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Integrating Employment Contracts and Comparisons: What One Can Teach Us about the Other

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Psychological contract (PC) theory has been the topic of considerable conceptual and empirical research for over two decades. Some researchers, however, have questioned its value-added contribution over social exchange theory (Anderson and Schalk, 1998; Guest, 1998). Social exchange theory relates more to behavioral aspects of the employment exchange (Coyle-Shapiro, 2002), while PC theory involves cognitive aspects (i.e., determining whether a contract has been breached or fulfilled) (Rousseau, 1989). Despite this cognitive component, studies to date have focused primarily on the outcomes (i.e., behaviors) associated with contract breach (e.g., Conway and Briner, 2002; Lo and Aryee, 2003; Morrison and Robinson, 1997; Robinson, 1996; Robinson and Morrison, 2000; Turnley and Feldman, 1999; Turnley *et al.*, 2003). In this study, we examine the cognitive processes that lead to PC evaluations and behavioral outcomes.

We examine a variety of work-related activities thought to trigger the information-gathering schemas for evaluating individuals' PCs (Rousseau, 1995). Using Goodman's three categories of social comparisons (1974), we examine how individuals make sense of workplace events. Specifically, we link theory underlying system-referents to describe the process of PC evaluation. We also argue

that social comparisons involving oneself and others enable individuals to contextualize situations (Elsbach *et al.*, 2005) to make sense of information in the workplace. We argue that such comparisons mediate workplace events and PC evaluation.

PSYCHOLOGICAL CONTRACTS AND SYSTEM-REFERENTS

Psychological contract research has examined employee beliefs about employer obligations (Robinson and Rousseau, 1994). Social cues help determine the degree of fulfillment between one's beliefs and what is provided by the employer (Rousseau, 1995; Salancik and Pfeffer, 1978). The negative impact resulting from perceived discrepancies on employee attitudes and behavior has been well documented, and includes changes in organizational citizenship behavior (Coyle-Shapiro, 2002), reductions in trust, satisfaction and intentions to remain, and greater turnover (Robinson and Rousseau, 1994). Social comparison theory describes a similar phenomenon with system-referent comparisons. Here, employees cognitively evaluate what was previously promised to them relative to what actually occurred (Goodman, 1977). When discrepancies exist, cognitive dissonance results (Festinger, 1957) and determinations of unfairness can result in negative outcomes, including deviance (Kickul, 2001), lower satisfaction and commitment, and increased turnover (Simons and Roberson, 2003).

A theoretical link can be drawn between PC outcomes and the comparative evaluations inherent in system-referent comparisons that may help explain the cognitive processes preceding breach perceptions (Rous-

seau, 1995). When faced with uncertainty, individuals seek comparative information (Festinger, 1954; Goodman, 1977) and begin to scan the environment for clues as to what is happening (Salancik and Pfeffer, 1978). Although a PC may exist between the individual and the organization, something must prompt the individual to compare perceived promises to perceived fulfillment in order to evaluate the PC. Until a comparison is made, fulfillment (or breach) determinations have not taken place and may theoretically never be made (O'Neill and Mone, 2005). Rousseau (1995) argues, however, that contract violations are commonplace and frequent, which suggests that contract evaluations are also frequently made. What remains unclear, however, are the cognitive processes underlying PC evaluation and the events that may trigger such processes. In the next section, we integrate sensemaking theory with social comparison theory to better understand and explain PC evaluation.

PSYCHOLOGICAL CONTRACT EVALUATION ANTECEDENTS

Most individuals are not likely to wake up in the morning thinking about their employment relationship. In fact, "people often see what they expect to see, gather information only when they think they need it, and ignore a lot" (Rousseau, 1995: 31). Although prior theoretical research has attempted to examine antecedent processes thought to be required for interpreting one's PC (e.g., perceptions of salience, vigilance, uncertainty), this work has been too unwieldy for empirical testing and contained numerous cognitive processes which were difficult to

tease apart (for a discussion, see Morrison and Robinson, 1997). Beyond this work, specific triggers have not been identified in any studies to date. However, we argue that a variety of common HR activities convey commitments and inducements to individuals on behalf of the organization, and provide an excellent starting point for identifying triggers. They may include job descriptions, procedural changes, performance reviews, recruiting decisions, compensation decisions, training, personnel manuals and benefits (cf., Kulik and Ambrose, 1992; Rousseau, 1995). Social comparison research also discusses how organizational roles are used in judgments of fairness (Goodman, 1974, 1977), which yields another potential trigger. Finally, Louis and Sutton's work on sensemaking describes situations that provoke an individual's switch from an automatic mode (i.e., noticing) to a more conscious cognitive processing mode (1991: 55). They identified events involving the individual that were likely to trigger this switch, such as performance reviews, career planning and assessment, role shifts that encompass promotions or transfers to a new job, job loss, or new employees entering the organization. At the organizational level, other more indirect processes were thought to be influential, including human resource planning and organizational assessment. From this body of work, we begin to identify a variety of events that may trigger PC evaluation.

Triggers and Social Comparison Processes

Rousseau suggests that, "all sorts of commitments are . . . being made all the time in organizations" (1995:

85). However, in order to evaluate the commitments made to employees, events must be noticed. Until an event is noticed, sensemaking and evaluation cannot occur (Starbuck and Milliken, 1988), and we argue, PC evaluation cannot occur. Louis and Sutton suggest that individuals rely on "habits of mind" in which we engage in much of our behavior without paying attention to it (1991: 55). They also argue that a trigger is needed for individuals to switch gears from an automatic mode into cognitively attending to the situation and begin sensemaking. Sensemaking, then, is linked to PC evaluation in that "it highlights the invention that precedes interpretation" (Weick, 1995: 14).

Sensemaking has been distinguished from simply noticing something in that "noticing refers to the activities of filtering, classifying, and comparing, whereas sensemaking refers more to interpretation and the activity of determining what the noticed cues mean" (Weick, 1995: 51). Although noticing increases our awareness of something as potentially relevant to us, sensemaking "is about the enlargement of small cues" that are originally noticed, and involves a search for "contexts within which small details fit together and make sense" (Weick, 1995: 133). We believe that social comparisons provide such a context for making sense of employees' PCs, and we examine the relationships between triggers, social comparisons and PC evaluation to better understand these processes.

