



University of Richmond  
UR Scholarship Repository

---

Management Faculty Publications

Management

---

5-2005

# With a Little Help from My Friends (and Substitutes): Social Referents and Influence in Psychological Contract Fulfillment

Violet Ho

University of Richmond, [vho@richmond.edu](mailto:vho@richmond.edu)

Follow this and additional works at: <http://scholarship.richmond.edu/management-faculty-publications>

 Part of the [Business Administration, Management, and Operations Commons](#), [Cognitive Psychology Commons](#), [Human Resources Management Commons](#), and the [Industrial and Organizational Psychology Commons](#)

---

## Recommended Citation

Ho, Violet T., and Laurie L. Levesque. "With a Little Help from My Friends (and Substitutes): Social Referents and Influence in Psychological Contract Fulfillment." *Organization Science* 16, no. 3 (May/June 2005): 275-89. doi:10.1287/orsc.1050.0121.

This Article is brought to you for free and open access by the Management at UR Scholarship Repository. It has been accepted for inclusion in Management Faculty Publications by an authorized administrator of UR Scholarship Repository. For more information, please contact [scholarshiprepository@richmond.edu](mailto:scholarshiprepository@richmond.edu).

# With a Little Help from My Friends (and Substitutes): Social Referents and Influence in Psychological Contract Fulfillment

Violet T. Ho

Nanyang Business School, Nanyang Technological University, Nanyang Avenue, Singapore 639798, atwho@ntu.edu.sg

Laurie L. Levesque

Frank Sawyer School of Management, Suffolk University, 8 Ashburton Place, Boston, Massachusetts 02108, llevesqu@suffolk.edu

This study investigated employees' choice of social referents and the impact of social influence on their beliefs of psychological contract fulfillment. Using data from a field study conducted with 99 employees in a research organization, we found that one's referent choice varied with the domain of promise evaluated. When evaluating the organization's fulfillment of organization-wide promises, employees' referents were primarily coworkers with whom they had close direct ties, namely, friends and advice givers. On the other hand, when evaluating the fulfillment of job-related promises, employees' referents were mainly fellow workers who could substitute for them and people with whom they had multiple relationships.

The effects of social influence also varied with the domain of promise evaluated. For organization-wide promises, employees' fulfillment evaluations were similar to those of their friends. However, for job-related promises, their fulfillment evaluations were dissimilar to those of coworkers who played the dual roles of friends and substitutes.

This study advances psychological contracts research by demonstrating that third parties to the psychological contract can influence fulfillment evaluations. In turn, the effect of such influence is contingent on the domain of promises being evaluated and the nature of the networks. We discuss implications for research in psychological contracts, social networks and influence, and referent choice.

*Key words:* psychological contract fulfillment; social network theory; social influence

---

A common phenomenon in contemporary organizations is the development of psychological contracts between workers and their employers. Defined as an individual's beliefs about the terms of an exchange agreement between the individual and the organization (Rousseau 1995), the psychological contract and its fulfillment play a vital role in the employment relationship. For example, there is copious evidence that psychological contract fulfillment has significant repercussions on key organizational outcomes such as job and organizational satisfaction (Robinson and Rousseau 1994, Turnley and Feldman 2000), loyalty to the organization (Turnley and Feldman 1999), and job performance (Robinson 1996). On the other hand, a breach or under-fulfillment of the psychological contract results in high turnover (Robinson and Rousseau 1994) and low citizenship behavior (Robinson 1996, Robinson and Morrison 1995). Thus, the effective management and understanding of psychological contract fulfillment, i.e., employees' evaluation of whether the organization has fulfilled its promised obligations in the psychological contract, are critical from both practical and theoretical standpoints.

Several models have been advanced about how employees' perceptions of psychological contract fulfill-

ment are shaped. For example, Rousseau (1995) developed a theoretical model of contract outcome discrepancy and breach. Subsequently, Morrison and Robinson (1997) proposed a distinct theory of psychological contract violation, describing how employees' experiences of unmet promises may eventually result in their perceiving a breach and feeling betrayed. While both models take into account the roles of individual differences, formal organizational influence, and the employment relationship, they do not consider the influence of informal social relationships in shaping employees' fulfillment evaluation, despite the prevalence of such relationships in most organizations.

Nonetheless, several reasons suggest that social influence will play a part in this process (Ho 2005). First, there is rich evidence in organizational research that social influence is a widespread phenomenon in organizations, as demonstrated by studies in social information processing (e.g., Salancik and Pfeffer 1978, Zalesny and Ford 1990), sensemaking (e.g., Weick 1995), and social influence and comparison (e.g., Festinger 1954, O'Reilly and Caldwell 1979). Furthermore, social influence has been found to occur even in instances where objective information is available (Klein 1997). Second, given individuals' intrinsic need to evaluate their relative

standing, they tend to look for social information to corroborate their initial evaluation (Frank 1985) and to determine if it needs reassessment. Finally, the nature of psychological contract-related beliefs is such that they are subjective and ambiguous (Rousseau and Tijoriwala 1998) and thus particularly prone to social influences from other people (Salancik and Pfeffer 1978). Thus, it is probable that judgments of the fulfillment of these promises will likewise be subject to informal social influence.

By omitting the role of informal social influence, our current understanding of the determinants of fulfillment evaluations is incomplete. In fact, this omission may account for observed discrepancies between employer and employee reports of contract fulfillment. For example, Lester et al. (2002) found that supervisors' perceptions of how well their subordinates' psychological contracts had been fulfilled were significantly higher than the subordinates' own evaluation. A similar pattern of results was found in a separate study by Coyle-Shapiro and Kessler (2000), where managers reported higher organizational fulfillment of transactional and relational obligations to the employees, compared to the employees' own evaluation. Potentially, this discrepancy between employers' and employees' evaluation of fulfillment could be partly accounted for by the fact that coworkers may have had a role in shaping an employee's fulfillment evaluation, a role that employers did not take into account.

To address this gap, Ho (2005) introduced a theoretical model of the role of social influence in psychological contract fulfillment. In this study, we draw on elements of that theoretical model to empirically examine the effects of social influence on fulfillment evaluations. Specifically, we address two key issues relating to social influence: (1) employees' choice of social referents from whom to obtain psychological contract-related social information and (2) the effects of such information on their eventual fulfillment evaluation. By empirically demonstrating that informal social referents can influence one's fulfillment evaluation, we extend psychological contracts research and bring new insights to the fulfillment evaluation process, introducing new and important factors that have not been considered thus far. Additionally, our study takes into account key characteristics of psychological contracts and social relationships to predict the outcomes of social influence, thereby highlighting the importance of context in organizational studies.

## Theoretical Development and Hypotheses

We adopt a social networks approach and dyadic-level perspective to examine the two key issues of referent choice and social influence effects. A social networks approach is particularly applicable in examining social

influence, because individuals' attitudes and beliefs are "modified primarily through interpersonal processes, and these processes occur largely in the boundaries of social networks" (Erickson 1988, p. 99). We propose that employees' choice of referents will vary depending on the domain of promise they are evaluating, and drawing upon social networks theory, we examine their choice among relational ties, positionally similar ties, and multiplex ties. Further, we predict that as a result of social influence, individuals' fulfillment evaluations will be shaped by referents' evaluations of how well the organization fulfilled its promises to them. In other words, we expect that individuals' fulfillment evaluations will be more similar to evaluations of their referents than to those of nonreferents.

### Choice of Social Referents

The long history of social networks research on social contagion and diffusion provides a fertile ground on which to understand individuals' referent choice for psychological contract-related information (e.g., Burt 1982, Coleman et al. 1966, Strang and Tuma 1993). Specifically, two network models have been advanced to help explain the social influence process, namely, the relational model (also known as cohesion) and the positional model (also known as structural equivalence) (Burkhardt 1994, Contractor and Eisenberg 1990). Under the relational model, social influence is purported to operate via the mechanisms of cohesion and solidarity, and individuals are said to be influenced by *relational others*, that is, people with whom an individual has direct interactions and enjoys close social proximity (Burkhardt 1994, Coleman et al. 1966). For example, friendship ties and advice ties fall into this category, as these referents are easily accessible and can provide individuals with opportunities to obtain information easily, frequently, and quickly, which, in turn, increases the salience of such information (Friedkin 1998). In addition, ties with relational others are typically cooperative in nature (Shah 1998) and characterized by positive interactions (Friedkin 1984), making them a likely choice for obtaining social information.

