WORKPLACES AS COMMUNITIES: THE ROLE OF SOCIAL NETWORKS IN WHO SEEKS, GIVES, AND ACCEPTS INFORMATION ON JUSTICE ISSUES

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This article examines individuals in a community as defined by their membership in an organization. In such a setting, individuals often make use of their social contacts to make sense of events in the organization. Yet, the organizational justice literature is generally silent on how these contacts shape information seeking, volunteering, and acceptance. Using a social network perspective, we found that expressive ties were positively related to information seeking, volunteering, and acceptance for both procedural and interactional justice issues. Instrumental ties were related to all dependent variables for procedural justice issues but only related to information seeking for interactional justice issues. The role of ties and networks in information flow is discussed. © 2006 Wiley Periodicals, Inc.

Although the literature in community psychology has focused mainly on the arena of social groups, the family, and neighborhoods, little attention has been given to communities in the workplace. The workplace is a fitting domain for study also because many individuals spend a substantial amount of their waking lives interacting with others there. As a result, the quality of individuals' life experiences is substantively affected by the nature and quality of the interactions at the workplace (Buunk & Verhoeven, 1991). In parallel with the study of social justice in community psychology, organizational justice has emerged as an important domain of study in organizations (Ambrose & Schminke, 2002). In organizational justice research, there is increasing recognition of a need to take a social constructive approach (e.g., Degoey, 2000; Lamertz, 2002; Tyler & Lind, 1992) as individ-

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uals use social networks to transfer information (Reagans & McEvily, 2003) and perceptions of organizational justice are shaped by these social interactions (Degoey, 2000; Deutsch, 1983; Umphress, Labianca, Brass, Kass, & Scholten, 2003). When individuals need to make a judgment about whether a process or an interaction is just, they do not rely solely on their own perceptions of the situation, but also on the perceptions of those around them (Umphress et al., 2003). In addition, they seek to influence, and are, in turn, influenced by, other people in their social interactions (Lamertz, 2002; Meyer, 1994).

Despite the recognition of the utility of taking a social constructionist perspective (e.g., Degoey, 2000; Lamertz, 2002; Tyler & Lind, 1992), research in organizational justice for the past 30 years has focused mainly on individual-level effects (e.g., Bies & Moag, 1986; McFarlin & Sweeney, 1996; Tyler & Lind, 1992). In one of the few studies that used a social constructionist perspective, Lind, Kray, and Thompson (1998) found that coworkers' communication about their personal treatment by a supervisor influenced individuals' perception of supervisor fairness. Jones and Skarlicki (2005) also found that peer discussions about an authority's reputation for fairness affected the individual's interpretation of the authority's subsequent behavior. Although these studies show that social relations shape an individual's perception of social justice, they do not distinguish among the types of relationship and their effects. Certainly, individuals do not seek information from or volunteer information to everyone, on every type of issue. For instance, Uzzi (1999) found that credit officers freely exchange information on their bank's interest rates with lenders but are less likely to share more private information about the bank unless there is a close relationship between the two parties.

In this study, we adopted network techniques in mapping individual ties in a social context to examine how ties, together with types of justice issues, affect information seeking, volunteering, and acceptance in a workplace community. This article contributes to the existing literature in several ways. First, we examine relationships in the workplace, an important but underresearched area in community psychology. Second, we introduce the use of social network methodology, which can be useful in examining community relations. Although this method is commonly adopted in organizational sociology, limited studies in community psychology have adopted such an approach. Third, we contribute to the justice literature by examining how social relations shape information flow for different types of justice issues. Fourth, we add to the social network literature by examining not only individual networks but also the types of issues that determine information seeking, volunteering, and acceptance in the workplace.

HYPOTHESIS DEVELOPMENT

The organizational justice literature has identified three dimensions of organizational justice that play a role in determining perceptions of fairness (Greenberg, 1990): procedural, interactional, and distributive justice. Procedural justice relates to the fairness of the processes for making organizational decisions (Chen & Tjosvold, 2002; Folger & Konovsky, 1989; Tata, Fu, & Wu, 2003). Interactional justice addresses the fairness of interpersonal treatment employees receive from their superiors (Greenberg, 1990; Greenberg, Bies & Eskew, 1991; Umphress et al., 2003). Distributive justice refers to employees' perception of the fairness of outcomes, such as pay and bonuses (Chen & Tjosvold, 2002; Umphress et al., 2003). This study focuses on procedural and interactional justice, because past research has suggested that expressive ties might not affect perceptions of distributive justice (Umphress et al., 2003). Given the amount of effort

required of respondents to provide network data, we pragmatically focused on procedural and interactional justice issues as they have been shown to be related to social exchanges in organizations (e.g., Ambrose & Schminke, 2002).