Self-referent Comparisons

To move beyond simply noticing an event to actively making sense of it and determining its salience to one-

self, additional cognitive processing is necessary. We argue that social comparisons, and in particular self-referent comparisons, assist individuals in making sense of workplace events that specifically involve oneself. Self-referent comparisons involve comparisons made with oneself and include comparisons involving one's own past, the present situation and/or some ideal situation (Kulik and Ambrose, 1992). For example, individuals might compare job duties from a prior position with current job duties to help make sense of their current obligations (a self-past comparison). Individuals might also compare current job accomplishments with established performance goals (a self-present comparison). And, what employee has never made a comparison between his/her current job situation and some ideal job (a self-future comparison)? In each case, some event triggers individuals to consciously think about what is happening, and self-referent comparisons help us make sense of the situations. We are not suggesting that individuals never consider their employment relationship without engaging in social comparisons. However, in the absence of some serendipitous act (e.g., an unexpected salary increase that one dares not question), social comparisons provide an important sensemaking mechanism for PC evaluation (O'Neill and Mone, 2005). We are also not suggesting that trigger events like those described above never lead to referent-other comparisons. Indeed, the uncertainty that individuals face may be so overwhelming that it exceeds the limits of one's own sensemaking abilities. However, as the most promixal referents available to individuals, self-referents are the

most relevant and useful (Goodman, 1974; Kulik and Ambrose, 1992), especially in situations involving primarily oneself. From this, we offer the following hypothesis.

Hypothesis 1a: Triggers involving oneself are positively associated with self-referent comparison.

Morrison and Robinson (1997) suggest that the frequency of PC breach is influenced by how closely employees monitor their employment agreements. Monitoring, in and of itself, does not discriminate between the various social cues that individuals gather; it relies primarily on individuals making sense of what is observed (Miller and Jablin, 1991). Engaging in a self-referent comparison provides the unique opportunity to switch from an automatic processing mode into cognitively attending to something important (Louis and Sutton, 1991) — in this case, evaluating one's PC. As a result, self-referent comparisons are likely to result in increased PC evaluation. We are not suggesting that one *must* select a self-referent before engaging in PC evaluation, but rather, that as more self-referent comparisons occur, PC evaluations also increase.

Hypothesis 1b: Self-referent comparison is positively associated with PC evaluation.

Other-referent Comparisons

Recent research has suggested that peers can be an important source of information for fairness determinations (Lamertz, 2002). Such comparisons are considered other-referent comparisons in that they involve comparisons between oneself and some other individual. Common work-related interactions that may trigger selection of an other-referent include attending professional meetings, at-

tending training sessions in which individuals have a chance to network with others, observing the promotion of a co-worker, conversations with individuals at other firms, or learning about someone else receiving organizational rewards. The difference between triggers involving oneself and these triggers is that there is likely to be much greater uncertainty surrounding these situations due to the involvement of other individuals. Although self-referents involve the most proximal—and most useful—source for comparisons (Goodman, 1974), this type of information may be insufficient in situations that include other individuals. For example, an employee may have some general interest in attending a training session for a new software product, but may not see the specific advantage of this software for his/her own job as it is currently performed. However, attending the training session and observing how other employees find ways to use the software to enhance their job performance may trigger the employee to consider how his/her job tasks might be changed. Here, attending the training session triggered comparisons with an other-referent. This comparison could result in subsequent PC evaluation of job changes by using the new software.

With the example above we are not suggesting that the employee would never invoke a self-referent comparison in situations that involve other individuals. However, Gilbert, Giesler and Morris (1995) suggest that because individuals have control over their thoughts and beliefs, we often "correct" or "undo" those that occur first when they do not provide enough diagnostic information. Similar to Griffeth's (1999) argument

that novelty triggers sensemaking, we argue that the novelty of situations involving other individuals is likely to require more diagnostic information than what is available within oneself (Gilbert *et al.*, 1995). Therefore, other-referent comparisons will be sought out and used for sensemaking. A recent study by Ho and Levesque (2005) supports our argument and demonstrated that other-referents do indeed influence PC evaluations. In this study, a variety of other-referents influenced PC fulfillment perceptions for job-related and organization-wide promises. In the example above, although a self-referent comparison *may* occur, it is insufficient to trigger PC evaluation. Evaluation occurs when new information is obtained from others during training that leads to job task changes. We cannot say for certain that self-referent comparisons do not occur; however, they may occur so quickly as to be unconsciously made or may be done so much out of habit that little notice is taken of them. From these arguments, we propose the following:

Hypothesis 2a: Triggers involving other individuals are positively associated with other-referent comparison.

Similar to theoretical arguments for self-referent comparisons, we assert that as other-referent comparisons increase, PC evaluations also increase. To illustrate, consider the circumstances of the trigger event of a new co-worker being hired. It seems natural for us to discuss the work situation with our new colleague as we observe or even explain job tasks and responsibilities to our new colleague. Such discussions likely trigger comparisons between our own work situation and that of our new colleague, which logically lead to considerations

of promises made by the organization relative to our own employment contract. An example of the thought process might be: "I see Mary being given the XYZ account. I've spent the past three months working to build a relationship with their firm representative, and she's getting the account instead (an other-referent comparison). I was told that this account would be awarded to the person who could sell them on our products and services (PC evaluation) and now she is being given the account" (perceptions of breach). This perceived injustice occurred following an other-referent comparison and evaluation of the PC. Based on this argument, we propose that:

Hypothesis 2b: Other-referent comparisons are positively associated with PC evaluation.

Structural Triggers

Prior research has examined several environmental elements that are thought to be "structural signals" useful for triggering additional informational needs of employees as they evaluate their PCs. These structural mechanisms can be contract makers in that the systems themselves convey information about commitments and the intentions of the organization (Rousseau, 1995). Examples of such secondary contract makers include, but are not limited to, human resources (HR) policies (e.g., educational support, changes in job roles), organizational goal-setting activities, and mission statements. Because they cannot be unambiguously linked to oneself or to any specific person, we propose that these activities directly trigger PC evaluation.