The other social influence mechanism is explained by the positional model, proponents of which advocate that social influence occurs through competition and socialization (Burt 1987, Contractor and Eisenberg 1990). The positional model specifies that individuals tend to pay attention to people who occupy positions similar to theirs in the informal social structure, i.e., *positionally similar others*. To illustrate, B is a positionally similar other to A if both A and B have ties to the same people (e.g., C and D) and likewise do not have ties to certain other people (e.g., E and F). These positionally similar others can serve as appropriate social referents for two key reasons. First, because an individual is inclined to think of a positionally similar other as a substitute

(Sailer 1978), a competitive orientation between the two of them is engendered (Burt 1987). In turn, the individual will pay attention to the positionally similar other's perceptions and behaviors to maintain an equal or even superior standing (Friedkin 1998). Second, because of their similar structural positions, an individual and a positionally similar other are likely to be connected to a similar set of people and to have undergone similar socialization experiences, which, in turn, increases the suitability and relevance of the positionally similar other as a social referent (Marsden and Friedkin 1993, Shah 1998).

To determine which of these two categories will be chosen as social referents when individuals evaluate promise fulfillment, Ho (2005) drew upon studies in information seeking, employee socialization, and social referents and proposed that the particular promise being evaluated plays a key role in referent choice. Employee socialization research has demonstrated that individuals seek different types of information in the course of their work, including more general information such as normative information on the organization's values and culture and social information about employees' acceptance of an individual. Employees also seek information that is more specific to their jobs or positions, including referent information on their work role, technical information relating to tasks, and performance-related information (Morrison 1993, Ostroff and Kozlowski 1992). In turn, workers' referent choice depends on the domain of information sought, specifically whether the information is organization-wide (i.e., pertaining to the organization in general) or job related (i.e., pertaining to one's specific job or position) in nature (Shah 1998). Building on this stream of research, Ho (2005) argues that in the context of psychological contract fulfillment, employees' referent choice when evaluating fulfillment will likewise be contingent on the domain of the promise being evaluated.

*Organization-Wide Promises.* A promise is defined as organization-wide if the delivery of that promise is the same across all employees, whereas it is job related if the way in which the organization delivers on the promise varies with one's job or position (Ho 2005). For example, a firm that says it will provide work-life balance to its employees is making an organization-wide promise if everyone, regardless of job or position, gets the same vacation benefit schedule and access to in-house day-care services. In contrast, a promise to provide employees with competitive pay based on industry standards is a job-related one because the delivery of this promise varies with one's job such that competitive pay may mean \$24,000 per annum for a secretarial staff member but \$180,000 for a top executive. Depending on whether a promise is organization-wide or job related, individuals' referent choice is expected to differ.

Specifically, we propose that an employee will turn to relational others as social referents when evaluating the fulfillment of organization-wide promises based on the following reasons. First, even though organization-wide promises are delivered in the same way to all workers (who thus have relevant psychological contract-related information), relational others are more similar to the focal employee in terms of personal characteristics and beliefs (Erickson 1988, Marsden 1988). As a result, this increases the employee's comfort and decreases his or her reservations in approaching them for information. Second, because ties to relational others are direct and often strong (Burkhardt 1994), this increases the frequency of interactions and makes social information from relational others more readily available, salient, reliable, and timely, compared to information from indirect or weaker ties. This argument has empirical support in a study by Shah (1998), where employees were found to obtain general organizational information from friends.

*HYPOTHESIS 1. Employees will rely on relational others as social referents when evaluating the employer's fulfillment of organization-wide promises.*

*Job-Related Promises.* Regarding fulfillment evaluations of job-related promises whose delivery vary with one's job, we propose that employees will obtain social information from coworkers who are in similar positions within the social structure of the firm. This is based on the fact that positionally similar others perform a similar role, and thus have psychological contract-related information that is most relevant and comparable to one's own. Although an employee may have direct and positive interactions with relational others, the latter do not necessarily have relevant job-related psychological contract information, as these ties are based more on liking and trusting and not necessarily on positional similarity in the social structure. In fact, relational others may not even be privy to the same job-related promises if they do not perform a similar job. Again, Shah's (1998) study provides tangential evidence for this argument, in that employees chose to obtain job-related information from positionally similar others.

*HYPOTHESIS 2. Employees will rely on positionally similar others as social referents when evaluating the employer's fulfillment of job-related promises.*

Consistent with prior social network studies, we employ structural equivalence to represent the competition mechanism underlying the positional model (Burkhardt 1994, Burt 1987, Friedkin 1998). At the same time, we note that extant support for the effects of structural equivalence is mixed, such that structural equivalents were sometimes found to influence only certain attitudes or not to have any influence at all (e.g., Meyer 1994, Rice and Aydin 1991). One possible reason for this is

that structural equivalence, particularly in relational networks, may not precisely capture the concept of *work-related substitution* that is inherent in many organizational studies employing the positional argument. For example, two people who are friends with the same third party may not necessarily perceive each other as competitors in the organization or think that the other can substitute in one's job. In fact, balance theory would predict that two people with positive ties to a third party are themselves likely to have positive ties with each other, too (Heider 1946), rather than view each other as competitors. To incorporate this alternative, we include another category of positional others in the form of work substitutes. Specifically, work substitutes consist of people whom an employee considers to be possible substitutes for his or her organizational role and who can replace him or her at work. This category of positional others offers the advantage of directly assessing an employee's perceptions of work substitutes, compared to the more traditional, indirect structural approach of structural equivalence, and we incorporate both types of positional others in this study.

Employees may have relational ties to some of their coworkers who are in similar positions in the firm, thereby creating multiplex ties. A *multiplex tie* is said to exist between two people when they have more than one relationship with each other (Erickson 1988, Wasserman and Faust 1994), such as when they are friends as well as structural equivalents. In our study, we are particularly interested in multiplex ties formed by a combination of relational and positionally similar ties, as these multiplex ties bring together the distinct influence mechanisms underlying each of the two network influence models. Prior research has demonstrated that these multiplex relationships are particularly influential (Wheeldon 1969), in that "the more different kinds of relationships a dyad includes...the more relevant it is to different kinds of attitudes" (Erickson 1988, p. 103). In addition to the relevance of information, the ease with which an employee can obtain information from a coworker is also likely to increase with tie multiplexity, given that the relationship between an employee and his or her coworker spans more settings and thus provides more opportunities for information seeking.

We contend that these benefits are likely to be manifested in the evaluation of job-related promises. Even though positionally similar others are likely referents for job-related promises (see Hypothesis 2), they may not be an easy source of information when an employee lacks direct ties with them. Moreover, as much as employees can try to obtain information from positionally similar others through indirect routes, the quality and detail of such information may be compromised. In such instances, where single ties may not be completely adequate in providing timely and high-quality information, the benefits of multiplex ties are likely to be realized

such that employees will turn to relational and positionally similar others who not only have the relevant information (because of their positional similarity) but also have positive interactions with the employee (because of their relational tie).

**HYPOTHESIS 3.** *Employees will rely on multiplex others (i.e., relational and positionally similar others) as social referents when evaluating the employer's fulfillment of job-related promises.*

On the other hand, we do not expect these multiplex ties to provide any additional benefits over single ties in the context of obtaining organization-wide information. First, the nature of organization-wide promises is such that everyone in the organization has relevant psychological contract-related information, which makes such information widely available and, in turn, implies that a multiplex tie does not carry with it any additional benefits in terms of information relevance. Second, relational ties, hypothesized to be the preferred avenue through which individuals obtain organization-wide information, are already of a positive and strong nature and the ensuing social information is easily accessible and of sufficient detail and quality, thereby obviating the need to rely on other referents.

### **Effects of Referent Information on Perceived Fulfillment**

Research has demonstrated that social influence and contagion have a consensus-forming effect on individuals' attitudes, perceptions, and behaviors (Friedkin 1984, Meyer 1994). According to communication theory, referents offer norms, cues, and their own interpretations of information, which, in turn, increase the salience of that information and shape one's perceptions and attitudes to be consistent with the referents' (Erickson 1982, Ibarra and Andrews 1993). More specifically, information employees receive from referents can serve as signals or indicators about objects (e.g., the organization) or people (e.g., a third party), which then shifts employees' perceptions in a similar direction as those held by referents (Felson and Reed 1986). Social influence is therefore manifested in similarity between employees' and referents' perceptions.