Although most studies in organizational justice examine the effects of individual factors in shaping the perceptions of fairness, Lamertz (2002) suggests that subordinates often do not spontaneously conclude that their interpersonal treatment by a supervisor is fair or unfair. Instead, subordinates often experience a period of ambiguity, which motivates them to seek information from their peers to make sense of the situation (Degoey, 2000; Lamertz, 2002). However, information seekers do not consider all people equally important in providing information about an event and are likely to seek information from those with whom they have better interpersonal relationships. Recent studies have found tentative evidence that the quality of the interpersonal relationship is related to the availability, type, and quantity of information exchanged between information seekers and providers (Jehn & Shah, 1997; Morrison, 1993; Shah, 1998).

One way to define the quality of interpersonal relationships is to use the classification provided by network theorists, that is, expressive versus instrumental ties (e.g., Fombrun, 1982; Ibarra, 1993; Krackhardt, 1992). Parties that have expressive ties tend to interact more frequently (Krackhardt, 1992) and have stronger and more intimate links with one another (Ibarra & Andrews, 1993; Marsden, 1988). In contrast, parties that have instrumental ties tend to have weak and at-arm's-length links (Ibarra & Andrews, 1993) and differ in a variety of personal characteristics (Marsden, 1988). Research in social networks suggests that individuals who have mutually expressive ties provide support and assistance to one another (Reagans & McEvily, 2003). The motivation stems from the emotional bond of the individuals and the desire to reciprocate. Furthermore, the trust these individuals experience gives them confidence that information shared will not be misused (Reagans & McEvily, 2003).

Individuals are more willing to seek information from and provide information to individuals with whom they have expressive ties; the extent to which they seek information from and provide information to individuals with whom they have instrumental ties is less clear. Individuals may be willing to convey information about certain issues but not others to those with whom they have instrumental ties (Jehn & Shah, 1997). For instance, procedural issues may be more readily discussed because they are less personal in nature, and procedural information is generally made available to employees. Thus, we would expect individuals to be more willing to discuss procedural justice issues with others with whom they have instrumental ties, even if expressive ties are not present. By the same reasoning, individuals who learn of another person's confusion and need for clarification may also assist by volunteering information. These assertions are consistent with Granovetter's (1973) classic study in which individuals provided job availability information to other individuals with whom they had little connection. In these procedural justice issues, we also expect recipients to be willing to accept the information volunteered because the issues are more factual in nature and the information provided can be independently verified. Thus, we offer the following hypotheses:

H1A: For procedural justice issues, expressive ties are positively related to information seeking and volunteering.

H1B: For procedural justice issues, instrumental ties are positively related to information seeking and volunteering.

H2A: For procedural justice issues, expressive ties are positively related to the likelihood of accepting information provided voluntarily by coworkers.

H2B: For procedural justice issues, instrumental ties are positively related to the likelihood of accepting information provided voluntarily by coworkers.

Although individuals may be willing to seek and volunteer information for procedural justice issues, they may be reluctant to seek and volunteer information for interactional justice issues. Individuals may be reluctant to talk to others about the treatment they receive from their supervisors because negative exchanges with superiors may invite inferences about one's incompetence at work. Individuals may even be reluctant to disclose positive exchanges because they could invite envy and allegations of favoritism, resulting in discord among colleagues (Exline & Lobel, 1999). Thus, individuals may be careful in seeking clarifications about the quality of interpersonal treatment by supervisors (Van den Bos, Bruins, Wilke, & Dronkert, 1999). We would expect individuals to approach those whom they share expressive ties for such information (Markiewicz, Devine, & Kausilas, 2000; Shah, 1998).

