analysis each item was dichotomized (Tabachnik & Fidell, 2007). The internal consistency of the three-item scale was .70.

4.2 Results and Discussion

Intercorrelations among the Study 3 variables and internal consistencies are presented in Table 5. In support of the Hypothesis 4, the results of multiple regression analyses (Table 6) indicated that the NOES was the strongest unique predictor of individual justice perceptions at Time 1, with the ESI, trust propensity, risk aversion, trait morality, and gender also in the model. It is noteworthy that the ESI did not exhibit incremental validity at Time 1. At Time 2, both the NOES and trait morality significantly predicted justice perceptions, but the ESI again did not. Furthermore, the results of lagged regression with Time 1 measures of NOES and the other antecedents predicting justice perceptions taken two months later indicated that the NOES at Time 1 was the strongest predictor of justice perceptions taken after a two months lag. Risk aversion also predicted lagged justice perceptions, but the equity preference (ESI) instrument did not uniquely predict justice perceptions.

To test Hypothesis 5, the interaction between events and equity sensitivity (measured via NOES) in predicting individual justice perceptions was next examined using moderated multiple

regression (see Table 7). Results indicated that equity sensitivity moderated the relationship between classroom events and individual perceptions of justice ($p < .05$, see Fig. 2). The results of two simple slopes tests (Aiken & West, 1991), performed at both high NOES and low NOES, confirmed that individuals who tend to evaluate objects fairly (high NOES) showed improved perceptions of fairness as the number of events increased ($p < .05$), whereas those with low NOES were negatively influenced by more frequent events ($p < .05$; supporting Hypothesis 5).

Overall, the results from Study 3 further supported the construct validity of the NOES. As presented in Table 5, the NOES measure showed acceptable reliability across the two-month time lag (retest $r = .72$), and the intercorrelations with three personal characteristics (trust propensity, risk aversion, and trait morality) additionally supported discriminant validity of the NOES. More importantly, the NOES demonstrated criterion-related validity longitudinally over the classic ESI equity sensitivity (i.e., equity preference) measure in predicting justice perceptions. Finally, the NOES also moderated the relationship between events and justice perceptions, consistent with our current definition of equity sensitivity as a *dispositional tendency to perceived stimuli as fair versus unfair*.

To this point, I have introduced a new, intuitive definition of equity sensitivity, shown that previous measures tend to tap into equity preference rather than equity sensitivity, proposed a new measure of equity sensitivity based upon neutral objects, demonstrated discriminant and convergent validity for the NOES, as well as nomological and incremental validity in a time-lagged classroom sample. To demonstrate the external validity of these findings, Study 4 will attempt to replicate the results from Study 3 using the employee online survey data collected via MTurk ($N = 516$). With this multi-organizational employee sample, the criterion validity of the NOES in predicting justice perceptions will further be compared to both established measures of

equity sensitivity (the ESI and the EPQ), providing evidence that the NOES incrementally predicts justice perceptions beyond the EPQ, in addition to the ESI (as shown in Study 3). Additionally, the moderating properties of the NOES on the relationship between workplace events and justice perceptions will be examined.

# CHAPTER 5

# STUDY 4

To replicate and expand the results found in Study 3, the current study included additional trait control variables (positive and negative affectivity) and organizational outcome variables. First, equity sensitivity measured with the NOES, as a potentially ambiguous survey measure, may relate to positive and negative affectivity (Bagozzi & Yi, 1990; Conway, 1998; Spector, 1987; Williams, Cote, & Buckley, 1989). Adams and his colleagues (2008) found that even when measured with the ESI, equity sensitivity and negative affect both had a significant impact on political perceptions in the workplace; specifically, those with high equity sensitivity are more likely to experience perceptions of organizational politics (POPS) than individuals with low equity sensitivity. The same effect was found for negative affectivity. This could be explained by the fact that the ESI and the EPQ are contaminated with respondent affectivity, as both instruments consist of statements that are positive or negative, as the traditional construct focused on one's preference for particular input/outcome ratios. For example, traditional equity sensitivity (i.e., equity preference) measures are related to negative traits such as Machiavellianism (King & Miles, 1994). In contrast, because the NOES is intended to specifically measure one's general tendency to evaluate the fairness of neutral stimuli, it is expected to show different patterns from positive and negative affectivity in predicting justice perceptions.

In addition, previous studies have found that equity sensitivity assessed with the traditional measures (i.e., equity preference) is related to various organizational outcomes. For example, Colquitt (2004) found that equity sensitivity, when measured with the ESI, moderates

the relationship between fairness perception and organizational outcomes such as performance. According to Colquitt, whereas interactions between individual perceptions of fairness among group members leads to higher levels of role performance, this effect is weakest when members show low levels of equity sensitivity. Furthermore, equity sensitivity also has moderating effects on the relationship between organizational justice and behavioral outcomes such as organizational citizenship behaviors (OCB). Specifically, Blakely, Andrews, and Moorman (2005) found that *benevolents* and *equity sensitives* exhibited more OCBs than *entiteleds*, regardless of their justice perception levels. Similarly, the ESI moderated the relationship between psychological contract breach and supervisor-rated OCB, such that stronger negative effects of breach on OCB were found for more *entitled* individuals, and these individuals also tend to show greater display of interpersonal deviance (Restubog, Bordia, & Tang, 2007). In a more recent study, team members reported that *benevolents* (measured with the ESI) were more likely to exhibit OCB at the end of a team project (Akan et al., 2009).

Despite the abundant evidence for the moderating role of equity sensitivity, there are few studies that hypothesize the direct effect of the construct on organizational outcomes, especially behavioral outcomes. As a rare example, King and Miles (1994) showed that equity sensitivity (measured with the ESI) is positively related to job satisfaction and organizational commitment, and negatively related to turnover propensity. Also, Sauley and Bedeian (2000) showed that the EPQ predicts job satisfaction. However, this evidence conspicuously omits behavioral outcomes as consequences of equity preference. Regarding this problem, Scott and Colquitt (2007) suggested that equity sensitivity may predict job attitudes such as job satisfaction better than it predicts work behaviors.

Nonetheless, I see some theoretical reasons to believe individuals with different levels of equity preference may react differently to perceived inequity. For example, traditional equity preference measures might tap unmet needs or unreciprocated contributions when individuals encounter unfair situations. Under such circumstances, social exchange theory (Blau, 1964) or the norm of reciprocity (Gouldner, 1960) may predict the withholding of inputs or extraction of greater outcomes in the form of counterproductive work behaviors. Greenberg (1990) found that those who perceived inequity through pay reduction at work exhibited a higher theft rate..

The subsequent section will examine the predictive validity of the NOES, the traditional ESI, and the three EPQ subfactor measures to predict behavioral outcomes of organizational citizenship behavior (OCB) and counterproductive work behavior (CWB). Finally, the hypothesized moderating role of the NOES on the relationship between events and justice perceptions will be assessed, in an attempt to replicate the findings from the classroom sample (Study 3).

> *Hypothesis 6:* Equity sensitivity (measured with the NOES) will predict justice perceptions beyond equity preference (measured with ESI and the three EPQ subfactor measures).