Because ambiguity and subjectivity characterize psychological contract fulfillment (Rousseau and Tijoriwala 1998), employees will tend to draw on referent information to better interpret and evaluate whether the organization has met its promises. In turn, the previous arguments suggest that when employees rely on such referent information to assess fulfillment, their perceptions will be more similar to those of referents. As such, we can extend the earlier hypotheses on referent choice to predict the eventual outcome similarity between an employee's perception of promise fulfillment and those held by different referents. Specifically, for organization-

wide promises, we hypothesize that:

**HYPOTHESIS 4.** *Employees' perceived fulfillment of organization-wide promises will be similar to that of relational others.*

Likewise, for job-related promises, we hypothesize that:

**HYPOTHESIS 5.** *Employees' perceived fulfillment of job-related promises will be similar to that of positionally similar others.*

Finally, regarding the effects of multiplex ties on perceived fulfillment, we build on the social contagion argument to propose that:

**HYPOTHESIS 6.** *Employees' perceived fulfillment of job-related promises will be similar to that of multiplex others (i.e., relational and positionally similar others).*

## Methods

### Sample and Procedures

We collected data from a field study of a research and development firm in a computer-related industry, located in the eastern United States. The company had 118 employees; most were research scientists (46%), with the rest consisting of research managers (9%), engineers and technicians (20%), and executive and support personnel (25%). The research personnel were divided into departments specializing in different aspects of the technology, but employees had to work and coordinate across departments to successfully meet superordinate goals.

In the first part of the field study, we conducted interviews with 54 employees from different groups and levels to develop an empathic questionnaire that tapped at promises that were salient and relevant to all employees (Alderfer and Brown 1972). In the hour-long semistructured interviews, participants were asked about their jobs and their experiences in the firm. We also asked respondents to describe what they thought were benefits the firm had promised to provide. Based on the aggregate responses, we arrived at a preliminary list of eight promises. The human resources (HR) manager then verified that the firm had made every one of those promises.

The first author then conducted a second round of interviews with four key informants to classify each of these initial promises as organization-wide or job related or not made to them at all. The four key informants consisted of two research scientists from different departments, one technician, and one secretary. These informants were specifically selected because of their longer tenure with the firm and to obtain various perspectives across departments and job positions. In this second round, promises in the initial list were excluded if different informants categorized them differently or

if any informant said that the particular promise had not been made to him or her. We adopted this conservative approach because it was vital that the final list of promises was relevant to every employee, and also because this was the first study to examine the two categories of promises (job related and organization-wide), and thus there were no preexisting items to draw upon. The final list consisted of (1) organization-wide promises, which included an open and relaxed work environment and a healthy work-life balance; and (2) job-related promises, which included flexibility to choose projects and pay based on performance. The HR manager then verified that these four promises fit into their respective categories.

The second part of the study involved administering a web-based survey to all employees, each of whom received a confidential user name and password. Participation was voluntary and a total of 99 employees responded (84%). Respondents were predominantly male (79%), consistent with the fact that 81% of employees were male ( $\chi^2 = 0.43$ , *ns*). Sixty-three percent had a graduate degree, 14% a bachelor's degree, and the remaining 23% at least a high school diploma. Organizational tenure ranged from 2 months to 4 years, with an average of 1.7 years.

### Measures

**Organization-Wide and Job-Related Referent Others.** To measure respondents' referent choice when evaluating the fulfillment of organization-wide promises, we combined the two organization-wide promises elicited from the interviews and asked respondents to indicate whom they observed or talked to about whether the employer had kept those two promises to them. To facilitate this, we provided respondents with a list of all employee names, and respondents checked off the names of those who were their referents. These responses made up the Organization-Wide Referent Others network. A similar procedure was used to arrive at the Job-Related Referent Others network. For each of these two networks, cell entry  $X_{ij}$  was 1 if person  $i$  selected person  $j$ , and 0 if otherwise, resulting in a  $99 \times 99$  matrix (99 respondents). Similar sociomatrices were constructed for subsequent network measures unless otherwise stated.

**Similarities in Perceived Fulfillment.** Another set of network measures involved computing the similarities between the perceived fulfillment of every pair of individuals. To do so, respondents were provided with the list of four promises and indicated on a five-point scale how well they thought the firm had fulfilled each of them. We then computed the degree of *dissimilarity* by taking the absolute difference between person  $i$ 's and person  $j$ 's fulfillment response on each promise. For example, for the promise of work-life balance, if person  $i$  rated its fulfillment at 3 and person  $j$  at 5, then

cell entry  $X_{ij}$  would be 2 for that particular perceived fulfillment dissimilarity matrix. We then converted the dissimilarity matrix into a similarity matrix by adding a negative sign in front of each cell entry such that the more negative the value, the less similar  $i$ 's and  $j$ 's responses were. Four Perceived Fulfillment similarity matrices were created.

*Relational, Positionally Similar, and Multiplex Others.* Within the general category of relational others, different operationalizations of such ties are possible. In this study, we measured relational others by using both friendship and advice networks, as prior studies have shown that they represent positive, direct interactions in the workplace (Ibarra and Andrews 1993, Krackhardt 1990). Friendship ties are characterized by close interactions in which parties feel a sense of responsibility for the other's well-being (Clark and Mills 1979, 1993), together with feelings of liking and affective trust for the other (Krackhardt and Porter 1985, Krackhardt and Stern 1988). To measure these ties, we provided respondents with a list of all employee names and asked them to indicate "whom you consider to be a personal friend," consistent with the approach used in prior studies (e.g., Ibarra and Andrews 1993, Krackhardt and Porter 1985).

Advice ties also capture positive interactions, in that they represent cooperative relationships in which a party has cognitive trust in and respect for the other, manifested in advice-seeking behaviors between the two. To measure these ties, we again provided respondents with a list of all employees and had them indicate "whom you might go to for help and advice if you have a question or problem at work."

Positionally similar others were obtained by using Structural Equivalence networks computed from the Friendship and Advice networks.<sup>1</sup> This measure captures the degree of similarity in network position between two actors, who are deemed structurally equivalent if they have identical ties to and from other actors in that particular network (Lorrain and White 1971, Wasserman and Faust 1994). For example, A and B are friendship structural equivalents if both are friends with persons C and D but are not friends with persons E and F. Likewise, A and B are advice structural equivalents if both go to persons G and H for advice but do not approach persons I and J. As a more direct measure of positionally similar others, we also assessed the Work Substitution network by asking respondents to indicate "whom you think can fill in for you when you are unavailable or out of the office."

Multiplex others (i.e., relational and positionally similar others) were obtained by computing the Hadamard product (Coppersmith and Winograd 1990) between each of the two relational network variables (friendship and advice) and each of the three positionally similar ones (friendship structural equivalence, advice structural equivalence, and work substitution). For example,

to obtain the matrix of people who were  $i$ 's friends as well as work substitutes, the Friendship network was multiplied with the Work Substitution network. Hence, in the Friendship and Work Substitution network, cell entry  $X_{ij}$  was 1 if person  $i$  considered person  $j$  as both a friend and a work substitute, and 0 if person  $j$  was solely a friend, solely a work substitute, or neither.

*Control Variables.* Individuals' referent choice and similarity in perceptions could be related to similarities in individual attributes (gender, age, tenure, education), department, organizational level or rank, and supervisors (Ibarra and Andrews 1993, Moreland and Levine 2000). Hence, we also collected data on these variables and computed similarity matrices for gender, work group, and supervisor variables using the matching rule (Borgatti et al. 2002). For example, cell entry  $X_{ij}$  in the Gender matrix was 1 if person  $i$  and person  $j$  were of the same gender and 0 if otherwise. Because the other variables (age, tenure, education, and organizational level) were continuous, we computed similarity matrices based on the negative values of absolute difference scores.

### Analysis

To test Hypotheses 1–3 on individuals' referent choice, we conducted a quadratic assignment procedure (QAP), a nonparametric, permutation-based test similar to ordinary least square techniques used in typical multiple regression analyses (Krackhardt 1987, 1988). Because the observations in network data are not independent, the error terms within rows and columns in a matrix are autocorrelated to each other. QAP resolves this problem by regressing each of the dependent variable matrices (referent choice) onto the independent and control variables matrices and tests the significance of the regression coefficients.<sup>2</sup> We used asymmetrical networks for this set of analyses because we were interested in an individual's own perspective of whom he or she would choose as a referent, not whether two parties saw each other as referents.