We distinguish these types of triggers from the previously discussed triggers because they are part of the infrastructure of the organization (Rousseau, 1995). Other common organization events include organizational turnover in staff, industry strength projections, and announcements of employee promotions. As an outgrowth of typical organizational processes, self-referent or other-referent comparisons may be inadequate to reduce the uncertainty associated with these activities since the events are rarely linked to a specific individual. Therefore, we propose that these triggers lead directly to PC evaluations with the organization as a whole. To illustrate, employees at one airline might hear news of a union strike at another airline and begin considering the industry impact of this news on their own upcoming union negotiations. Thus, the influence of this industry-level news—which involves no comparison with individuals—may directly trigger consideration of promises made by the organization relative to the upcoming contract negotiations.

Similarly, tension over one's job roles may result from reading an updated job description and comparing it to the prior job description. In this situation, comparisons with a coworker may provide little diagnostic information, particularly if the coworker is experiencing the same shift in job roles. Uncertainty resulting from discrepancies between the two documents is likely to trigger the evaluation of promises made by the organization and, in this case, perceptions of PC breach. For example, "When I was hired, my job description never included driving to our other location for mail pick-up. Now, they're making me use my own car to drive over there! That isn't what I bargained for when I took this job!" In this case, the discrepancy triggered by

considering prior duties with revised duties leads directly to PC evaluation.

Hypothesis 3: Triggers involving structural activities are positively associated with PC evaluation.

PSYCHOLOGICAL CONTRACT EVALUATION AND BREACH

Following PC evaluation, determinations of contract fulfillment or breach are made. Psychological contract breach is defined as an employee's perception of the organization's failure to meet one or more of its obligations (Morrison and Robinson, 1997). The discussions above illustrate that once these thoughts are brought into the conscious mind, individuals use them to make sense of their surroundings (Louis and Sutton, 1991). Our existing mental schemas identify for us the salient elements of a situation that link directly to perceptual processes and outcomes in organizations (Elsbach *et al.*, 2005). Weick and his colleagues suggest that "action is always just a tiny bit ahead of cognition" (2005: 419). Accordingly, we argue that when our cognitions catch up to the actions triggered by the environmental events described above, employees are likely to become even more vigilant in monitoring fulfillment of their PCs. And, increased employee vigilance leads to more perceptions of PC breach (Morrison and Robinson, 1997). We acknowledge that not all PC evaluations lead to perceptions of breach. In fact, any number of individual differences (e.g., equity sensitivity, social comparison orientation) and situational factors influence PC breach perceptions (Gibbons and Buunk, 1999; Kickul and Lester, 2001; Morrison and Robinson, 1997). However, prior research suggests that PC breach is commonplace (Rous-

seau, 1995). Accordingly, logic suggests that increased PC evaluation likely results in increased perceptions of breach. Therefore, we propose that:

Hypothesis 4: PC evaluations are associated with breach, such that as individuals engage in more PC evaluations, they report more perceptions of breach.

METHOD

Pilot Study

In order to measure the broad triggers derived from Rousseau (1995), graduate students from a midwestern university were asked to identify things that prompted them to think about the relationship with their employer. A brief explanation that the employment relationship is viewed as an exchange between employees and employers was offered to orient the students to the topic. All students were part-time MBA students, employed in a variety of professional-level positions. Participation was voluntary, and no inducements for participating in the study were provided. Of the 73 students responding, the average age was 28.9 years old, and average work experience was 4.2 years (range: six months to 16 years). The responses yielded a list of 14 activities: performance reviews, human resource policy changes, receiving a promotion, changes in job duties, personal goal-setting activities, others getting an organizational reward that you wanted, turnover in staff, unclear job roles, organizational goal-setting activities, new hires entering the organization, discussions with people at other firms, attendance at professional meetings, attendance at training sessions, and promotions of co-workers.

As part of another study, the 14 items above were also examined to determine the general importance of these events to individuals and to identify additional triggers. A convenience sample of 33 individuals known to the first author from a variety of activities were contacted. All held full-time, professional positions, and were employed across a variety of disciplines. Individuals were asked to select items perceived to be personally salient and to rank them in order of importance. Items were allowed to be omitted and space was provided for other triggers to be added. All 14 items were selected (i.e., none were omitted), and two additional triggers—educational support and strength of the industry—were new items added to the list.

Further analyses were conducted on the items to learn more about their content and construct dimensionality. First, a Q-sort was conducted with three academic colleagues with a specialization in organizational behavior and a familiarity with social comparison theory. After a brief explanation of Goodman's three referent categories (self, other and system—which we termed structural) and PC evaluations, individuals were given the 16 items and asked to sort them according to similarities with these three categories (Anderson and Gerbing, 1991) within an employment context. The few discrepancies that arose were discussed and resolved by mutual agreement. Consistency between the parties suggested alignment along the existing theoretical dimensions of triggers involving oneself, triggers involving other individuals, and structural triggers. Additional *post hoc* tests (discussed later in the article) also examined the relationship between each distinct item and other variables.

In order to empirically test the results of the Q-sort, 1,000 surveys were randomly mailed to the alumni graduating from a large southeastern university between 1970 and 2000. A total of 202 surveys were completed and returned (a 23% response rate). Of the participants, 36% were female, 96% were White, and the average age of all participants was 42.6 years. Participants' average tenure with their current employer was 11.8 years, with 133 participants holding bachelor's degrees and 69 holding master's degrees. A listwise deletion of missing data resulted in a usable sample of 198.

Using SAS version 8 for all statistical analyses, we first conducted an exploratory factor analysis (EFA) suggesting a three-factor model, which was consistent with the three-factor structure from the Q-sort above. We inspected the scale for potentially problematic items and found that six items cross-loaded onto multiple factors (e.g., they had factor loadings of .30 or higher on more than one factor). Moreover, one item loaded onto a conceptually inconsistent factor. After dropping these seven items, the resulting scale was nine items, with three items for each of the three trigger categories (see Table 1 for scale items and their corresponding factor loadings).