> *Hypothesis 7:* Equity sensitivity (measured with the NOES) will moderate/enhance the relationship between work events and justice perceptions. Specifically, individuals who are more dispositionally prone to see things as fair will exhibit a more positive relationship between frequency of events and justice perceptions, whereas those dispositionally prone to see things as unfair will exhibit a more negative relationship between frequency of events and justice perceptions.

5.1 Method

*Sample*

The sample for Study 4 was the same as the Study 2 sample (see section above).

*Measures*

Apart from the measures previously described, several additional measures were taken that were unique to Study 4. These measures are described below.

*Trust propensity, Risk aversion, Trait morality*. As in Study 3, three personal characteristics measures were included in Study 4 (Costa & McCrae, 1992; Jackson, 1994; Hofstee, et al., 1992; as used in Colquitt et al., 2006). Reliabilities of the measures were .69, .67, and .68 respectively.

*Justice Perceptions*. Individual justice perceptions were measured through 20 items assessing procedural, distributive, interpersonal, and informational justice (Colquitt, 2001). In addition to the sub-instructions for each justice dimension described in the original article, the questionnaire consisted of the additional instruction, which specified "The following items refer to the procedures used to arrive at your INDIVIDUAL salary amount and/or performance evaluation. To what extent:" The measure then included statements such as "Have you been able to express your views and feelings during those procedures?" and "Does your salary amount / performance evaluation reflect the effort you have put into your work?" The participants were asked to rate each statement on a scale from 1 (*to a small extent*) to 5 (*to a large extent*). The reliability of the overall composite justice perception measure was .93.

To investigate the discriminant validity of the justice perception measure from the final NOES equity sensitivity measure, I conducted a confirmatory factor analysis on the full set of responses ($N = 516$) examining the factor structures of the NOES items and justice perception items simultaneously. In specific, I wanted to know whether respondent reports on the fairness of neutral objects (NOES) were conceptually distinguishable from respondent reports of workplace fairness as assessed via the Colquitt (2001) scale. Thus, I compared two *a priori* factor models

using LISREL 8.71 (Joreskog & Sorbom, 1993). The first model consisted of five oblique factors: the NOES factor and the four factors of justice perceptions (procedural, distributive, interpersonal, and informational justice; Colquitt, 2001). In the second model, I included the same five lower-order factors (i.e., NOES, distributive, procedural, interpersonal, and informational justice), but additionally modeled a higher-order overall justice factor, instead of specifying correlations amongst the four lower-order justice factors (Ambrose & Schminke, 2003; Colquitt & Shaw, 2005).

Factor analytic results revealed that the NOES demonstrated the discriminant validity from the justice perception measures. Both models showed adequate fit, based on practical fit indices. That is, model fit was good both when the NOES was included as a separate factor alongside the four oblique justice perception factors (RMSEA = .047; CFI = .98; SRMR = .046; NNFI = .98), and when the NOES was included alongside the four justice perceptions factors with a higher-order overall justice factor (RMSEA = .051; CFI = .98; SRMR = .052; NNFI = .98). In the oblique five-factor model, the NOES was only moderately correlated with each justice factor (standardized latent factor correlations ranged from $\phi = .28$ to $\phi = .37$). However, the four justice perception factors were highly intercorrelated with one another; specifically, the procedural justice factor was correlated $\phi = .83$ with the informational justice factor, and $\phi = .73$ with the distributive justice factor. Likewise, the interpersonal justice factor was correlated $\phi = .79$ with the informational justice factor. Therefore, for all subsequent analyses I have chosen to accept the more parsimonious, hierarchical model with an overall justice perception factor, in addition to the separate NOES factor. The latent factor correlation between the NOES and the overall justice factor was $\phi = .369$, which further supports the discriminant validity of the NOES.

*Positive and Negative Affectivity*. The Positive and Negative Affect Schedule (PANAS; Watson, Clark, & Tellegen, 1988) was used to assess individuals' general affectivity. The measure included a list of 20 terms indicating either positive or negative emotion, such as "Enthusiastic" and "Jittery." Respondents were asked to indicate how they generally feel on the average, on a 7-point scale (1 = *very slightly or not at all*, 5 = *extremely*). The reliabilities were .88 for PA and .87 for NA.

*Job Satisfaction*. To assess individuals' attitudes toward their jobs, an 8-item version of the Overall Job Satisfaction scale was used (Brayfield & Rothe, 1951). The measure included 5 items identified by Judge, Locke, Durham, and Kluger (1998) to form the short OJS, plus three additional items that Guo (2010) noted as representative of the full trait range of job satisfaction, based upon an item response theory analysis. These three additional items were "Most of the time I have to force myself to go to work," "I definitely dislike my work," and "I like my job better than the average worker does.";  The other five items included items such as, "I consider my job rather unpleasant" and "I find real enjoyment in my work." Instructions asked respondents how they feel about their present job on a 5-point scale ranging from 1 (*strongly agree*) to 5 (*strongly disagree*). The internal consistency of the measure in the current study was .81.

*Organizational Citizenship Behavior*. To assess individuals' behaviors and involvement in their organizations, Lee and Allen's (2002) 16-item Organizational Citizenship Behavior (OCB) measure was included in the study. Examples of the OCB items include "Give up time to help others who have work or nonwork problems," and "Offer ideas to improve the functioning of the organization." Instructions asked participants to indicate how often they engage in each of the

listed behaviors on a 7 point scale ranging from 1 (*never*) to 7 (*always*). The internal consistency in the current study was .92.

*Counterproductive Work Behavior (CWB)*. Bennett and Robinson's (2002) Interpersonal and Organizational Deviance Scale was used to assess worker's deviant behaviors in the workplace. Instructions asked participants to indicate the extent to which they had engaged in each of the listed behaviors in the last year on a 7 point scale (1 = *never*, 7 = *daily*). The measure included 7 items related to interpersonal deviance, such as "Publicly embarrassed someone at work" and 12 items assessing organizational deviance, such as "Come in late to work without permission." The reliability of the composite measure was .94 in the current study.

*Events*. To examine the moderating effect of equity sensitivity in predicting justice perceptions, I created a two-item events measure. Participants were asked to specify how many times each event happened to them during the past 6 months in their job. The two items were (1) "I received feedback on a task," and (2) "I received an evaluation." Due to the substantially skewed distribution of these items (skewness = 22.58 for item 1, skewness = 5.08 for item 2; i.e., 18% of respondents reported 20 or more events each, and 3.9% of respondents reported more than 100 events each), prior to the analysis both items were polytimized to consist of 5 levels (i.e., four quartiles and the zero group who experienced no events). Cronbach's alpha for the two-item scale was .56. Although this two-item events measure was less than ideal, these two items formed the most reliable events subscale from the full set of five events items I originally measured (i.e., the three additional items were "Tasks were explained by the supervisor," "I received a payment/salary," and "I received a bonus," and did not intercorrelate with the feedback/evaluation items, or with each other).