Volunteering information can also be risky for the information provider. For instance, the individual may be branded as prying or may be viewed as trying to create suspicion and disharmony among the workers and their superiors (Grant, 2002). Understandably, individuals who are privy to information regarding the interaction between a subordinate and a superior may be reluctant to volunteer information. Information provided is not always accepted by the recipient, and unsolicited information can evoke negative reactions, depending on how the action is interpreted (Bolger, Zuckerman, & Kessler, 2000; Gleason, Iida, Bolger, & Shrout, 2003). This interpretation is, in turn, dependent on the relationship between the provider and the recipient of information (Sarason, Sarason, & Pierce, 1994). Some reference groups are more important sources of information, and their opinions are considered to be more relevant or trustworthy than those of other groups (Ibarra & Andrews, 1993; Krackhardt, 1992). Parties who have expressive ties have higher levels of mutual trust, cooperation, and care, and these factors enable the recipient to attribute the act of volunteering information as an expression of genuine concern (Clark, 1984; Clark, Mills & Corcoran, 1989; Ibarra & Andrews, 1993; Krackhardt, 1992). The norms of care and reciprocity in such relationships may also motivate people to volunteer information that they think is beneficial to those with whom they have expressive ties. In contrast, recipients of help may interpret information volunteered by instrumental coworkers as prying or as a self-interested strategy. Consequently, recipients may be less willing to accept the information provided by those with whom they have instrumental ties (see Uzzi, 1997, and McDonald & Westphal, 2003, for case examples).

H3A: For interactional justice issues, expressive ties are positively related to information seeking and volunteering.

H3B: For interactional justice issues, expressive ties are positively related to the likelihood of accepting information provided voluntarily by coworkers.

METHOD

Sample

The data were collected from 1 of the 16 electricity plants in Yunxiao County, Zhangzhou City, mainland China. The electricity plant surveyed had eight departments: two admin-

istrative functions (General Office and Finance Department), four operations divisions (Water Control, Central-Electricity Control, Electricity-Generation Division 1, and Electricity-Generation Division 2), and two supporting divisions (Engineering and Maintenance). The 56 full-time employees who participated worked in eight departments, and their work was related to the main activities and functions of the company. We did not survey part-time employees as the turnover for these employees was high and, therefore, they were less likely to build stable instrumental and expressive ties with the other workers in the company.

A total of 56 questionnaires were distributed, completed, and returned, representing a 100% response rate. The high response rate was, in large part, caused by social ties. One of the authors of this article had a long-standing association with the full-time employees because her father is a manager of that plant and she visited the plant frequently with her father. As she is currently working on a graduate degree in another country, her return to the plant to collect data was warmly welcomed by many of the 56 workers, who agreed to complete the survey to help a "long-lost daughter." Eighty-three percent of the employees surveyed were male. The average age was 38.09 years ($SD = 8.15$), and the average company tenure was 13.57 years ($SD = 6.40$).

Procedures

In constructing the questionnaire, we interviewed several full-time employees about procedural and interactional justice issues in the workplace. We could, therefore, write scenarios that reflected employee experiences at the workplace, as well as verify that the questions we asked were clear and reflected what we wanted to measure. Two scenarios were written, one for a procedural justice issue and another for an interactional justice issue. Data collection followed, and those involved in the pilot study were excluded from the sample. To reduce common method bias, data were collected from the respondents at two points in time. During the first round of data collection, information about the employees' demographic characteristics and their network ties—expressive ties and instrumental ties—with other coworkers were collected. A week later, the respondents were presented with the two scenarios. For each scenario, they answered questions about their likelihood of engaging in information seeking, volunteering, and acceptance for each coworker.

Measures

Data on network ties and information seeking, volunteering, and acceptance were collected by the well-established roster method used by network researchers. That is, for each question, the respondent had to answer the same question for all 55 coworkers (excluding the respondent). This method has been found to increase the reliability of collecting network data because it provides information on all interactions inside a network (Marsden, 1990; Reagans & McEvily, 2003; Umphress et al., 2003). As an example of how the data were collected, for the question, "Whom do you need to interact with at the workplace in order to get your work done?" the respondent answered with a 1 for each coworker with whom he or she interacted in the workplace to get the work done and left a blank for each coworker with whom he or she did not interact to get the work done. For each question, responses were tabulated into a 56-rows-by-56-columns matrix

in which the value of cell X_{ij} reflected actor i's response to actor j. Eleven matrices were constructed, three for the dependent variables (providing, seeking, and accepting information), two for the independent variables (expressive ties and instrumental ties), and six for the control variables (age, gender, tenure, education, department affiliation, and hierarchical level).

Independent Variables: Expressive Ties and Instrumental Ties. Instrumental ties and expressive ties were measured with two sociometric questions. Respondents were asked to name the people in their firm (1) "With whom you need to interact at the workplace in order to get your work done" and (2) "Who are your friends or close friends, people whom you often meet outside work." Answers to the first question formed the matrix of instrumental ties in which the cell entry X_{ij} equals 1 if actor i regarded actor j as an instrumental coworker and equals 0 for all other entries. Answers to the second question formed the matrix of expressive ties in which the cell entry X_{ij} equals 1 if actor i regarded actor j as an expressive coworker and equals 0 for all other entries. These questions follow previous social network research (Ibarra, 1992; Krackhardt, 1992; Morrison, 2002). For instance, for Ibarra (1992), the expressive tie question was "Who are very good friends of yours, people whom you see socially outside work?" and for Morrison (2002) friendship was measured with the question "Who are people at the firm whom you consider to be friends, that is, people whom you might choose to see socially outside work or when you are not working together?"