We then examined the trigger scale via a confirmatory factor analysis, specifying a three-factor structure consistent with results from the exploratory factor analysis and the pilot study Q-sort. Several goodness-of-fit indices were used to assess the overall fit of the proposed measurement and path models: the Comparative Fit Index (CFI; Bentler, 1990), the Tucker-

Table 1. Study Measurement Scales with Factor Loadings

Referent Choice Trigger Scale Items	Factor Loading
Self-trigger Factor	
Performance reviews ___ cause me to think about my employment relationship.	.69/.73
Receiving a promotion ___ causes me to think about my employment relationship.	.76/.76
Changes in my job duties ___ cause me to think about my employment relationship.	.78/.78
Other-trigger Factor	
New people entering the organization ___ cause me to think about my employment relationship.	.71/.77
Discussions with people at other firms ___ cause me to think about my employment relationship.	.70/.78
Attendance at training sessions ___ causes me to think about my employment relationship.	.70/.74
Structural-trigger Factor	
Receiving educational support ___ causes me to think about my employment relationship.	.66/.68
Turnover in staff ___ causes me to think about my employment relationship.	.83/.81
Having unclear job roles___ causes me to think about my employment relationship.	.75/.73
Referent Comparison Scale Items*	**Factor Loading**
Self-referent Factor	
Things I have done in the past.	.66
Future goals and expectations I have for myself.	.84
What I consider to be an ideal situation for myself.	.85
My own past experience.	.72
Expectations I have for myself in the future.	.87
What I consider as the "best possible case scenario" for myself.	.83
Other-referent Factor	
Peers in other organizations.	.83
Peers in my own organization.	.74
Individuals in other organizations who have higher level jobs than me.	.87
Individuals in my own organization who have higher level jobs than me.	.90
Individuals in other organizations who have lower level jobs than me.	.87
Individuals in my own organization who have lower level jobs than me.	.87
Psychological Contract Evaluation Scale Items*	**Factor Loading**
Policies/practices described to me when I was hired and what has actually happened.	.82
Actual policies/practices and what I expect policies/practices to be in the future.	.88
Actual policies/practices and what I consider to be the ideal best practices in the industry.	.89
Actual policies/practices and policies/practices promised to me in the past.	.84
Actual policies/practices and organizational goals for future policies/practices.	.87
Actual policies/practices and what I consider to be the ideal policies/practices for the company.	.81

*Stem for all items: "Regarding my job as a whole, I consider it useful to make comparisons based on...."

Note: *For the Referent Choice Trigger Scale, loadings before the slash are from the pilot study, after the slash are for the primary study. Items reflect the final scale. Deleted items include: HR policy changes, personal goal-setting activities, co-worker getting an organizational reward you wanted, organizational goal-setting activities, attendance at professional meetings, promotions of co-workers, and strength of the industry.*

Lewis Index (TLI; Bentler and Bonett, 1980), Akaike's Information Criterion (AIC; Akaike, 1987), the Bayesian Criterion (BIC), and the Root Mean Squared Error of Approximation (RMSEA). The three factor-structure that included all of the items (including the cross-loading items) provided poor fit to the data from this sample (χ^2 = 299.00, df = 62; CFI = .81; TLI = .76; RMSEA = .14). We re-tested the model after dropping the problematic items as indicated by the EFA. This three factor-structure provided better fit to the data from this sample (χ^2 = 46.41, df = 24; CFI = .97; TLI = .95; RMSEA = .069). The new scale with three factors also provided a better fit to the data than a unidimensional model.

Primary Study Participants and Procedure

A second study was conducted with the assistance of undergraduate management students as part of a research assignment at a large southern university. During a class meeting, the instructor discussed the role of research in organizations and provided a basic overview of research methods. Then, as part of the assignment, students collected measures from three individuals who were working full-time during the semester. To ensure that the surveys were indeed completed by individuals who held full-time positions, we randomly selected 30 percent of the surveys and directly contacted the participants to verify their participation. Of those contacted, all participants verified that they had completed the survey. This method of survey collection has been effectively used by field researchers to gain access to survey data from work-

ing adults (Ferris *et al.*, 2005; Kolodinsky *et al.*, 2004).

The project resulted in a sample of 408 working adults (i.e., not a student sample). Of those reporting demographic information, 75% were female, 75% were White, and the mean age was 38.99 years. The average tenure with the organization was 7.84 years. In terms of education, 113 participants reported holding a bachelor's degree and 53 participants reported holding a master's degree. A wide variety of industries were represented (e.g., education, health care, banking/financial services, government, manufacturing, retail, telecommunications). A listwise deletion of missing data resulted in a usable sample of 395.

Measures

Triggers. The 16 triggers from the pilot study were measured with the current sample using a five-point scale that asked individuals the following: "Indicate on a scale of 1 (never) to 5 (always) how frequently each of the following statements makes you think about the relationship between you and your company (i.e., your employment relationship)." Cross-loading issues similar to those in the pilot study were again encountered, suggesting that they were not idiosyncratic to the pilot study sample. As a result, those seven items were dropped from this study (see Table 1 and Note for factor loadings and dropped items). With the nine remaining items, we calculated the total frequency of the triggers for each factor by summing the items (three for each factor). Higher numbers represent greater frequency than lesser numbers.

Referent Comparison. To measure self-referent and other-referent comparisons, we adapted an existing referent comparison scale (O'Neill, 2000). The original scale was developed from theoretical concepts outlined by Kulik and Ambrose (1992). Original scale items that were confusing or ambiguous were refined, and we added new items examining temporal dimensions of self-referents and upward/downward other-referent comparisons thought to be an important source of comparative information (Blanton *et al.*, 1999; Gibbons *et al.*, 2002; Kulik and Ambrose, 1992; Masters and Keil, 1987; Wood, 1989). Using a seven-point frequency scale (1 = never, 2 = a few times a year, 3 = once a month, 4 = a few times a month, 5 = once a week, 6 = a few times a week, 7 = several times a day), 12 items measured self-referent and other-referent comparisons (six items per referent type; see Table 1). Self-referent items consisted of two items per temporal dimension (past, present, and an ideal situation; six total items) as recommended in prior research (Kulik and Ambrose, 1992; Levine and Moreland, 1987; Masters and Keil, 1987; Oldham *et al.*, 1986). The following introduction was provided: "Regarding my job as a whole, I consider it useful to make comparisons based on the following." Item examples included (1) "What I consider as the 'best possible case scenario' for myself" (an ideal self-referent comparison), (2) "things I have done in the past" (a past self-referent comparison), and (3) "future goals and expectations I have for myself" (a present self-referent comparison). The job "as a whole" was highlighted to ascertain the referents regularly relied on, rather than those used more sporadically. This was done because

prior research suggested that referent comparisons tend to be stable over a long period of time (e.g., 24 months; for a discussion, see Stepina and Perrewé, 1991).