5.2 Results and Discussion

As predicted, the results of multiple regression analyses replicated the previous findings that the NOES was a strong unique predictor of justice perceptions, incrementally explaining justice perceptions beyond the established so-called equity sensitivity (i.e., equity preference) measures (see Table 10). Along with the NOES, job satisfaction also uniquely predicted justice perceptions. On the other hand, the classic measures of equity sensitivity (i.e., equity preference) uniquely predicted organizational outcome behaviors OCB and CWB. Specifically, the EPQ subfactor duty was the strongest unique predictor of OCB ($p < .05$), and the EPQ subfactor equity preference was a unique predictor of CWB among the five equity sensitivity measures ($p < .05$). Likewise, the ESI uniquely predicted OCB ($p < .05$) but predicted neither justice perceptions nor counterproductive behavior. The intercorrelations among the variables are presented in Table 8.

Consistent with the findings from Study 3, moderated regression results supported the moderating effect of equity sensitivity assessed via NOES on the relationship between events and justice perceptions ($p < .05$, see Table 11). The simple slopes test suggested that only those who think things are fair in general (high NOES) showed a positive relationship between frequency of events and justice perceptions ($p < .05$), whereas the simple slope for individuals with dispositional unfairness (low NOES) was not statistically significant (see Figure 2).

All in all, the replicated results in Study 4 provided consistent evidence for the construct validity of the NOES. Specifically, the NOES demonstrated internal consistency, two-month stability, factor-analytic discriminant validity, and criterion-related validity over traditional (i.e.,

equity preference) measures in predicting overall justice perceptions, as well as a moderating

effect on the relationship between events and individual perceptions of justice.

# CHAPTER 6

## GENERAL DISCUSSION

In the current paper, I discussed a broader approach to conceptualize and measure equity sensitivity. Traditionally, equity sensitivity has been defined in terms of equity preference, which led to potential confusion in the theoretical interpretation, measurement, and nomological validity of the construct. The alternative approach discussed in the current report defined equity sensitivity as the dispositional tendency to perceive stimuli as fair/unfair, and the systematic development of a new measure may eventually resolve theoretical and empirical confusion and contribute to better understanding of equity sensitivity and its relationships with other constructs. When conceptualizing equity sensitivity in this manner, the *stimuli* that are perceived as fair/unfair can include events, situations, outcomes, policies, agents, and a host of other perceived objects. The current study lends support to two conclusions. First, equity preference is not equity sensitivity. Second, both equity sensitivity and equity preference are useful concepts for understanding organizational behavior. Traditional equity preference measures (heretofore labeled equity sensitivity; Huseman et al., 1985; Sauley & Bedeian, 2000) seem to offer a good litmus test for whether employees believe they are getting as much as they deserve in the social and economic exchange with an employer. As such, high equity preference (reverse-coded EPQ factor 1) was related to greater counterproductive behavior at work.

As Weitz envisioned with his gripe index, the NOES measured individuals' general tendency to perceive things as unfair, which adequately related to more specific perceptions of both workplace fairness and classroom fairness. The size of the relationship between the NOES and the overall justice perceptions at work (as determined by factor correlation) was similar to

what Weitz (1952) originally proposed between the gripe measure and work satisfaction. The current work extends Weitz's view that a composite of reactions to neutral objects in the life space is an index of one's dispositional tendency to react or perceive things in a particular way, by demonstrating that the perceived fairness of neutral objects indexes one's sensitivity to perceive stimuli as fair/unfair *in general*.

*Implications for Justice Theories*

The current paper highlighted that past research on equity sensitivity may have actually been focused on the construct of equity preference—or the tendency to emphasize self-interest and to desire more rewards at work (see Table 1). This could be a useful conceptual distinction, because in the current paper I assert that it is equity sensitivity—not equity preference—that determines how likely an individual is to perceive stimulus events as fair versus unfair.

Thus, theories that focus on the origins of justice perceptions (Adams, 1965; Folger, 1993; Leventhal, 1980; Lind & Tyler, 1988) could potentially benefit from incorporating individual differences in NOES equity sensitivity, perhaps as a moderator of these theories' primary propositions. On the other hand, theories of justice uniquely based on social and economic exchanges (Adams, 1965; Blau, 1964; Homans, 1961) might benefit from reconsidering Huseman et al.'s (1985) construct as reflecting individual differences in self-interest, which could likely contribute to justice perceptions in a manner similar to how satisfaction with rewards contributes to justice perceptions (Colquitt, Conlon, Wesson, Porter, & Ng, 2001).

*Practical Implications*

The results may offer several practical implications. First of all, differences in certain employee behaviors in the organization can be explained by individual differences in equity preference. Specifically, individuals may engage in more counterproductive work behaviors merely because their interest lies in maximizing gains from their organizations either by investing less effort or by increasing the outcome. In addition, our findings suggest that frequent events have positive influence on individual perceptions of fairness for those who tend to dispositionally view things as fair. Thus, managers could increase the frequency of interaction with their high-NOES subordinates to ensure that the employees feel they are treated fairly, and decrease the amount of interaction and evaluation provided to low-NOES employees, who are likely to perceive such interactions as unfair. Finally, policy makers may attempt to aggregate the individual reports of equity sensitivity to the work team, organization, regional or national levels, which may have implications for differences in legal standards and policies across cultures.

*Limitations*

As in many research studies which utilize data obtained online, the overall data quality may have been compromised in subtle and undetectable ways, even though some efforts were made to improve the quality (e.g., instructions, an open-ended quality-control question). In addition, although the results were consistent across two independent samples, they may not generalize to all organizational settings.

In addition to the three personal characteristics included in the study, Colquitt et al. (2006) examined *sensitivity to befallen injustice*, a construct introduced by Schmitt, Neumann, & Montada (1995). The construct denotes individual differences in their sensitivity to unjust *own*

*disadvantages*" (italicized in the original article.) The original measure included four specific

facets: frequency of befallen injustice, intensity of anger following an unjust treatment, intrusive

thoughts about the unjust event, and desire to punish the perceived perpetrator. The sample items

are "I am taken advantage of by others," "I am being treated or judged unfairly by others,"

"Others are being treated better than me," and "I have to work hard for a goal while others reach

it without effort." The measure was not included in the current study because the items appear to

directly measure justice perceptions as well as equity preference (inputs/outputs) constructs

assessed by the traditional equity sensitivity measures.

Further, the current study potentially suffers from common method variance (Podsakoff et al.,

2003), because all variables were assessed via self-report. Attempts to mitigate this limitation

include separating measures across time, using a two-month lag, and statistically controlling the

effects of positive and negative affectivity.

*Directions for Future Research*

The new viewpoint on equity sensitivity yields numerous opportunities for future

research. First of all, the construct can be further examined in terms of its relationship with other

constructs, such as personality and organizational commitment. Also, equity sensitivity assessed

with the new approach may either uniquely or interactively predict other important organizational

outcomes such as job performance, perhaps as mediated by justice perceptions (cf. Colquitt et al.,

2001). Second, because equity sensitivity involves one's reaction to unjust events, the

consequences may relate to one's emotion regulation ability. Therefore, future research could

investigate the relationship between emotional intelligence and equity sensitivity. In addition, two

individuals who are identical in the level of equity sensitivity may have different consequences at

work merely due to differences in self-censorship and tendency to express their opinions at work (Detert & Edmondson, 2011). Finally, cultural differences may be detected either in the level of equity sensitivity itself or the in the expression of the construct, providing additional theoretical and practical implications.