Hypotheses 4–6 pertain to dyadic social influence effects, that is, whether both  $i$  and  $j$  have similar evaluations. Because such dyadic similarity can be better predicted by social relationships that both parties recognize as existing, we adopted a conservative approach by examining only reciprocated ties, where both  $i$  and  $j$  acknowledge a tie to each other. Given that friendship and substitution ties by nature are likely to be mutual, using reciprocated ties helps reduce measurement and recall errors (Wasserman and Faust 1994). Even though advice ties do not necessarily engender mutuality, the occurrence of a mutual advice tie represents a greater degree of respect and trust between the two parties, and presumably a greater likelihood for social influence. We first symmetrized the independent variable matrices of Friendship, Advice, and Work Substitution networks, using the minimum rule to obtain reciprocated

ties (Borgatti et al. 2002). Structural equivalence measures in Friendship and Advice networks were then recomputed using the symmetrized networks. Finally, we conducted QAP by regressing each of the fulfillment similarity matrices on the symmetrized independent variables and control variables.

## Results

### Descriptive Statistics

Table 1 presents descriptive statistics for the seven binary networks assessed. On average, respondents elected 10 coworkers as friends and went to 18 people for work-related help and advice. However, they considered far fewer coworkers as being able to fill in for them in their absence, selecting only two people on average as work substitutes. In terms of multiplex ties, respondents on average considered one person as occupying the dual position of friend and work substitute, which is not surprising, given the small number of people selected as work substitutes. This also accounts for the small number of people in the dual position of advice giver and substitute (average of one person). In terms of referent others, respondents selected more referents for organization-wide promises than for job-related promises, with an average of six and four, respectively.

### Choice of Social Referents

Table 2 presents the descriptive statistics and intercorrelations for the network variables used to test Hypotheses 1–3, while Table 3 shows the results of the QAP regression analyses. Support was found for Hypothesis 1, which predicted that individuals would obtain information on organization-wide promises from relational others. Specifically, the effects of friends and advice givers were both significant ( $\beta = 0.20$  and  $0.16$ , respectively;  $p < 0.001$ ). Work substitutes, a positionally similar other, also had a significant effect ( $\beta = 0.06$ ;  $p < 0.05$ ), although the effect size is smaller compared to that of friends and advice givers.<sup>3</sup> The other two types of positionally similar others, friendship and advice structural equivalents, did not have a significant effect ( $\beta = -0.02$  and  $0.00$ , respectively; *ns*). Finally,

**Table 1** Descriptive Statistics of Binary Ties

Type of tie	Minimum	Maximum	Mean	Standard deviation
Friend	0	98	10.40	13.49
Advice giver	0	98	17.91	18.01
Work substitute	0	6	1.56	1.42
Friend and work substitute	0	5	0.99	1.18
Advice giver and work substitute	0	6	1.24	1.36
Organization-wide referent other	0	50	6.47	8.83
Job-related referent other	0	23	4.33	5.26

even though we did not expect multiplex others to be chosen as referents for organization-wide promises, the results indicated that several types of multiplex ties had significant effects. Individuals were likely to go to people who were both friends and substitutes ( $\beta = 0.04$ ;  $p < 0.05$ ), both friends and friendship structural equivalents ( $\beta = 0.12$ ;  $p < 0.001$ ), and both advice givers and friendship structural equivalents ( $\beta = 0.14$ ;  $p < 0.001$ ) for referent information when evaluating organization-wide promises.

When selecting social referents to help one assess fulfillment of job-related promises, respondents tended to choose work substitutes ( $\beta = 0.15$ ;  $p < 0.001$ ), a form of positionally similar others, as predicted in Hypothesis 2. However, neither of the other two types of positionally similar others, friendship and advice structural equivalents, were significant ( $\beta = -0.01$  and  $0.00$ , respectively; *ns*). It is worth noting that even though friendship ties also demonstrated a significant effect ( $\beta = 0.08$ ;  $p < 0.01$ ), its magnitude was lower than that of work substitutes. Several types of relational and positionally similar others also demonstrated significant effects as hypothesized in Hypothesis 3. Specifically, individuals turned to people who were both friends as well as substitutes ( $\beta = 0.05$ ;  $p < 0.05$ ), both friends and friendship structural equivalents ( $\beta = 0.17$ ;  $p < 0.001$ ), and both advice givers and friendship structural equivalents ( $\beta = 0.11$ ;  $p < 0.001$ ).

### Effects of Social Influence on Perceived Fulfillment

To test for social influence, we used reciprocated ties, given that social influence is more likely in mutual than in unreciprocated relationships. Table 4 presents the results from the QAP analyses, which provide evidence for the overall effects of social influence on perceived fulfillment. For the two organization-wide promises on relaxed environment and work-life balance, the results consistently showed that an employee's perceived fulfillment of these two promises was similar to that of friends ( $\beta = 0.06$  for relaxed environment and  $0.05$  for work-life balance;  $p < 0.05$ ) and not to the other types of ties, thereby offering support for Hypothesis 4. Consistent with our expectations, multiplex ties also did not exhibit any significant social influence effects.

For job-related promises, we found that an individual's perceived fulfillment of pay was similar to that of work substitutes ( $\beta = 0.06$ ;  $p < 0.05$ ), whereas relational ties had no significant effect, consistent with Hypothesis 5. However, this pattern was reversed for the promise of project flexibility such that individuals' perceived fulfillment was similar to that of friends ( $\beta = 0.05$ ;  $p < 0.05$ ) but not to any positionally similar others. Finally, for both job-related promises, a consistent finding was that the multiplex tie of friend and substitute was significant ( $\beta = -0.05$  for project flexibility and  $-0.04$  for pay;  $p < 0.05$ ). However, the direction of this



**Table 2 Means, Standard Deviations, and Correlations of Network Variables**

Variables	Mean	Standard deviation	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
<i>Controls</i>																					
1. Age	9.80	7.87																			
2. Department	0.13	0.33	-0.04																		
3. Education	1.58	1.43	0.04	-0.02																	
4. Gender	0.66	0.47	0.01	0.14***	-0.13																
5. Level	1.35	1.12	0.28***	-0.03	0.52***	-0.00															
6. Tenure	1.12	0.80	0.05	0.01	-0.00	0.02	0.04														
7. Supervisor	0.01	0.08	0.04**	0.20***	-0.03	0.02**	0.07***	0.01													
<i>Relational ties</i>																					
8. Friend	0.11	0.31	-0.02	0.20***	-0.08	0.04	-0.07	-0.07	0.07***												
9. Advice giver	0.18	0.39	-0.01	0.15***	-0.06	0.00	-0.03	-0.05	0.14***	0.42***											
<i>Positionally similar ties</i>																					
10. Friendship structural equivalent	0.12	0.12	-0.05	0.33***	-0.15	0.06*	-0.11	-0.09	0.08***	0.26***	0.19***										
11. Advice structural equivalent	0.17	0.13	-0.00	0.22***	-0.11	-0.04	-0.08	-0.08	0.05***	0.22***	0.20***	0.43***									
12. Work substitute	0.02	0.13	-0.02	0.27***	-0.06	0.03*	-0.05	-0.01	0.20***	0.22***	0.20***	0.18***	0.13***								
<i>Relational and positionally similar ties</i>																					
13. Friend and work substitute	0.01	0.10	-0.02	0.22***	-0.04***	0.02	-0.04**	-0.01	0.14***	0.31***	0.19***	0.18***	0.12***	0.79***							
14. Friend and friendship structural equivalent	0.02	0.08	-0.02	0.27***	-0.09***	0.08**	-0.09**	-0.07***	0.08***	0.82***	0.33***	0.47***	0.28***	0.30***	0.39***						
15. Friend and advice structural equivalent	0.03	0.09	-0.01	0.23***	-0.09***	0.07**	-0.07**	-0.07***	0.08***	0.86***	0.35***	0.34***	0.39***	0.25***	0.34***	0.83***					
16. Advice giver and work substitute	0.01	0.11	-0.01	0.24***	-0.05***	0.03*	-0.05***	-0.01	0.21***	0.23***	0.25***	0.18***	0.13***	0.89***	0.77***	0.29***	0.24***				
17. Advice giver and friendship structural equivalent	0.03	0.09	-0.00	0.25***	-0.09***	0.07**	-0.05**	-0.06***	0.17***	0.42***	0.76***	0.49***	0.28***	0.31***	0.30***	0.54***	0.45***	0.35***			
18. Advice giver and advice structural equivalent	0.04	0.11	-0.00	0.19***	-0.09***	0.04	-0.06**	-0.05**	0.15***	0.41***	0.82***	0.30***	0.44***	0.26***	0.23***	0.42***	0.51***	0.30***	0.78***		
<i>Referent others</i>																					
19. Organization-wide referent other	0.07	0.25	0.02	0.19***	-0.09	0.07**	-0.04	-0.03	0.15***	0.38***	0.34***	0.21***	0.14***	0.22***	0.24***	0.40***	0.37***	0.22***	0.39***	0.33***	
20. Job-related referent other	0.04	0.21	0.00	0.22***	-0.09	0.08**	-0.05	-0.04	0.19***	0.35***	0.28***	0.22***	0.16***	0.27***	0.27***	0.41***	0.38***	0.25***	0.37***	0.33***	0.59***

\*p < 0.05, \*\*p < 0.01, \*\*\*p < 0.001.