For other-referents, three items measured participants' inclination to make upward, downward and peer-level comparisons that are proximally available in the workplace (Shah, 1998; Wood, 1989). An example includes, "Regarding my job as a whole, I consider it useful to make comparisons based on individuals in my own organization who have higher- (lower-) level jobs than me." And, because comparisons are not limited to those in one's own organization (Kulik and Ambrose, 1992; Scholl *et al.*, 1987), three items also measured participants' inclination to engage in upward, downward and peer-level comparisons with individuals external to their organization. Examples include: "Regarding my job as a whole, I consider it useful to make comparisons based on individuals in other organizations who have higher- (lower-) level jobs than me." For each subscale, item responses were summed and then averaged.

Psychological Contract Evaluation. Using theory from Goodman's conceptualization of system-referents (1974), we developed a scale that captured comparisons made between perceived promises relative to policies and practices made at the time of hire, those made generally in the past, and promises relative to the future (see Table 1). The same seven-point frequency scale used above was used here. The questions included: "Regarding my job as a whole, I consider it useful to make comparisons based on: (1) policies/practices described to me when I was hired and what has actually happened, (2) ac-

tual policies/practices and what I expect policies/practices to be in the future, (3) actual policies/practices and what I consider to be the ideal best practices in the industry, (4) actual policies/practices and policies/practices promised to me in the past, (5) actual policies/practices and organizational goals for future policies/practices, and (6) actual policies/practices and what I consider to be the ideal policies/practices for the company." Item responses were summed and averaged to obtain the frequency of individuals' PC evaluations.

Psychological Contract Breach. Psychological contract breach was measured using a modified version of Robinson's (1996) scale assessing PC obligations. Participants indicated the extent to which they believed their current employers had fulfilled their obligations along the following dimensions: job security, promotion and advancement, career development, fair pay, pay raises, and benefit packages. Participants' level of perceived obligation fulfillment was assessed at decreasing levels (1 = 100%, 2 = 75%, 3 = 50%, 4 = 25%, and 5 = 0%) for each dimension. A higher score indicates a relatively higher degree of PC breach than a lower score. Cronbach's alpha for this scale was .94, which is consistent with prior work. Item responses were summed and then averaged to obtain an overall perception of breach.

Control Variables. Self-reported demographic data were collected on the following dimensions: age, gender, race, educational level, and tenure. Hierarchical multiple regression in which control variables were entered into the equation first, followed by the main effect variables was done to rule out the possibility of any findings being explained by demographics. There were no significant effects from any control variable.[1] Because of this, and due to the large number of indicator variables relative to the sample sizes, subsequent data analyses were conducted between only the main effect variables.

RESULTS

We examined the means, standard deviations, inter-item reliabilities, and correlations of all variables and found no unexpected relationships. These results and the Cronbach's alpha for each subscale are displayed in Table 2. To test the hypotheses of the study, structural equation modeling was performed using PROC CALIS in SAS version 8. Following Anderson and Gerbing's (1988) two-step procedure, we tested the measurement components of the model first and then tested the structural (path) components of the model. They recommend this method due to the practical difficulties in obtaining large enough samples to test the measurement and path models simultaneously, resulting in underestimation of fit of an overall structural model.

Goodness of Fit of Proposed Measurement Models

Triggers. Pearson correlations between items for each subscale were larger than correlations between items across subscales, demonstrating convergent validity (Anderson and Gerbing, 1988). We subjected the trigger scale to a confirmatory factor

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[1] Regression results available from the first author upon request.

Table 2. Scale Means, Standard Deviations, Internal Consistency Estimates, and Interscale Correlations

Variable	Mean	SD	1	2	3	4	5	6	7	8	9	10	11	12
1. Age	38.99	8.76	---	.24**	.05	.01	.34***	.07	-.08	-.04	-.05	.03	.09	-.04
2. Sex	.23	.09		---	.06	.03	-.04	.03	.04	.04	.06	-.07	.05	.06
3. Race	1.24	.69			---	.12*	.06	.06	-.05	.03	.04	.05	.06	-.07
4. Education Level	2.31	1.00				---	-.21**	-.08	.03	.04	-.06	.03	.06	.02
5. Org. Tenure	7.84	5.52					---	-.09	.03	.01	.04	.02	.05	.03
6. Self-referent	4.08	1.46						.91	.35***	.45***	.38***	.22***	.23***	.20***
7. Other-referent	3.04	1.53							.93	.32***	.19***	.53***	.16**	.14**
8. Psych. Contract Evaluation[a]	3.15	1.50								.93	.17***	.22***	.49***	.51***
9. Triggers w/self	3.15	1.08									.81	.45***	.47***	.05
10. Triggers w/others	2.67	1.05										.81	.43***	.11*
11. Admin. Triggers	2.82	1.04											.78	.38***
12. PC Breach	2.46	1.14												.95

Note: $N = 395$. Internal consistency estimates along the diagonal are Cronbach's alpha (where appropriate). Sex was coded $0 = $ female, $1 = $ male. Race was coded $1 = $ white and $2 = $ non-white; this categorization was used because of the large proportion of white participants in the sample. Education level was divided into four categories: $1 = $ high school diploma, $2 = $ two-year degree, $3 = $ bachelor's degree, and $4 = $ graduate degree. *$p < .05$, **$p < .01$, ***$p < .001$.
[a] aka System-referent.

analysis, utilizing the three factors from Goodman's typology and derived from the pilot study. The proposed three-factor model provided a good fit to the data. Moreover, the factor loadings from the sample were highly similar to those from the pilot test and were within acceptable ranges (.66 to .83, and .68 to .81 in the pilot study and present study, respectively; see Table 1).

Referent Comparison. We examined the referent comparison scale via a confirmatory factor analysis, specifying a two-factor (self-referent vs. other-referent) structure consistent with the theoretical structure that guided the scale development. The two-factor structure provided acceptable fit to the data, and also provided a better fit to the data than a unidimensional model, and fell within acceptable ranges (.66 to .87 and .74 to .90 for self-referent and other-referent subscales, respectively; see Table 1).

Psychological Contract Evaluation. Cronbach's alpha for the PC evaluation scale was satisfactory at a value of .81. We also examined the scale via a confirmatory factor analysis specifying a one-factor structure. The one-factor structure provided acceptable fit to the data ($\chi2 = 11.71$, df $= 9$; CFI $= .98$; TLI $= .98$; RMSEA $= .042$), and the factor loadings fell within an acceptable range (.82 to .89; see Table 1).