**TABLES**

Table 1

*Content Validity Analysis of the Equity Sensitivity Index (ESI; Huseman, Hatfield, & Miles, 1985) and the Equity Preference Questionnaire (EPQ; Sauley & Bedeian, 2000)*

| | Content Category Assignments (% of respondents) | | | | |
| | Equity Preference | | | Equity Sensitivity | |
| Item | Reduce INPUT | Increase OUTCOME | BOTH | FAIR / UNFAIR | OTHER |
|---|---|---|---|---|---|
| ESI1 | 0% | 20% | 73.3% | 0% | 6.7% |
| ESI2 | 20% | 13.3% | 40% | 0% | 26.7% |
| ESI3 | 0% | 6.7% | 86.7% | 0% | 6.7% |
| ESI4 | 0% | 33.3% | 53.3% | 6.7% | 6.7% |
| ESI5 | 6.7% | 6.7% | 46.7% | 6.7% | 33.3% |
| | | | | | |
| EPQ1 | 0% | 0% | 100% | 0% | 0% |
| EPQ2 | 100% | 0% | 0% | 0% | 0% |
| EPQ3 | 93.3% | 6.7% | 0% | 0% | 0% |
| EPQ4 | 100% | 0% | 0% | 0% | 0% |
| EPQ5 | 13.3% | 53.3% | 33.3% | 0% | 0% |
| EPQ6 | 80% | 6.7% | 0% | 0% | 13.3% |
| EPQ7 | 20% | 13.3% | 0% | 20% | 46.7% |
| EPQ8 | 53.3% | 6.7% | 0% | 0% | 40% |
| EPQ9 | 53.3% | 0% | 0% | 26.7% | 20% |
| EPQ10 | 60% | 0% | 0% | 13.3% | 26.7% |
| EPQ11 | 40% | 6.7% | 0% | 26.7% | 26.7% |
| EPQ12 | 0% | 13.3% | 80% | 6.7% | 0% |
| EPQ13 | 0% | 40% | 60% | 0% | 0% |
| EPQ14 | 26.7% | 6.7% | 0% | 6.7% | 60% |
| EPQ15 | 13.3% | 13.3% | 10% | 23.3% | 40% |
| EPQ16 | 26.7% | 6.7% | 16.7% | 23.3% | 26.7% |
| Average Endorsement | | 74.3% | | 7.6% | 18.1% |

*Note*. *N* = 15 subject matter experts

Table 2

*Exploratory Factor Analysis Results of Initial 99 NOES Items*

| Factor 1 | | Factor 1 (cont.) | | Factor 2 | | Weak loadings |
|---|---|---|---|---|---|---|
| Items | | Items | | Items | | Items |
| 84. Traffic lights | .64 | 2. Your parents | .49 | 62. Cancer | .82 | 3. Education system |
| 36. Toys | .61 | 78. Diets | .49 | 97. Flu | .81 | 4. The government |
| 53. People riding bicycles | .60 | 81. Rainfall | .48 | 54. Pollution | .79 | 8. Taxes |
| 17. The United Nations | .60 | 67. Outsourcing jobs to other countries | .48 | 76. Tornadoes | .79 | 9. Heaven and hell |
| 43. Foreign cars | .59 | 23. Security deposits | .48 | 80. Pain | .78 | 12. Protesting |
| 24. Your paycheck | .59 | 48. Standby flights | .48 | 59. Drought | .77 | 14. Nuclear energy |
| 39. Holidays | .58 | 21. Hybrid cars | .48 | 38. Earthquakes | .74 | 22. Torturing terrorists |
| 19. Democracy | .58 | 88. Negotiation | .47 | 92. Poison | .74 | 32. Estate taxes |
| 41. E-mail | .58 | 29. Baseball | .47 | 86. Typhoons | .72 | 50. Chewing gum |
| 6. The internet | .57 | 31. Private schooling | .47 | 58. Hunger | .72 | 52. Censors |
| 42. Federal employment | .57 | 46. Clowns | .46 | 18. Racism | .71 | 60. Lotteries |
| 20. The Olympic games | .57 | 77. Mergers and acquisitions | .46 | 82. Constipation | .71 | 64. Tipping at restaurants |
| 33. Convenience/ Corner stores | .56 | 40. Bonus questions | .46 | 99. War | .70 | 65. Clearance racks in retail clothing stores |
| 25. Promotions in your company | .55 | 51. Board games | .46 | 13. Nuclear weapons | .61 | 66. Gazebos |
| 96. Radio programs | .54 | 11. U.S. Supreme Court | .45 | 68. Job layoffs | .60 | 83. Microwave foods |
| 35. Department of Motor Vehicles | .54 | 44. Yield signs | .45 | 95. Steroids | .59 | 87. Dating |
| 34. Insurance | .53 | 98. Foreign aid | .45 | 57. Hand grenades | .56 | 94. Capitalism |
| 55. Recycling | .53 | 75. Psychoanalysis | .45 | 89. Shipping fees | .49 | |
| 72. The middle class | .52 | 93. Farmer's market | .44 | 79. Furloughs[1] | .49 | |
| 71. Health care | .51 | 28. The FDA | .44 | 61. Air fare | .47 | |
| 85. Vending machines | .51 | 63. Coupons | .43 | 69. Minimum wage | .46 | |
| 74. Skyscrapers | .50 | 1. Traffic laws | .43 | 10. Drug companies | .45 | |
| 30. Community centers | .50 | 91. The SAT test | .43 | 5. TV commercials | .44 | |
| 70. Wall Street | .50 | 49. Styrofoam cups | .41 | 7. Prices of produce | .44 | |
| 47. Auto mechanics | .50 | 45. Public parking | .41 | 27. Cosmetic surgery | .44 | |
| 90. Foreign Embassies | .50 | 73. Socialism | .40 | 15. Pesticides | .41 | |
| 26. Organic food | .49 | | | 16. Squatter's rights | .40 | |
| 37. Student loans | .49 | | | 56. 5'' high-heeled shoes | .40 | |
| **Eigenvalues (% variance)** | | **20.98 (21.19%)** | | **10.20 (10.30%)** | | |

*Note.* [1] Clarification was added in the survey form (involuntary pay reduction to cut costs.)
Factor loadings less than .4 are not reported in the table.