**Table 3 QAP Regression Analyses of Choice of Organization-wide and Job-Related Social Referents<sup>a</sup>**

	Organization-wide referent others	Job-related referent others
<i>Controls</i>		
Age	0.03	0.00
Department	0.04*	0.06**
Education	-0.04*	-0.03
Gender	0.02	0.03*
Level	-0.00	-0.02
Tenure	-0.00	-0.01
Supervisor	0.06***	0.11***
<i>Relational ties</i>		
Friend	0.20***	0.08**
Advice giver	0.16***	0.04
<i>Positionally similar ties</i>		
Work substitute	0.06*	0.15***
Friendship structural equivalent	-0.02	-0.01
Advice structural equivalent	0.00	0.00
<i>Relational and positionally similar ties</i>		
Friend and work substitute	0.04*	0.05**
Friend and friendship structural equivalent	0.12***	0.17***
Friend and advice structural equivalent	-0.03	0.03
Advice giver and work substitute	-0.03	-0.09**
Advice giver and friendship structural equivalent	0.14***	0.11***
Advice giver and advice structural equivalent	-0.05	0.04
R <sup>2</sup>	0.24***	0.24***

<sup>a</sup>Regression coefficients are standardized.  
 \* $p < 0.05$ , \*\* $p < 0.01$ , \*\*\* $p < 0.001$ .

social influence effect was opposite to that predicted in Hypothesis 6, in that individuals had *less* similar (i.e., more dissimilar) perceptions as their friends and substitutes.

## Discussion

In general, the findings in this study demonstrate that individuals do rely on informal social referents for information relating to psychological contract fulfillment and support the idea that social influence matters in the evaluation of psychological contract fulfillment. Given that this perspective has not been systematically addressed in previous psychological contract research, this study furthers our current understanding of psychological contract fulfillment and introduces new constituents in the evaluation process. This study also offers several new and unexpected insights into the distinction between choosing referents and being influenced by these referents, the nature of different types of social ties, and the characteristics of psychological contract terms being evaluated.

**Table 4 QAP Regressions of Similarity in Perceived Fulfillment on Social Ties<sup>a</sup>**

	Organization-wide promises		Job-related promises	
	Relaxed environment	Work-life balance	Pay	Project flexibility
<i>Controls</i>				
Age	-0.07	-0.01	-0.03	-0.02
Department	0.03	0.03	-0.03	0.01
Education	-0.07	-0.03	0.00	-0.10*
Gender	0.07	0.07	0.04	0.10*
Level	0.11**	0.07	-0.01	0.00
Tenure	0.04	0.02	-0.04	-0.03
Supervisor	-0.01	0.01	-0.01	0.01
<i>Relational ties</i>				
Friend	0.06*	0.05*	-0.00	0.05*
Advice giver	0.01	0.02	-0.01	0.04
<i>Positionally similar ties</i>				
Work substitute	-0.01	-0.02	0.06*	0.03
Friendship structural equivalent	0.01	-0.01	-0.03	0.01
Advice structural equivalent	-0.02	-0.01	0.02	-0.01
<i>Relational and positionally similar ties</i>				
Friend and work substitute	0.02	-0.02	-0.04*	-0.05*
Friend and friendship structural equivalent	-0.05	0.02	0.03	-0.03
Friend and advice structural equivalent	0.03	-0.02	0.01	0.00
Advice giver and work substitute	-0.01	0.01	0.00	0.00
Advice giver and friendship structural equivalent	0.01	0.01	0.00	0.00
Advice giver and advice structural equivalent	-0.04	0.01	-0.01	-0.04
R <sup>2</sup>	0.02 <sup>†</sup>	0.01	0.01	0.03*

<sup>a</sup>Regression coefficients are standardized.  
<sup>†</sup> $p < 0.10$ , \* $p < 0.05$ , \*\* $p < 0.01$ .

## Referent Choice vs. Social Influence Effects

Employees' choice of referent others and the eventual effects of referent information on their perceived fulfillment are similar yet distinct issues. Even though an employee may consciously select a variety of referents (e.g., friends, work substitutes, and multiplex others) for information, the results suggest that some referents carry more weight and exert more influence than others. For example, the results show that friends, advice givers, work substitutes, and multiplex others were chosen as referents for organization-wide information. However, it appears that individuals placed greater weight on and ultimately were influenced only by their friends' opinions, as exhibited in the similarity between their friends' and their own perceived fulfillment. Characteristics of the referent information and the relationship could account for this preference. First, the information obtained from one source may be of a better quality and depth than that from other referents. Second, even if

information from two sources is exactly the same, differences in relationships with different referents may cause employees to place greater trust in the objectivity and reliability of information from one than from another. Consequently, even though an employee's choice of referent others may include a variety of different relationships, only a subset will eventually exert a significant influence on perceptions of fulfillment, which, in turn, is manifested by greater similarity between the employee's and that subset's evaluations.

### Nature of Social Ties

*Relational vs. Positionally Similar Others.* The relational model of social influence is premised on direct, positive interactions between two parties, with cohesion and solidarity being the primary influence mechanism (Burkhardt 1994, Contractor and Eisenberg 1990). Thus, it is not surprising that relational others in the form of friends and advice givers were chosen as referents for organization-wide promises or that mutual friends reported similar perceived fulfillment of organization-wide promises. In fact, friendship ties also had a significant effect on job-related promises. This could be because of the fact that social information can be easily obtained from friends such that even though the information may not be particularly relevant to one's position, employees still place some weight on it. This is consistent with Wood's (1989, p. 236) assertion that people tend to compare with similar others "even when the similarity seems to be unrelated to the dimension under evaluation." Moreover, such job-specific information is not completely irrelevant, in that it broadly shows how the organization treats its employees on the whole.

At the same time, the positional model of social influence asserts that people in similar social positions influence one another because of the perceived competition between them (Burt 1982, Contractor and Eisenberg 1990, Friedkin 1998). To be in line with prior studies, friendship and advice structural equivalence measures were used in this study to represent positionally similar others. However, the results showed that these structural equivalents were not consciously chosen as social referents, nor did they exert social influence effects on each other's perceived fulfillment. These nonfindings make intuitive sense for several reasons. First, the structural equivalence measures examined here capture similarity between friendship and advice-seeking ties, and not necessarily the work role similarity that underlies job-related promises. It therefore makes sense that one does not choose a referent simply because he or she has a similar network of advice givers or friends. Second, even though individuals can, in the absence of direct ties, obtain information from structural equivalents through monitoring or observation, this is more plausible if the information is of a public nature or highly observable.

However, the organization in this study did not have a policy of publicizing how well it fulfills employees' psychological contracts, such as by giving out performance awards in company-wide meetings to demonstrate that it delivers on its promise to reward outstanding employees. Moreover, the fulfillment of certain psychological contract terms, such as pay, is not easily observable and is, in fact, kept confidential; therefore, it is not surprising that friendship and advice structural equivalents are not significant sources of psychological contract fulfillment information.

*Multiplex Ties.* Another noteworthy finding is that multiplex ties, in the form of friends and substitutes, had a significant social influence effect for the two job-related promises, but not for the two organization-wide ones. These results suggest that individuals are indeed selective of when they will rely on information from friends and substitutes and when they will rely on information from others with whom they have single ties (e.g., only friendship or only work substitution). Because information on organization-wide promises is widely available for anyone in the organization, and because such information can be easily obtained from friends alone, multiplex others do not offer any additional informational advantage. However, it appears that when the information provided by singly tied referents is insufficient in meeting individuals' evaluation purposes, they will then rely on multiplex ties as well.