Goodness of Fit of Proposed Path Model and Alternatives

Because of the reasonable fit of the proposed measurement models, we proceeded to test the fit of the path model (see Figure I). This model yielded an acceptable degree of fit to the data (see Table 3 below). Because

of the proposed mediation effects (referent choice mediating the relationship between social comparison triggers and PC evaluation), we followed procedures outlined by Cole and Maxwell (2003; see also Baron and Kenny, 1986) and tested a saturated model with all direct and indirect paths included and systematically removed paths that were not significant. We found that paths outside of the proposed model were not significant and did not contribute to the fit of the model to the data, providing support for our proposed model.

To test for the possibility that other structural models might provide reasonable fit and to rule out alternative explanations, particularly given the cross-sectional nature of the data, we tested several alternative models derived from PC literature and discussed earlier in the article. The first two alternative models tested nested versions of our proposed model. The first alternative we tested (Alternative 1 in Table 3) examined whether self-referent or other-referent comparisons lead directly to breach (with breach as a conceptual proxy for injustice perceptions) without the mediating effect of PC evaluation. This model retained the links between referent triggers and their associated comparisons, and is derived from the study discussed earlier that showed the influence of referents on perceptions of justice (Lamertz, 2002). Although the study did not specifically examine PC breach, other-referent comparisons led to perceptions of unfairness. We also tested a model that completely excluded links from self-referent and other-referent comparison to PC evaluation and links with PC breach (dropping the H1b and H2b links in Figure I), while maintaining the link between triggers in-

Figure I. Parameter Estimates for Triggers, Referent Choice and Psychological Contract Breach Model
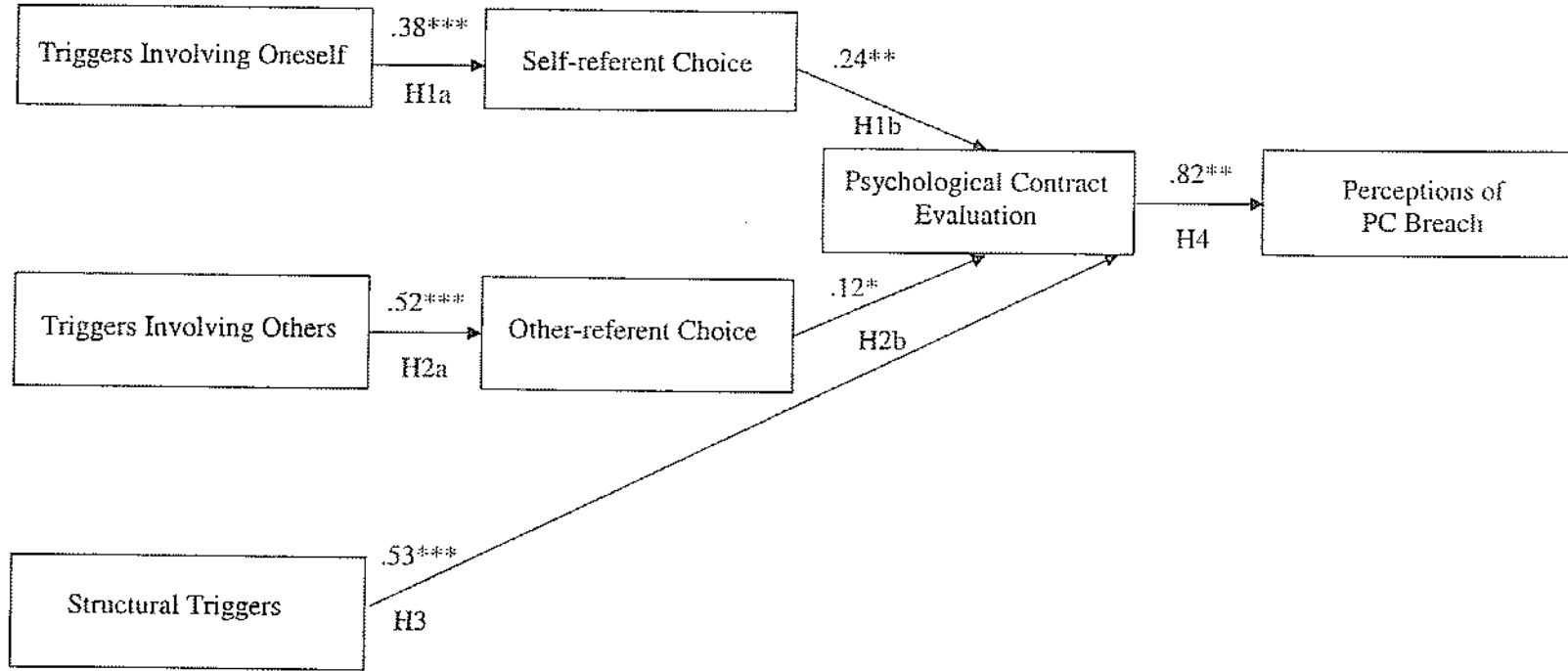
Note: *Parameter estimates are standardized.* *p < .05, **p < .01, ***p < .001.

volving oneself and self-referent comparison and the link between triggers involving others and other-referent comparison (see Alternative 2 in Table 3). This model assumes that self-referent and other-referent comparison are independent outcomes of the triggers, and do not necessarily lead one to think about his or her PC. As indicated by the fit statistics in Table 3, neither Alternative 1 nor Alternative 2 provided a better fit than our proposed model.

In their conceptual model of PC violation, Morrison and Robinson (1997) proposed that social comparisons occur after a perceived unmet promise is realized, which presumes that the PC has already been evaluated. As such, we tested a model (Alternative 3 in Table 3) with links from each of the three types of triggers to PC evaluation, links from PC evaluation to both self- and other-referent comparison and, finally, links from self- and other-referent comparison to breach. Effectively, this model argues that the triggers lead to PC evaluation, which leads to social comparison, which leads to perceived breach. This contrasts with our proposed model, in which we argue that social comparisons are needed in order to make sense of the information and are used in order to determine discrepancies and evaluate the promises. As indicated in Table 3, our proposed model provided a better fit to the data than Alternative 3.