Table 3

*Confirmatory Factor Analysis Results of Equity Sensitivity Measure Items*

| Measure Item | Factor | | | | |
|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 |
| **Equity Sensitivity Instrument[1]** | | | | | |
| In any organization I might work for: | | | | | |
| 1. I would be more concerned about (A) What I received from the organization (B) What I contributed to the organization. | .75 | | | | |
| 2. It would be more important for me to (A) Get from the organization (B) Give to the organization. | .71 | | | | |
| 3. The hard work I would do should (A) Benefit the organization (B) Benefit me. | .56 | | | | |
| 4. My personal philosophy in dealing with the organization would be (A) If I don't look out for myself, nobody else will (B) It's better for me to give than receive. | .48 | | | | |
| 5. It would be more important for me to (A) Help others (B)Watch out for my own good. | .45 | | | | |
| | | | | | |
| **Equity Preference Questionnaire[2]** | | | | | |
| 1. I prefer to do as little work as possible at work while getting as much as I can from my employer. (R) | | .76 | | | |
| 2. If I could get away with it, I would try to work just a little bit slower than the boss expects. (R) | | .73 | | | |
| 3. When I am at my job, I think of ways to get out of work. (R) | | .71 | | | |
| 4. It is really satisfying to me when I can get something for nothing at work. (R) | | .67 | | | |
| 5. It is the smart employee who gets as much as he or she can while giving as little as possible in return. (R) | | .67 | | | |
| 6. If I had to work hard all day at my job, I would probably quit. (R) | | .65 | | | |
| 7. I am most satisfied at work when I have to do as little as possible. (R) | | .61 | | | |
| 8. Employees who are more concerned about what they can get from their employer rather than what they can give to their employer are the wisest ones. (R) | | .59 | | | |
| 9. At work, I feel uneasy when there is little work for me to do. | | | .69 | | |
| 10. I would become very dissatisfied with my job if I had little or no work to do. | | | .68 | | |
| 11. All other things being equal, it is better to have a job with a lot of duties and responsibilities than one with few duties and responsibilities. | | | .61 | | |
| 12. A job that requires me to be busy during the day is better than a job which allows me a lot of loafing. | | | .56 | | |
| 13. At work, my greatest concern is whether or not I am doing the best job I can do. | | | .50 | | |
| 14. Even if I receive low wages and poor benefits from my employer, I would still try to do my best at my job. | | | | .74 | |
| 15. I feel obligated to do more than I am paid to do at work. | | | | .61 | |
| 16. When I have completed my task for the day, I help out other employees who have yet to complete their tasks. | | | | .55 | |
| | | | | | |
| **Neutral Objects Equity Sensitivity Questionnaire** | | | | | |
| 1. Traffic lights | | | | | .56 |
| 2. The United Nations | | | | | .50 |
| 3. The internet | | | | | .48 |
| 4. Democracy | | | | | .40 |
| 5. Federal employment | | | | | .56 |
| 6. Toys | | | | | .60 |
| 7. Holidays | | | | | .64 |
| 8. E-mail | | | | | .72 |
| 9. Foreign cars | | | | | .63 |
| 10. People riding bicycles | | | | | .50 |

*Note.* [1] From Huseman, Hatfield, & Miles (1985). [2] From Sauley & Bedeian (2000). Loadings based on 5-factor oblique model.

Table 4

*Comparisons of Equity Sensitivity Measures Factor Models*

| Model | $\chi^2$ | df | $\chi^2(df)$ | RMSEA | CFI | NNFI | SRMR |
|---|---|---|---|---|---|---|---|
| *MTurk sample* (*N* = 258) | | | | | | | |
| 3-factor oblique | 1178.43 | 431 | 2.73 | .082 | .88 | .87 | .091 |
| 4-factor oblique[1] | 736.993 | 428 | 1.72 | .053 | .94 | .93 | .068 |
| 5-factor oblique[2] | 636.78 | 424 | 1.50 | .044 | .95 | .95 | .064 |
| 6-factor oblique[3] | 639.33 | 419 | 1.53 | .045 | .95 | .95 | .072 |
| 4-factor hierarchical[1] | 741.548 | 429 | 1.73 | .053 | .94 | .93 | .070 |
| 5-factor hierarchical[2] | 656.61 | 428 | 1.53 | .046 | .95 | .95 | .069 |
| 6-factor hierarchical[3] | 735.25 | 427 | 1.72 | .053 | .94 | .93 | .084 |
| *Student sample* (*N* = 110) | | | | | | | |
| 2-factor oblique[4] | 149.93 | 89 | 1.68 | .079 | .92 | .91 | .086 |

*Note.* [1] Model based on 2-factor EPQ structure (Miller, 2009). [2] Model based on 3-factor EPQ structure (Foote & Harmon, 2006). [3] Model based on 4-factor EPQ structure (Shore & Strauss, 2008). [4] Model based on ESI and NOES only. RMSEA = root mean square error of approximation; CFI = comparative fit index; NNFI = non-normed fit index; SRMR = standardized root mean square residual.

Table 5

*Descriptive Statistics and Correlations among Study Variables for Student Sample*

| Variable | *M* | *SD* | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. Gender | 1.39 | .49 | 1.00 | | | | | | | | | | | | | |
| 2. Trust T1 | 3.57 | .76 | -.23 | (.84) | | | | | | | | | | | | |
| 3. Trust T2 | 3.55 | .74 | -.19 | .78 | (.82) | | | | | | | | | | | |
| 4. Risk T1 | 2.97 | .89 | .49 | -.21 | -.17 | (.82) | | | | | | | | | | |
| 5. Risk T2 | 3.06 | .90 | .48 | -.13 | -.12 | .88 | (.85) | | | | | | | | | |
| 6. Moral T1 | 4.22 | .64 | -.43 | .39 | .44 | -.33 | -.28 | (.76) | | | | | | | | |
| 7. Moral T2 | 4.14 | .64 | -.44 | .43 | .50 | -.34 | -.27 | .80 | (.73) | | | | | | | |
| 8. ESI T1 | 5.11 | 1.44 | .37 | -.43 | -.42 | .33 | .27 | -.56 | -.49 | (.89) | | | | | | |
| 9. ESI T2 | 5.10 | 1.44 | .33 | -.49 | -.46 | .27 | .25 | -.53 | -.50 | .91 | (.89) | | | | | |
| 10. NOES T1 | 3.73 | .59 | -.09 | .21 | .25 | -.07 | -.01 | .38 | .39 | -.16 | -.17 | (.83) | | | | |
| 11. NOES T2 | 3.73 | .55 | -.09 | .15 | .23 | -.03 | .05 | .23 | .31 | -.20 | -.18 | .72 | (.77) | | | |
| 12. Justice T1 | 4.09 | .51 | -.09 | .06 | .06 | -.04 | .01 | .15 | .30 | .05 | -.03 | .33 | .19 | (.91) | | |
| 13. Justice T2 | 4.11 | .53 | -.13 | .16 | .23 | -.23 | -.14 | .20 | .44 | -.16 | -.13 | .37 | .32 | .73 | (.93) | |
| 14. Events | .32 | .35 | .15 | -.01 | .05 | .07 | .09 | .01 | -.07 | .06 | .06 | .02 | -.01 | -.02 | -.07 | (.70) |

*Note*. *N* = 110; T1 = Time 1; T2 = Time 2; Coefficient alpha reliabilities are shown in parentheses on the diagonal. Trust = trust propensity; Risk = risk aversion; Moral = trait morality; PA = positive affectivity; NA = negative affectivity; ESI = equity sensitivity index; EPQ = equity preference questionnaire; NOES = neutral objects equity sensitivity questionnaire.