In addition, the finding that individuals had similar perceived fulfillment as their friends or work substitutes, but dissimilar perceptions from people who were both friends and substitutes, suggests that individuals may use referent information for two different evaluation functions. On the one hand, individuals can use referent information on others' perceived fulfillment as an indicator of how well the organization fulfills its promises to employees, thereby reporting more similar perceptions as their referents. On the other hand, individuals also appear to seek referent information from friends and substitutes to serve as a basis of comparison, such that the higher these referents' perceived fulfillment, the lower will be individuals' own perceived fulfillment. This is consistent with the assertion in self-evaluation maintenance theory that individuals are more likely to engage in comparison processes with people to whom they are close than with more distant others (Tesser 1988, Tesser and Moore 1990). Which of these two functions operate appears to be determined by the nature of the psychological contract term being evaluated, as described next.

### Nature of Psychological Contract Terms

An added dimension appears to underlie the nature of the promises examined in this study. The two job-related promises of pay and project flexibility pertain to benefits that are contestable in that they are scarce and the

amount provided is contingent on certain criteria (e.g., performance), rather than freely and equally provided to all who want them. Consequently, employees who have more of these benefits will enjoy greater relative advantage or status over their counterparts who have less of them (Frank 1985, Hirsch 1976). In turn, consistent with Ho's (2005) argument, such a contestable characteristic may trigger individuals to use referent information in a comparative manner (Olson and Ross 1984), specifically by using others' experiences as a standard against which to evaluate their own fulfillment. As a result of such comparisons, a negative relationship exists between the eventual outcome evaluation and the standard used for comparison. In other words, the higher the standard of comparison, the lower the focal person's own outcome evaluation will be. This then accounts for why individuals' perceived fulfillment of the two job-related promises (pay and project flexibility) were more dissimilar to those of their friends and substitutes.

At the same time, information on contestable promises is potentially sensitive, so relying purely on work substitution ties may be inadequate for providing information detailed enough to engage in comparisons. Hence, individuals may have to rely on referents who not only possess the relevant job-related information (i.e., substitutes), but also are able and willing to provide enough details for one to compare against (i.e., friends). This implies that multiplex ties would be the better conduits through which to obtain comparative referent information.

For the two organization-wide promises of relaxed environment and work-life balance, these are noncontestable in that employees do not have to vie with one another to obtain them, and having the benefits does not confer any relative advantage on the recipient over others. In such instances, individuals are less likely to use referent information in a comparative manner, but instead may rely on others' experiences as a general indicator of how well the organization fulfills these promises (Olson and Ross 1984). Moreover, because such information is not sensitive, individuals can easily obtain it from single ties rather than relying on multiplex ties. This would account for the finding that employees primarily obtained referent information from friends and reported more similar perceptions as them.

### Contributions and Research Implications

These empirical findings contribute to psychological contracts research by demonstrating the role of social influence in shaping employees' fulfillment evaluations. Extant studies typically focus on individual-level factors and the formal employment relationship when examining determinants of psychological contract fulfillment (e.g., Morrison and Robinson 1997, Rousseau 1995) and do not take into account the role that informal social relationships can play. We address this theoretical gap

in research and also offer empirical evidence to support the notion that third parties do indeed have some influence on employees' fulfillment evaluation. By introducing new players to the evaluation process, the findings here can potentially account for observed discrepancies between employers' and employees' perceptions of the organization's fulfillment (e.g., Lester et al. 2002).

The findings also reveal new and important informal constituents in the realm of psychological contract evaluation, broadening the extant focus on recruiters, managers, coworkers, mentors, and top management (e.g., Nelson et al. 1991, Rousseau and Greller 1994). We not only provide empirical support for propositions on employees' referent choice but also advance knowledge of the fulfillment-evaluation process by demonstrating that referent choice and social influence effects vary depending on two factors: (1) the type of tie and (2) the nature of promise being evaluated. The characteristics of different relationships affect the availability and relevance of social information, the trust placed in such information, and its subsequent influence on one's perceptions. Also, the nature of promises, in terms of whether they are organization-wide, job-related, contestable, or noncontestable, affects the ways and functions in which social information is used. Taken together, these highlight the importance of the context in which social influence is studied and suggest that the effects of social information may not be as straightforward as previously thought, but rather contingent on situational factors.

A contribution of this study to social networks research is its examination of the two key social influence mechanisms. There is ongoing debate in social networks research on whether social influence and contagion occur through the relational or positional model (e.g., Burt 1987, Marsden and Podolny 1990, Strang and Tuma 1993), and despite the considerable attention and research devoted to it, this issue has yet to be resolved. A possible reason is that the mechanisms underlying both models can be effective in causing contagion, and that the primary mechanism at work varies depending on contextual factors, as demonstrated in this study. Rather than deliberating on whether the relational or positional model is more predictive, future research may fare better by taking situational factors into account, such as the nature of the information being sought (its availability, contestability, and sensitivity) and the ease with which it is observed.

Additionally, although network studies have traditionally used structural equivalence to capture the substitution and competition elements underlying the positional model, this study shows that this may not necessarily be the best representation of that model. For example, the mere fact that two people are structural equivalents in the friendship network does not necessarily imply that they compete with each other for organizational resources or

that they view each other as work substitutes. Instead, other more direct and perceptual measures, such as the Work Substitution network, may be better at representing work role competition in organizations. More broadly, it is important that researchers first determine the nature of the competitive forces deemed to affect their criterion variables (e.g., competition for resources, for information, or for friendship); only then can we better employ the appropriate networks and equivalence measures to capture the relevant competitive forces.

In their review of social networks research, Kilduff and Tsai (2003) noted that as social network analysis took a structuralist perspective, the individual was removed from the equation. Consequently, they called for the inclusion of individual attributes as researchers explore network emergence, evolution, and properties, particularly in relation to the multiple and complex ties between people in the network (Kilduff and Tsai 2003). Our current study takes an important step in that direction, as we included both individual and network characteristics in examining the choice of social referents and perceptions of psychological contract terms and demonstrated that both play a part in predicting these outcomes.

Finally, this study also contributes to social referents and choice research by demonstrating that more specific categories of referents, such as friends and work substitutes, are useful in capturing the different dynamics underlying the choice of social referents. Earlier social referents studies have typically examined broader, more generic types of referents, such as employees within and outside the firm or ingroup and outgroup members (e.g., Kulik and Ambrose 1992, Merton and Kitt 1950). Although these categories of referents may be valuable, they are not necessarily specific enough to discriminate subtler differences and effects across varied types of social relationships.

### **Organizational Implications**

The findings reported above provide useful guidelines for managers desiring a better understanding of how employees derive and assess fulfillment of psychological contracts and how they can use that knowledge to improve outcomes. Employee perceptions are fundamental to their assessments of psychological contract fulfillment or breach. Managers who keep abreast of perceptions regarding the department or firm keeping its promises are subsequently in a better position to predict employee behaviors such as turnover or citizenship and attitudes such as job satisfaction. This study shows that friends are likely to hold similar beliefs of contract fulfillment of organization-wide promises, suggesting that managers could focus on acquiring this information informally from a limited number of key informants who represent larger groups of employees. By tapping into cliques of friends beyond the manager's own group, a more accurate understanding of contract

fulfillment across the organization can be determined. Similarly, managers can also focus on representatives from various job categories, i.e., groups of employees who could substitute for one another, as they would have similar views of certain contract items and their subsequent fulfillment.

In addition to helping managers stay informed, these findings also suggest that they could indirectly influence employee perceptions of fulfillment. While psychological contracts are typically derived from information gathered from formal sources such as recruiters, top management, and employee handbooks, these findings suggest that various informal, work-based relationships can nonetheless affect employees' fulfillment evaluations of these contracts. Managers may have little control over promises made by recruiters or senior managers involved in the hiring process, but they may be able to help employees make more realistic assessments of fulfillment by communicating with and perhaps influencing key people within the social network. For example, an employee who underestimates a firm's fulfillment of organization-wide promises can be encouraged to compare experiences with friends, mentors, or those who have similar jobs. While direct managers may have no control over whom an employee chooses as a referent, knowing which types of referents have the greatest impact allows them to make informed suggestions. Extending the findings to a larger social context, employers can also make use of the broader organizational culture to shape employees' psychological contracts and fulfillment perceptions. Given the role of informal social dynamics in the fulfillment-evaluation process, it is possible that the broader organizational culture can also be used to create a shared understanding of psychological contracts and fulfillment in the organization, which, in turn, facilitates the management of the psychological contract and its ensuing outcomes.