Morrison and Robinson's (1997) theoretical model does not elaborate on different types of referent categories. However, other work suggests clear distinctions between referent categories (e.g., Goodman, 1977; Kulik and Ambrose, 1992; Masters and Keil, 1987). To test a more parsimonious version of our model, we com-

bined both referents into one category (Alternative 4 in Table 3). Our proposed model once again provided a better fit to the data. We also combined the self- and other triggers into a single category of human triggers, since our triggers were originally derived from Rousseau's (1995) work (Alternative 5 in Table 3). As indicated in Table 3, our proposed model provided a better fit to the data.

Next, we tested an alternative model in which each of the trigger items was allowed to load onto any or all of the comparison processes (self, other, or PC evaluation) (Alternative 6 in Table 3). The rationale for this model was that the triggers might lead to multiple types of referent comparisons and accounts for the possibility that the triggers may not fall into the categories assigned by the Q-Sort. As indicated in Table 3, this model did not provide as good a fit to the data as did our predicted model. Taken together, alternative models 1-6 support our contention that different triggers of social comparison provide distinct paths; for example, the types of triggers associated with others may differ from the triggers associated with oneself.

One could also potentially argue that all triggers necessitate a self-referent, such that anything that triggers social comparison first leads one to think about him/herself. As such, we tested a path leading from triggers involving others to self-referent comparisons and then to other-referent comparisons (Alternative 7 in Table 3). As indicated in Table 3, our proposed model provided a better fit to the data than this alternative. This supports our logic about self-referents being more automatic (and perhaps more unconscious) in situations involving other individuals and that

Table 3. Fit Statistics for Structural Equations Model Comparisons

Model	χ^2	df	CFI	TLI	AIC	BIC	RMSEA
Proposed Model	12.23	8	.99	.97	.24	- 23.64	.051
Alternative 1	188.16	12	.78	.62	164.16	116.41	.19
Alternative 2	189.25	14	.78	.68	161.25	105.55	.18
Alternative 3	340.41	11	.59	.22	318.41	274.64	.27
Alternative 4	136.85	7	.81	.58	122.85	94.99	.22
Alternative 5	135.83	5	.77	.55	125.83	105.94	.26
Alternative 6	194.66	17	.71	.66	142.93	100.32	.21
Alternative 7	179.76	11	.79	.60	157.76	113.99	.20

Note: *For the CFI and TLI, values of .95 or above indicate a model with acceptable fit (Bentler and Bonett, 1980; Hu and Bentler, 1999). For the RMSEA, values of .05 or less indicate a well-fitting model (Hu and Bentler, 1999). The AIC and BIC are used for model comparison purposes, where lower index scores indicate a better fitting model.*

other-referent comparisons may be more useful because other individuals entering the situation increases its novelty and uncertainty.

Parameter Estimates

Hypothesis 1a proposed that triggers involving oneself would be associated with self-referent comparison; that relationship was positive and significant (.38, p < .001). Therefore, hypothesis 1a was supported. In support of hypothesis 1b, self-referent comparison was also associated with PC evaluations. The relationship was both positive and significant, with a path coefficient of .24 (p < .01). As more self-referents are chosen, PC evaluations are also more prevalent.

Hypothesis 2a proposed that triggers involving other individuals are positively associated with social comparisons with other individuals. A significant relationship was found, with a path coefficient of .52 (p < .001). Thus, hypothesis 2a was supported. Similarly, hypothesis 2b suggested that other-referent comparison is positively associated with PC evaluations, and the relationship was also found to be significant (.12, p < .01), supporting hypothesis 2b.

Hypothesis 3 proposed a direct and positive association for triggers involving structural activities and PC evaluation. Such association was found to be significant, with a path coefficient of .53 (p < .001), supporting hypothesis 3.

Finally, hypothesis 4 proposed that PC evaluation is associated with breach, such that as more contract considerations were being made, individuals report more perceived breaches. This relationship was found to be positive and significant (.82, p < .001), supporting hypothesis 4.

DISCUSSION

Existing PC research has tended to focus primarily on outcomes related to contract breach. In this study, we sought to break new ground by examining antecedents thought to stimulate comparative activity and sensemaking prior to the development of breach perceptions. By understanding the sensemaking that underlies PC evaluation, managers may be able to devote attention towards more effectively managing the events that lead to perceptions of breach or better capitalize on those events that are perceptually fulfilled in the minds of employees (e.g., through better overall communication).

Theoretical Implications

There are several theoretical implications of our work. First, we took a closer look at both social comparison and PC domains and discovered a theoretical overlap not yet considered in scholarly research. By capitalizing on some theoretical similarities between system-referent comparisons and PCs, we were able to tease out how individuals might use this type of comparison in evaluating their PCs prior to developing fulfillment perceptions. These commonalities have enabled us to integrate and advance knowledge in both the social comparison and PC literatures.

Second, our results suggest that individuals report more breach perceptions when evaluation of the contract takes place. While on the surface this may not seem to be a strikingly new theoretical development, what is new is the discovery that social comparisons are a sensemaking mechanism for evaluating PCs. By examining three different comparisons—past

promises with the present, current promises relative to the future, and current promises relative to some ideal—we are able to draw finer distinctions between the cognitive processes involved in this type of evaluative comparison. Although items were summed and averaged to create an overall scale for purposes of examining our hypotheses, *post hoc* analyses revealed that response frequencies were relatively consistent across the different categories, with all three types of evaluations taking place. This provides preliminary evidence that a variety of comparisons are involved when individuals evaluate their PCs.

Another theoretical contribution of our study is the identification of common organizational situations that may trigger PC evaluation. Although studies have historically tended to focus on outcomes associated with breach, we examined events that indirectly influence judgments of the employment relationship prior to evaluations of PC fulfillment. We also examined several situations that prompt individuals to utilize not only comparisons with others, but also internal standards (via self-referents) when thinking about employment promises. Although other individuals are commonly used as comparative standards (Kulik and Ambrose, 1992), self-referents are more proximal, accessible and useful (Greller and Herold, 1975; Shah, 1998). Our results demonstrate that both self- and other-referents are important comparisons.