Table 6

*Summary of Multiple Regression and Lagged Regression Analyses for Variables predicting Perceptions of Procedural Justice at Each Time Point for Study 3*

| Variable | Justice Perceptions | | | |
|---|---|---|---|---|
| | *b* (SE) | *β* | *T* | Sig. (*p*) |
| *Time 1*[1] | | | | |
| ESI | .057 (.04) | .164 | 1.36 | .175 |
| NOES | .257 (.09) | .302* | 2.95 | .004 |
| Trust Propensity | -.022 (.07) | -.034 | -.31 | .754 |
| Risk Aversion | -.007 (.06) | -.012 | -.11 | .913 |
| Trait Morality | .082 (.10) | .103 | .81 | .419 |
| Gender | -.063 (.12) | -.061 | -.54 | .589 |
| | | | | |
| *Time 2*[2] | | | | |
| ESI | .052 (.04) | .144 | 1.34 | .185 |
| NOES | .224 (.09) | .234* | 2.49 | .015 |
| Trust Propensity | .026 (.08) | .037 | .34 | .735 |
| Risk Aversion | -.071 (.06) | -.012 | -1.22 | .226 |
| Trait Morality | .322 (.10) | .383* | 3.18 | .002 |
| Gender | .055 (.11) | .052 | .49 | .627 |
| | | | | |
| *Time 1 to Time 2 (lagged)*[3] | | | | |
| ESI | .005 (.04) | .013 | .10 | .919 |
| NOES | .296 (.09) | .331* | 3.24 | .002 |
| Trust Propensity | .016 (.08) | .023 | .21 | .834 |
| Risk Aversion | -.128 (.06) | -.219* | -2.03 | .046 |
| Trait Morality | .041 (.11) | .049 | .39 | .699 |
| Gender | .009 (.12) | .008 | .07 | .943 |

*Note.* [1] Time 1 variables predicting justice perceptions at time 1. [2] Time 2 variables predicting justice perceptions at time 2. [3] Time 1 variables predicting justice perceptions at time 2. ESI = equity sensitivity index; NOES = neutral objects equity sensitivity questionnaire.

Table 7

*Moderated regression results* for *Events and Equity Sensitivity (NOES) in predicting Justice Perceptions from Study 3 (student sample)*

|  | Justice Perception | |
| --- | --- | --- |
|  | $b$ (SE), $\beta$ | $b$ (SE), $\beta$ |
| Events | -.091 (.14), -.06 | -3.39 (.89), -2.26* |
| NOES | .308 (.09), .32* | -.00 (.12), .00 |
| Events x NOES |  | .901 (.24), 2.24* |
| Total $R^2$ | .11* | .21* |
| $\Delta R^2$ |  | .10* |

* $p < .05$.

Table 8

*Descriptive Statistics and Correlations among Study Variables for Multi-organizational Employee Sample*

| Variable | *M* | *SD* | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. Trust | 3.15 | .74 | (.69) | | | | | | | | | | | | | | | |
| 2. Risk | 2.94 | .73 | -.01 | (.67) | | | | | | | | | | | | | | |
| 3. Moral | 3.77 | .70 | .23 | -.28 | (.68) | | | | | | | | | | | | | |
| 4. PA | 3.70 | .77 | .17 | .18 | .24 | (.88) | | | | | | | | | | | | |
| 5. NA | 2.21 | .79 | -.20 | .11 | -.50 | -.18 | (.87) | | | | | | | | | | | |
| 6. ESI | 4.86 | 1.28 | -.13 | -.03 | -.09 | -.21 | -.06 | (.76) | | | | | | | | | | |
| 7. EPQ | 3.55 | .63 | .12 | -.19 | .58 | .22 | -.39 | -.22 | (.83) | | | | | | | | | |
| 8. EPQ-EP | 3.45 | .90 | .07 | -.27 | .56 | .10 | -.44 | -.19 | .87 | (.87) | | | | | | | | |
| 9. EPQ-WE | 3.74 | .74 | .07 | -.04 | .36 | .19 | -.20 | -.09 | .73 | .38 | (.69) | | | | | | | |
| 10. EPQ-D | 3.51 | .84 | .19 | .05 | .21 | .30 | -.04 | -.20 | .46 | .11 | .37 | (.62) | | | | | | |
| 11. NOES | 3.78 | .64 | .11 | .10 | .20 | .41 | -.08 | -.04 | .13 | .05 | .15 | .18 | (.82) | | | | | |
| 12. Events | 2.24 | 1.06 | -.00 | .08 | -.11 | .09 | .09 | -.05 | -.10 | -.08 | -.11 | -.02 | .05 | (.56) | | | | |
| 13. Justice | 3.43 | .74 | .07 | .05 | .05 | .21 | -.04 | -.02 | .08 | -.06 | .17 | .23 | .32 | .16 | (.93) | | | |
| 14. JS | 2.54 | .75 | -.18 | .02 | -.35 | -.35 | .31 | .11 | -.42 | -.38 | -.24 | -.24 | -.21 | -.08 | -.33 | (.81) | | |
| 15. OCB | 5.06 | .96 | .25 | .04 | .38 | .45 | -.14 | -.26 | .42 | .26 | .35 | .44 | .39 | -.00 | .38 | -.43 | (.92) | |
| 16. CWB | 2.32 | 1.14 | -.18 | .21 | -.52 | -.24 | .42 | .08 | -.46 | -.51 | -.21 | -.09 | -.13 | .09 | .01 | .35 | -.25 | (.94) |

*Note*. $N = 516$; Coefficient alpha reliabilities are shown on the diagonal. Trust = trust propensity; Risk = risk aversion; Moral = trait morality; PA = positive affectivity; NA = negative affectivity; ESI = equity sensitivity index; EPQ = equity preference questionnaire; EPQ-EP = equity preference; EPQ-WE = work ethic; EPQ-D = duty; NOES = neutral objects equity sensitivity questionnaire; JS = job satisfaction; OCB = organizational citizenship behavior; CWB = counterproductive work behavior. For $|r| > .09$, $p < .05$.

Table 9

*Summary of Multiple Regression Analyses for Variables predicting Justice Perceptions, Organizational Citizenship Behavior, and Counterproductive Work Behavior for Study 4*

| Variable | Justice Perception | | OCB | | CWB | |
|---|---|---|---|---|---|---|
| | *b* (SE) | *β* | *b* (SE) | *β* | *b* (SE) | *β* |
| ESI | .007 (.03) | .012 | -.078 (.03) | -.105* | -.008 (.03) | -.009 |
| EPQ | -.067 (.06) | -.056 | .331 (.07) | .219* | -.338 (.08) | -.193* |
| NOES | .306 (.06) | .253* | .285 (.06) | .186* | -.004 (.07) | .002 |
| Trust | .016 (.04) | .016 | .140 (.05) | .109* | -.063 (.06) | -.043 |
| Risk | -.031 (.05) | -.030 | .054 (.05) | .042 | .154 (.06) | .102* |
| Moral | -.104 (.06) | -.096 | .180 (.07) | .132* | -.390 (.08) | -.245* |
| PA | .026 (.05) | .027 | .242 (.05) | .195* | -.154 (.06) | -.107* |
| NA | .010 (.05) | .010 | .160 (.05) | .133* | .193 (.06) | .139* |
| JS | -.334 (.05) | -.337* | -.244 (.05) | -.194* | .117 (.06) | .080 |

*Note.* * $p < .05$. ESI = equity sensitivity index; EPQ = equity preference questionnaire; NOES = neutral objects equity sensitivity questionnaire; Trust = trust propensity; Risk = risk aversion; Moral = trait morality; PA = positive affectivity; NA = negative affectivity; JS = job satisfaction; OCB = organizational citizenship behavior; CWB = counterproductive work behavior.