### **Limitations and Future Directions**

Because this study was conducted in a single organization, it has certain limitations dealing with site specificity. The majority of employees in the firm was engaged in research activities that involved individuals with diverse skills and focused expertise. As such, the employees deemed only a small group of coworkers as their work substitutes, which, in turn, may have made it difficult for them to obtain job-related social information. Consequently, studies using respondents who perform comparable or more substitutable tasks (e.g., workers in an assembly line or a large consulting firm) may find even stronger evidence of social influence from work substitutes. In addition, because the firm was relatively new and small and did not have many formal procedures for the dissemination of information, it was particularly suited to the study of how informal channels can shape fulfillment evaluations. Future research

should examine if the findings here can be replicated in mature organizations with well-established and formal communication channels. Because different organizations make different promises, it should also be noted that the promises and their categorizations elicited in this study are specific to that research firm. Subsequent studies in other organizations may find that the promises in those organizations, together with the categorizations of the promises, may vary from these results and thus may need to customize them to fit their particular organizational context.

In terms of conceptual limitations, our study focuses on the social influence *mechanisms* and effects on fulfillment evaluation but does not specifically address the *processes* through which fulfillment evaluations are shaped by social information. This is partly because several theories have already addressed the process of psychological contract fulfillment, and also because our data do not allow us to empirically examine this issue. Nonetheless, based on prior theories (e.g., Ho 2005, Morrison and Robinson 1997, Rousseau 1995), we speculate that the influence process begins with an individual's own receipt-promise disparity, that is, how much he or she has received relative to what was promised by the organization. This forms one component that determines the individual's fulfillment evaluation. In addition, given the prevalence of social influence in organizations and the subjective nature of fulfillment evaluations, an individual is also likely to rely on coworkers' receipt-promise disparity when evaluating fulfillment such that the final evaluation is determined by one's own as well as referents' receipt-promise disparity. Future research would benefit from empirically testing this process model and exploring other possible processes as well, such as influence through the contagion effects of satisfaction and vicarious contracting (Rousseau and Parks 1993).<sup>4</sup>

Additionally, further research is required to corroborate the current findings that individuals can use referent information for different evaluation purposes. Even though the use of information for a comparative function in the evaluation of contestable benefits (e.g., pay) was unexpected, it is consistent with research in social comparison demonstrating that individuals use others' experience for self-evaluation purposes (e.g., Blau 1994, Goodman 1974). More generally, it is also possible that individuals will engage in social comparison for other purposes. For example, they may engage in upward comparisons for the purpose of self-improvement or downward comparisons for the purpose of self-enhancement (Collins 1996, Wood 1989). Future research can explore how individuals vary their use of referent information according to characteristics of the promise (e.g., contestability), the purpose of social comparison (e.g., self-improvement or self-enhancement), and the nature of

their ties with referents (e.g., tie strength, frequency, and multiplicity).

Finally, research can also examine various consequences resulting from social influence and comparison, particularly for contestable promises whereby individuals had dissimilar fulfillment evaluations to certain referents. In this study, the focus was on how an individual's perceived fulfillment was affected because of referent information. Equity theory offers some other possible responses beyond perceptual ones. For example, individuals may respond to a perceived inequity by changing their referent others, decreasing (or increasing) their contributions, or cognitively changing their judgment of how much inequity exists (Adams 1965). Likewise, when employees perceive a discrepancy between the organization's fulfillment to themselves and to referents, they may respond by choosing another referent or by changing how well they fulfill their promises to the organization. In general, employees' responses may encompass cognitive, emotive, and behavioral aspects, all of which merit further investigation.

In conclusion, this study integrates divergent research in the fields of information seeking, social influence, and social networks to examine social influence on psychological contract fulfillment. It shows that individuals look to informal social referents when evaluating fulfillment and that social information, in turn, shapes individuals' perceived fulfillment to be more or less similar to that of referents. Such effects are contingent on several factors, including the nature of the social relationship in place and the type of psychological contract term under evaluation. Overall, this study underscores the role of social influence in the fulfillment evaluation process and highlights the importance of considering contextual factors when studying the phenomenon of social influence.

### Acknowledgments

This research is based on the first author's dissertation completed at Carnegie Mellon University under the supervision of Denise Rousseau, Laurie Weingart, David Krackhardt, and Dick Moreland. An earlier version of this paper by the first author was awarded the Best Paper based on a dissertation in the Organizational Behavior Division at the 2003 Annual Meeting of the Academy of Management. The authors thank the above committee members, action editor Barbara Lawrence, and the reviewers for their comments on this research.

### Endnotes

<sup>1</sup>We assessed structural equivalence using Pearson correlation as a measure of similarity. This procedure takes an actor's row and column entries in the matrix, compares them to the row and column entries of all other actors in the matrix, and computes the degree of profile similarity between the subject actor and each of the other actors. This comparison is made between every pair of actors in the matrix, and the resulting profile similarity between each pair of actors is captured using the Pearson product correlation coefficient of that pair (Borgatti

et al. 2002, Wasserman and Faust 1994). The greater the correlation coefficient for a pair of actors, the more structurally equivalent they are in that network.

<sup>2</sup>Two steps are involved in QAP. First, standard multiple regression is conducted across corresponding cells of the dependent and independent matrices. Second, the rows and columns of the dependent matrix are randomly permuted and the regression is recomputed. This step is repeated thousands of times, and the procedure then counts the proportion of random permutations required to yield the regression coefficient found in step one (Borgatti et al. 2002). In this way, QAP takes into consideration the row and column interdependence in network data when testing the regression coefficients (Krackhardt 1988).

<sup>3</sup>Unlike regular ordinary least squares (OLS) regression, there are no statistical techniques in QAP to conduct pairwise comparisons of the statistical difference between two regression coefficients. Hence, comparisons between effect sizes are made simply by looking at the magnitudes of the pairs of standardized regression coefficients.

<sup>4</sup>We thank an anonymous reviewer for highlighting these possibilities.