Lastly, our study adds one more dimension to the examination of PCs by examining the antecedent processes involved in PC evaluation. Prior research has shown that a close fit between applicant/new employee values and the values of the organization

result in greater job satisfaction and fewer turnover intentions (Cable and Judge, 1996). Here, firm values were conveyed to applicants by staff recruiters who became contract makers for their organization, influencing key outcomes of satisfaction and turnover. Although the authors did not specifically examine PCs, subsequent work demonstrates the link between perceptions of PC breach, satisfaction, and turnover (Cavanaugh and Noe, 1999). Taken together, combining our work on antecedent processes with existing work related to outcomes provides an overall richer picture of the nature of PCs.

Practical Implications

There are also several practical implications to be drawn from our work. PC promises are not limited solely to comparisons between promises made at the time of hire and present conditions. Instead, PC evaluation frequencies illustrate that employees engage in comparisons throughout their employment. For example, annual benefit changes are frequently driven by current market forces and occasionally result in extraordinary premium increases for employers. Such situations set the stage for perceptions of breach when employees are asked to contribute more toward these benefits. This scenario illustrates perceived promises made in the past being compared to the future, and applies to all employees, not just newcomers. Here, management needs to actively manage breach perceptions not only with realistic job previews at the time of hire, but in an ongoing manner with regular employees, including managers, since they themselves are not immune from evaluating their PCs.

Recent research suggests that when employees perceive their organization to be supportive, they exhibit more citizenship behaviors towards the organization (Kaufman et al., 2001). However, such behaviors may be declining as a result of employees feeling more overworked and an increase in the use of contingent workers (McLean Parks and Kidder, 1994). Understanding the trigger events most likely to lead to both positive and negative perceptions of procedural and interactional justice can provide managers a vehicle for focusing their efforts on effectively managing the events most salient to employees (Rupp and Cropanzano, 2002) and redirecting efforts towards addressing fairness issues that can lead to the loss of valuable talent. Beyond selection of a self-referent or other-referent, our study also suggests that a category of structural triggers is associated with PC evaluation. Specifically, the more frequently trigger events occur, the more frequently individuals are evaluating their PC. With the ongoing increase in layoffs and the uncertainty that often plagues organizational survivors, the firm benefits from acquisitions/mergers can lead to less cooperation and more competition between employees, less productivity and a host of negative psychological outcomes (Mone, 1997). The implications of such increases in contract breach perceptions should not be minimized, since continuing breach perceptions erode employee trust and reduce contributions to the firm (DeMeuse et al., 2001; Robinson, 1996). However, not all comparison activities result in perceptions of breach. Indeed, as indicated by the moderate mean reported for PC breach by participations in this study ($\mu = 2.46$), some

events may lead to favorable PC evaluations. Although a complete examination of the effects of individual triggers on perceptions of PC fulfillment is beyond the scope of this study, trigger events such as attending training sessions, or discussions with individuals at other firms, particularly if facilitated by the organization, may actually decrease breach perceptions. Management can mitigate potential breach perceptions by focusing on procedures and processes that are viewed as fair by most employees (Kickul, 2001) and more actively promote trigger events that are viewed favorably by employees. Such positive evaluations, then, are likely to contribute towards the development of positive cognitive schemas that influence subsequent PCs (Morrison and Robinson, 1997; Weick et al., 2005).

Study Limitations and Directions for Future Research

As with any study, there are limitations to our work and the results should be interpreted with caution. The first limitation concerns the nature of the sample for the primary study. Individuals were from multiple organizations in multiple industries, and the potential for confounding elements due to responses from individuals at different firms and industries must be noted. In order to capture a broader range of variation in this sample, we were unable to control for size of the organization, industry differences and a variety of employment practices that might influence individual attitudes. However, the triggers and referent choices examined in this study are commonly found in most organizations.

Another limitation is that the list of triggers is a preliminary attempt to identify common workplace events triggering PC evaluation and it is not intended to be exhaustive. Therefore, this study is not intended to be a rigorous validation study. Using Rousseau's (1995) work as a starting point, we began the process of exploring activities or events thought to be common antecedents of PC evaluation. Therefore, in addition to replicating our study, future empirical work should seek to expand on the current list of trigger events to augment our initial list. And, as theoretical development of a measure of triggers progresses, content and construct validation of a trigger scale is warranted.

Next, our study design was cross-sectional in nature, and considerable literature on referent selection has noted the utility of conducting longitudinal studies. Although a study by Stepina and Perrewé (1991) showed that referent choices tended to be stable over a 24-month period of time, recent work suggests that other-referent choices are contingent on the domain of PC promises being evaluated and the nature of employees' networks (Ho and Levesque, 2005). That study, however, did not explore the nature of self-referents. Perhaps individuals use self-referents to make sense of routine job duty changes while selection of an other-referent may be more useful for evaluating complex job changes that exceed available self-referent information.

Another potential limitation in the present study is common methods bias. The risks and potential common-methods bias associated with a single survey method were intended to be offset by gaining access to sensitive information from employees in a field setting. Although lack of experimen-tal control is another limitation not to be ignored, an important benefit associated with using a field setting is access to a more realistic scenario from which to generalize about attitudes and behaviors in the workplace. Nonetheless, to test for the possibility that common method bias might be unduly influencing the data, we conducted Harman's single-factor test (for a discussion, see Podsakoff et al., 2003); it provided support for the notion that common method bias is not a critical influence on the relationships between the variables. There are additional implications and recommendations to be noted. Although we sought to examine a one-way relationship with self-referents and other-referents leading to contract evaluation, there is nothing to suggest that the relationships may not be bi-directional, particularly given the ongoing nature of PC evaluation. Future studies might specifically investigate the relationship between self-referents and other-referents, since correlations from the data herein demonstrate a moderately strong, positive association between self-referent and other-referent comparisons ($r = .45$, $p < .01$). Despite acceptable statistics, the referent choice scale used herein is still relatively new and should be subjected to additional scale validation in future empirical studies.

Finally, recent work has suggested that individual differences may have a role in influencing social comparisons and PCs. For example, Blanton and colleagues (1999) suggest that social comparison orientation and self-efficacy are complementary constructs. And, individual differences in equity sensitivity are also thought to influence perceptions of PC breach (Kickul and Lester, 2001). Accord-

ingly, future studies might examine whether these or other individual dimensions influence referent comparisons differently, or whether they influence how individuals notice various trigger events. Based on the present study, such advances may be beneficial in attempting to understand and better predict individual variations in PC perceptions.

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