Table 10

*Summary of Multiple Regression Analyses for Variables predicting Justice Perceptions, Organizational Citizenship Behavior, and Counterproductive Work Behavior for Study 4*

| Variable | Justice Perception | | OCB | | CWB | |
|---|---|---|---|---|---|---|
| | *b* (SE) | *β* | *b* (SE) | *B* | *b* (SE) | *β* |
| ESI | -.005 (.03) | -.008 | -.080 (.03) | -.107* | -.017 (.03) | -.020 |
| EPQ-EP | -.223 (.05) | -.266* | .033 (.05) | .031 | -.341 (.06) | -.277* |
| EPQ-WE | .124 (.05) | .120* | .121 (.05) | .093* | .011 (.06) | .007 |
| EPQ-D | .090 (.04) | .100* | .247 (.04) | .218* | .055 (.05) | .042 |
| NOES | .280 (.05) | .231* | .264 (.06) | .172* | -.020 (.07) | -.011 |
| Trust | -.015 (.04) | -.014 | .101 (.05) | .079* | -.095 (.06) | -.064 |
| Risk | -.063 (.05) | -.061 | .032 (.05) | .025 | .125 (.06) | .083* |
| Moral | -.072 (.06) | -.066 | .208 (.07) | .152* | -.361 (.08) | -.227* |
| PA | -.015 (.05) | -.015 | .198 (.05) | .160* | -.194 (.06) | -.135* |
| NA | -.041 (.05) | -.043 | .109 (.05) | .091* | .144 (.06) | .104* |
| JS | -.355 (.05) | -.358* | -.252 (.05) | -.200* | .100 (.06) | .069 |

*Note.* * $p < .05$. ESI = equity sensitivity index; EPQ-EP = equity preference; EPQ-WE = work ethic; EPQ-D = duty; NOES = neutral objects equity sensitivity questionnaire; Trust = trust propensity; Risk = risk aversion; Moral = trait morality; PA = positive affectivity; NA = negative affectivity; JS = job satisfaction; OCB = organizational citizenship behavior; CWB = counterproductive work behavior.

Table 11

*Moderated regression results* for *Events and Equity Sensitivity (NOES) in predicting Justice Perceptions from Study 4 (MTurk sample).*

|  | Justice Perception | |
| --- | --- | --- |
|  | $b$ (SE), $\beta$ | $b$ (SE), $\beta$ |
| Events | .100 (.03), .142* | -.407 (.16), -.58* |
| NOES | .369 (.05), .31* | .073 (.10), .06 |
| Events x NOES |  | .136 (.04), .79* |
| Total $R^2$ | .12* | .14* |
| $\Delta R^2$ |  | .02* |

*Note.* $\Delta R^2$ denotes the additional variance in the dependent variable explained by adding interaction effect.

\* $p < .05$.

**FIGURES**

*Figure 1*. Scree plot of eigenvalues for NOES from exploratory factor analysis.

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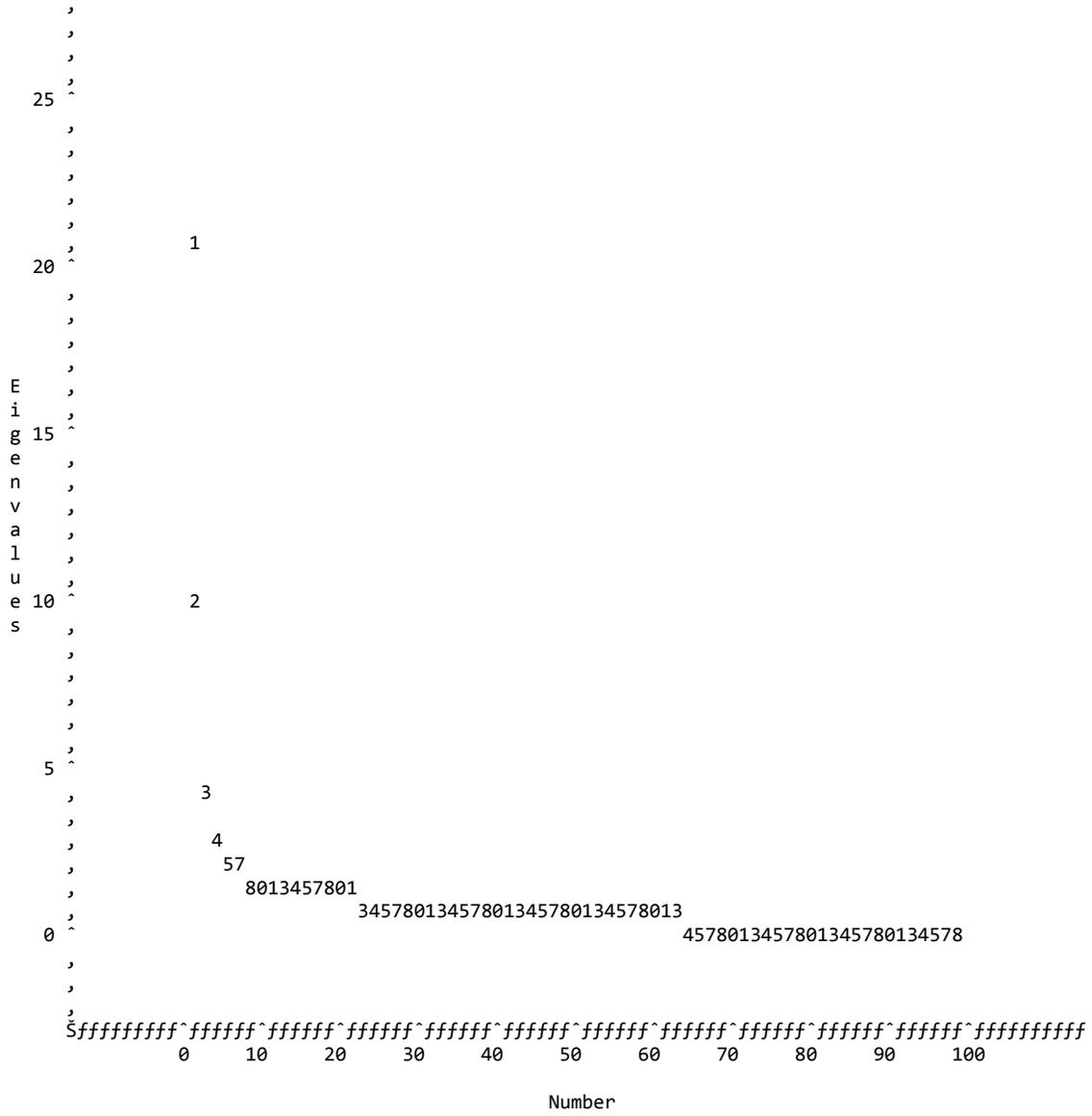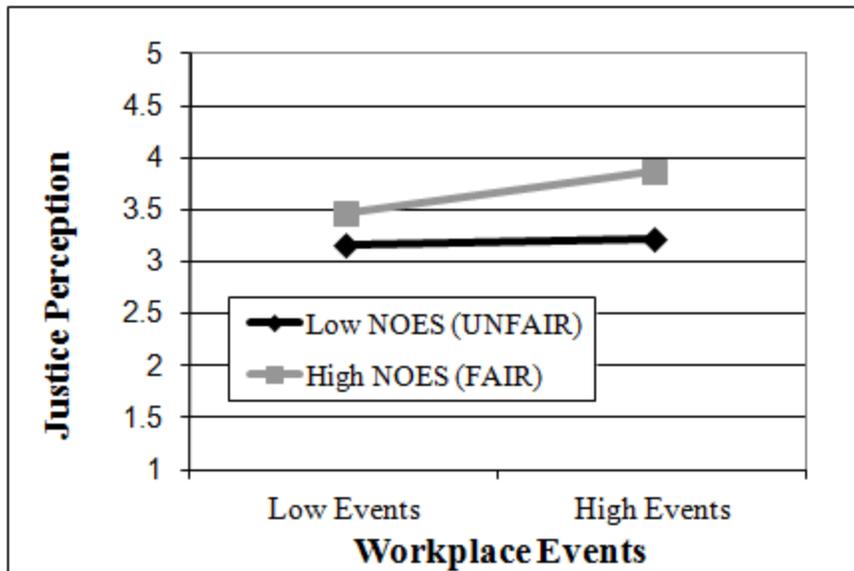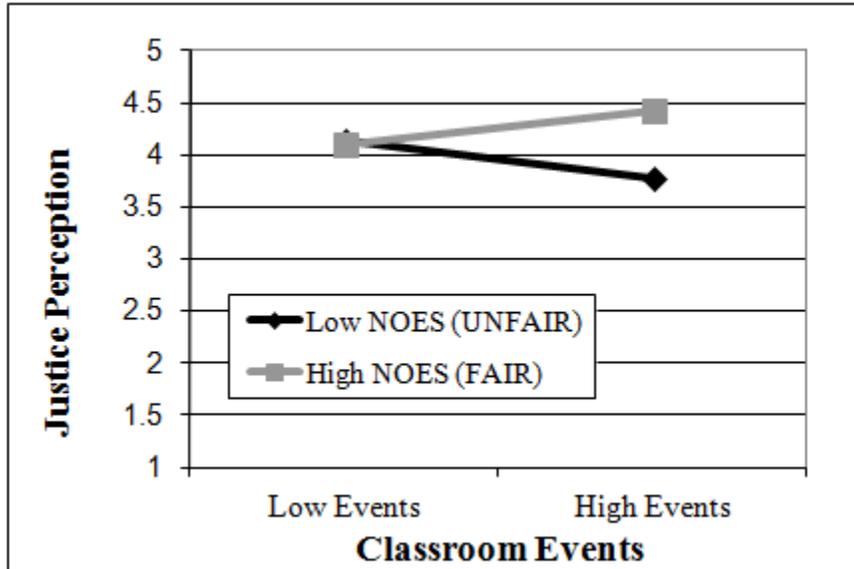
*Figure 2.* Plots of events and equity sensitivity (NOES) interactions for justice perceptions across two samples.