## References

- Adams, J. S. 1965. Inequity in social exchange. L. Berkowitz, ed. *Advances in Experimental and Social Psychology*. Academic Press, San Diego, CA, 267–299.
- Alderfer, C. P., D. L. Brown. 1972. Designing an empathic questionnaire for organizational research. *J. Appl. Psych.* **56** 456–468.
- Blau, G. 1994. Testing the effect of level and importance of pay referents on pay level satisfaction. *Human Relations* **47** 1251–1268.
- Borgatti, S. P., M. G. Everett, L. C. Freeman. 2002. *Ucinet for Windows: Software for Social Network Analysis*. Analytic Technologies, Harvard, MA.
- Burkhardt, M. E. 1994. Social interaction effects following a technological change: A longitudinal perspective. *Acad. Management J.* **37** 869–898.
- Burt, R. S. 1982. *Toward a Structural Theory of Action*. Academic Press, New York.
- Burt, R. S. 1987. Social contagion and innovation: Cohesion versus structural equivalence. *Amer. J. Sociology* **92** 1287–1335.
- Clark, M. S., J. Mills. 1979. Interpersonal attraction in exchange and communal relationships. *J. Personality Soc. Psych.* **37** 12–24.
- Clark, M. S., J. Mills. 1993. The difference between communal and exchange relationships: What it is and is not. *Personality Soc. Psych. Bull.* **19** 684–691.
- Coleman, J. S., E. Katz, H. Menzel. 1966. *Medical Innovation: A Diffusion Study*. Bobbs-Merrill, New York.
- Collins, R. L. 1996. For better or worse: The impact of upward social comparison on self-evaluations. *Psych. Bull.* **119** 51–69.
- Contractor, N. S., E. M. Eisenberg. 1990. Communication networks and new media in organizations. J. Fulk, C. Steinfield, eds. *Organizations and Communication Technology*. Sage Publications, Newbury Park, CA, 143–172.
- Coopersmith, D., S. Winograd. 1990. Matrix multiplication via arithmetic progressions. *J. Symbolic Comput.* **9** 251–280.
- Coyle-Shapiro, J., I. Kessler. 2000. Consequences of the psychological contract for the employment relationship: A large scale survey. *J. Management Stud.* **37** 903–930.
- Erickson, B. H. 1982. Networks, ideologies, and belief systems. P. V. Marsden, N. Lin, eds. *Social Structure and Network Analysis*. Sage Publications, Beverly Hills, CA, 159–172.
- Erickson, B. H. 1988. The relational basis of attitudes. B. Wellman, S. Berkowitz, eds. *Social Structures: A Network Approach*. Cambridge University Press, New York, 99–121.
- Felson, R. B., M. D. Reed. 1986. Reference groups and self-appraisals of academic ability and performance. *Soc. Psych. Quart.* **49** 103–109.
- Festinger, L. 1954. A theory of social comparison processes. *Human Relations* **7** 117–140.
- Frank, R. H. 1985. *Choosing the Right Pond: Human Behavior and the Quest for Status*. Oxford University Press, New York.
- Friedkin, N. E. 1984. Structural cohesion and equivalence explanations of social homogeneity. *Sociological Methods Res.* **12** 235–261.
- Friedkin, N. E. 1998. *A Structural Theory of Social Influence*. Cambridge University Press, Cambridge, UK.
- Goodman, P. S. 1974. An examination of referents used in the evaluation of pay. *Organ. Behavior Human Performance* **12** 170–195.
- Heider, F. 1946. Attitudes and cognitive organization. *J. Psych.* **21** 107–112.
- Hirsch, F. 1976. *Social Limits to Growth*. Harvard University Press, Cambridge, MA.
- Ho, V. T. 2005. Social influence on evaluations of psychological contract fulfillment. *Acad. Management Rev.* **30** 113–128.
- Ibarra, H., S. B. Andrews. 1993. Power, social influence, and sensemaking: Effects of network centrality and proximity on employee perceptions. *Admin. Sci. Quart.* **38** 277–303.
- Kilduff, M., W. Tsai. 2003. *Social Networks and Organizations*. Sage Publications, Thousand Oaks, CA.
- Klein, W. M. 1997. Objective standards are not enough: Affective, self-evaluative, and behavioral responses to social comparison information. *J. Personality Soc. Psych.* **72** 763–774.
- Krackhardt, D. 1987. QAP partialling as a test of spuriousness. *Soc. Networks* **9** 171–186.
- Krackhardt, D. 1988. Predicting with networks: Nonparametric multiple regression analysis of dyadic data. *Soc. Networks* **10** 359–381.
- Krackhardt, D. 1990. Assessing the political landscape: Structure, cognition, and power in organizations. *Admin. Sci. Quart.* **35** 342–369.
- Krackhardt, D., L. W. Porter. 1985. When friends leave: A structural analysis of the relationship between turnover and stayers' attitudes. *Admin. Sci. Quart.* **30** 242–261.
- Krackhardt, D., R. N. Stern. 1988. Informal networks and organizational crises: An experimental simulation. *Soc. Psych. Quart.* **51** 123–140.
- Kulik, C. T., M. L. Ambrose. 1992. Personal and situational determinants of referent choice. *Acad. Management Rev.* **17** 212–237.
- Lester, S. W., W. H. Turnley, J. M. Bloodgood, M. C. Bolino. 2002. Not seeing eye to eye: Differences in supervisor and subordinate perceptions of and attributions for psychological contract breach. *J. Organ. Behavior* **23** 39–56.
- Lorrain, F., H. C. White. 1971. Structural equivalence of individuals in social networks. *J. Math. Sociology* **1** 49–80.
- Marsden, P. V. 1988. Homogeneity in confiding relations. *J. Soc. Networks* **10** 57–76.

- Marsden, P. V., N. E. Friedkin. 1993. Network studies of social influence. *Sociological Methods Res.* **22** 127–151.
- Marsden, P. V., J. M. Podolny. 1990. Dynamic analysis of network diffusion processes. H. Flap, J. Weesie, eds. *Social Networks Through Time*. ISOR, Utrecht, The Netherlands, 197–214.
- Merton, R. K., A. S. Kitt. 1950. Contributions to the theory of reference group behavior. R. K. Merton, P. F. Lazarsfeld, eds. *Studies in the Scope and Method of "The American Soldier"*. Free Press, Glencoe, IL, 40–105.
- Meyer, G. W. 1994. Social information processing and social networks: A test of social influence mechanisms. *Human Relations* **47** 1013–1047.
- Moreland, R. L., J. M. Levine. 2000. Socialization in organizations and work groups. M. Turner, ed. *Groups at Work: Theory and Research*. Erlbaum, Mahwah, NJ, 69–112.
- Morrison, E. W. 1993. Newcomer information seeking: Exploring types, modes, sources, and outcomes. *Acad. Management J.* **36** 557–589.
- Morrison, E. W., S. L. Robinson. 1997. When employees feel betrayed: A model of how psychological contract violation develops. *Acad. Management Rev.* **22** 226–256.
- Nelson, D. L., J. C. Quick, J. R. Joplin. 1991. Psychological contracting and newcomer socialization: An attachment theory foundation. *J. Soc. Behavior Personality* **6**(7) 55–72.
- Olson, J. M., M. Ross. 1984. Perceived qualifications, resource abundance, and resentment about deprivation. *J. Experiment. Soc. Psych.* **20** 425–444.
- O'Reilly, C. A., D. F. Caldwell. 1979. Informational influence as a determinant of perceived task characteristics and job satisfaction. *J. Appl. Psych.* **64** 157–165.
- Ostroff, C., S. W. J. Kozlowski. 1992. Organizational socialization as a learning process: The role of information acquisition. *Personnel Psych.* **45** 849–874.
- Rice, R. E., C. Aydin. 1991. Attitudes toward new organizational technology: Network proximity as a mechanism for social information processing. *Admin. Sci. Quart.* **36** 219–244.
- Robinson, S. L. 1996. Trust and breach of the psychological contract. *Admin. Sci. Quart.* **41** 574–599.
- Robinson, S. L., E. W. Morrison. 1995. Psychological contracts and OCB: The effects of unfulfilled obligations on civic virtue behavior. *J. Organ. Behavior* **16** 289–298.
- Robinson, S. L., D. M. Rousseau. 1994. Violating the psychological contract: Not the exception but the norm. *J. Organ. Behavior* **15** 245–259.
- Rousseau, D. M. 1995. *Psychological Contracts in Organizations: Understanding Written and Unwritten Agreements*. Sage Publications, Thousand Oaks, CA.
- Rousseau, D. M., M. M. Greller. 1994. Human resource practices: Administrative contract makers. *Human Resource Management* **33** 385–401.
- Rousseau, D. M., J. M. Parks. 1993. The contracts of individuals and organizations. L. L. Cummings, B. M. Staw, eds. *Research in Organizational Behavior*, Vol. 15. JAI Press, Greenwich, CT, 1–43.
- Rousseau, D. M., S. A. Tijoriwala. 1998. Assessing psychological contracts: Issues, alternatives and types of measures. *J. Organ. Behavior* **19** 679–696.
- Sailer, L. 1978. Structural equivalence: Meaning and definition, computation and application. *Soc. Networks* **1** 73–90.
- Salancik, G. R., J. Pfeffer. 1978. A social information processing approach to job attitudes and task design. *Admin. Sci. Quart.* **23** 224–253.
- Shah, P. P. 1998. Who are employees' social referents? Using a network perspective to determine referent others. *Acad. Management J.* **41** 249–268.
- Strang, D., N. B. Tuma. 1993. Spatial and temporal heterogeneity in diffusion. *Amer. J. Sociology* **99** 614–639.
- Tesser, A. 1988. Toward a self-evaluation maintenance model of social behavior. L. Berkowitz, ed. *Advances in Experimental Social Psychology*, Vol. 21. Academic Press, New York, 181–227.
- Tesser, A., J. Moore. 1990. Independent threats and self-evaluation maintenance processes. *J. Soc. Psych.* **130** 677–691.
- Turnley, W. H., D. C. Feldman. 1999. The impact of psychological contract violations on exit, voice, loyalty and neglect. *Human Relations* **52** 895–922.
- Turnley, W. H., D. C. Feldman. 2000. Re-examining the effects of psychological contract violations: Unmet expectations and job dissatisfaction as mediators. *J. Organ. Behavior* **21** 25–42.
- Wasserman, S., K. Faust. 1994. *Social Network Analysis: Methods and Applications*. Cambridge University Press, Cambridge, UK.
- Weick, K. E. 1995. *Sensemaking in Organizations*. Sage Publications, Thousand Oaks, CA.
- Wheeldon, P. D. 1969. The operation of voluntary associations and personal networks in the political processes of an inter-ethnic community. J. C. Mitchell, ed. *Social Networks in Urban Situations*. Manchester University Press, Manchester, UK.
- Wood, J. V. 1989. Theory and research concerning social comparisons of personal attributes. *Psych. Bull.* **106** 231–248.
- Zalesny, M. D., J. K. Ford. 1990. Extending the social information processing perspective: New links to attitudes, behaviors, and perceptions. *Organ. Behavior Human Decision Processes* **47** 205–246.