*Note.* NOES = neutral objects equity sensitivity questionnaire. Both simple slopes are statistically significant ($p < .05$) for the classroom events-justice perceptions relationship. The simple slope for High NOES is statistically significant ($p < .05$) for the workplace events-justice perceptions relationship.

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# APPENDIX A: CONTENT VALIDITY ASSESSMENT

Please categorize the following items in terms of the five concepts presented below:

- **INPUT**:Preference to <u>reduce</u> work inputs (e.g., to work less)

- **OUTCOME**: Preference to <u>increase</u> work rewards and outcomes (e.g., to get more)

- **BOTH**: Preference to BOTH reduce work inputs AND increase work rewards/outcomes

- **FAIR/UNFAIR**: General tendency to perceive things as fair or unfair

- **OTHER**: Does not fit into the categories above

**Items 1-5: dividing 10 points between the two choices (A and B)

| | Item | Reduce INPUT | Increase OUTCOME | BOTH | FAIR / UNFAIR | OTHER |
|---|---|---|---|---|---|---|
| 1 | In any organization I might work for, it would be more important for me to<br>____ A. Get from the organization<br>____ B. Give to the organization | | | | | |
| 2 | In any organization I might work for, it would be more important for me to<br>____ A. Help others<br>____ B. Watch out for my own good | | | | | |
| 3 | In any organization I might work for, I would be more concerned about<br>____ A. What I received from the organization<br>____ B. What I contributed to the organization | | | | | |
| 4 | In any organization I might work for, the hard work I would do should<br>____ A. Benefit the organization<br>____ B. Benefit me | | | | | |
| 5 | In any organization I might work for, my personal philosophy in dealing with the organization would be<br>____ A. If I don't look out for myself, nobody else will<br>____ B. It's better for me to give than receive | | | | | |

| 6 | I prefer to do as little work as possible at work while getting as much as I can from my employer.  (R) | | | | | |
|---|---|---|---|---|---|---|
| 7 | I am most satisfied at work when I have to do as little as possible.  (R) | | | | | |
| 8 | When I am at my job, I think of ways to get out of work.  (R) | | | | | |
| 9 | If I could get away with it, I would try to work just a little bit slower than the boss expects.  (R) | | | | | |
| 10 | It is really satisfying to me when I can get something for nothing at work.  (R) | | | | | |
| 11 | If I had to work hard all day at my job, I would probably quit.  (R) | | | | | |
| 12 | At work, my greatest concern is whether or not I am doing the best job I can do. | | | | | |
| 13 | A job that requires me to be busy during the day is better than a job which allows me a lot of loafing. | | | | | |
| 14 | At work, I feel uneasy when there is little work for me to do. | | | | | |
| 15 | I would become very dissatisfied with my job if I had little or no work to do. | | | | | |
| 16 | All other things being equal, it is better to have a job with a lot of duties and responsibilities than one with few duties and responsibilities. | | | | | |
| 17 | It is the smart employee who gets as much as he or she can while giving as little as possible in return.  (R) | | | | | |
| 18 | Employees who are more concerned about what they can get from their employer rather than what they can give to their employer are the wisest ones. (R) | | | | | |
| 19 | When I have completed my task for the day, I help out other employees who have yet to complete their tasks. | | | | | |
| 20 | Even if I receive low wages and poor benefits from my employer, I would still try to do my best at my job. | | | | | |
| 21 | I feel obligated to do more than I am paid to do at work. | | | | | |

**APPENDIX B: NEUTRAL OBJECTS EQUITY SENSITIVITY QUESTIONNAIRE (NOES)**

**Fairness Questionnaire**

Below is a list of different topics. Please rate the extent to which you believe the following items/topics are *fair* versus *unfair*.

| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|
| Extremely Unfair | | | | Extremely Fair |

1. Traffic lights

2. The United Nations

3. The internet

4. Democracy

5. Federal employment

6. Toys

7. Holidays

8. E-mail

9. Foreign cars

10. People riding bicycles