The use of single-item measures is a standard practice in network research (e.g., Brass, 1985; Burkhardt, 1994; Ibarra & Andrew, 1993; Rice & Aydin, 1991; Shah, 1998; Umphress et al., 2003), because respondents have to answer each question for all other employees within the organization. In this study, for instance, the respondent has to answer each question 55 times, once for each coworker. Using even a 3-item scale would require the respondent to respond 165 times just to measure a single variable. Respondent fatigue and frustration could set in quickly, thus compromising the quality of the data collected. Thus, network theorists rely on process controls rather than post-collection statistical evidence to safeguard the validity of the data (Shah, 1998). With this aim, we relied on interviews during the pilot phase to word the questions in the layperson language of the respondents.

Psychologists are trained to design multi-item measures to quantify a construct or dimensions of a construct and then aggregate the responses to measure the construct or dimensions of the construct. However, in a network study, because of potential respondent fatigue, it is necessary to use single-item measures to capture the entire domain of the construct as a gestalt (e.g., Brass, 1985; Burkhardt, 1994; Ibarra & Andrew, 1993; Rice & Aydin, 1991; Shah, 1998; Umphress et al., 2003). To ensure that participants fully understood the items, a research assistant was present to brief them about the survey and to answer their questions.

Dependent Variables. Each person responded to two scenarios, one involving a procedural justice issue, the other an interactional justice issue. Respondents were asked about their likelihood of seeking, providing, and accepting information for each of the 55 coworkers. The questions were "How likely are you to seek information about the specific procedures from the coworker?" "If the coworker voluntarily provides the information to you, how likely are you to accept it?" and "How likely are you to provide the information to the coworker voluntarily even if he/she does not ask for it?" (See Appendix for the sce-

narios and questions). Respondents indicated the level of likelihood on a 5-point scale ranging from "Very unlikely" (1) to "Very likely" (5). Answers to the questions formed different dependent variable matrices in which cell entry X_{ij} reflected actor i's response (e.g., likelihood of accepting information from) with respect to actor j.

Control Variables: Demographic Characteristics. To rule out alternative explanations for our hypotheses, we controlled for six variables in our analysis: gender, education, age, tenure, departmental affiliation, and hierarchical status. These items are commonly used as control variables in social network research (e.g., Burkhardt, 1994; Shah, 1998; Umphress et al., 2003). Gender was controlled because previous research has demonstrated that men and women have different communication patterns (Brass, 1985). We controlled for education because educational backgrounds may influence communication patterns. Age and tenure were controlled because it is possible that older employees and those who have longer tenure know more about the organizational procedures and supervisors' behaviors, and this knowledge could influence their justice perceptions. Departmental affiliation was controlled because information seeking, provision, and acceptance could be attributed to respondents' availability in the same department. Hierarchical status was controlled because employees at different levels may perceive organizational justice in different ways (Umphress et al., 2003), and their perception, in turn, may directly affect their information seeking, provision, and acceptance.

The control variables were converted into matrices by using the following methods: Cell entry X_{ij} in gender, education, departmental affiliation, or hierarchical status matrices was coded as 1 if actor i and actor j were of the same category; otherwise, $X_{ij} = 0$. Control measures for tenure and age were continuous. Thus, the matrices contained difference scores between two actors on each variable. For example, cell entry X_{ij} for the tenure matrix represented the absolute value of actor i's tenure minus actor j's tenure.

RESULTS

We used UCINET's Quadratic Assignment Procedure (QAP) correlation and multiple regression techniques to calculate intercorrelations among the matrices and to test the hypotheses. QAP provides a nonparametric test of the relationships among two or more matrices, overcoming autocorrelation procedures (Shah, 1998). Conceptually, the QAP multiple regression technique is similar to ordinary least squares (OLS). However, as each respondent answered the same question for other coworkers, the 55 data points for each respondent were not independent of each other. Therefore, techniques such as OLS that do not take into account nonindependence of the data are not appropriate. Table 1 presents the means, standard deviations, and correlations of all the variables in the study. As shown in Table 1, each individual, on average, considered 17% of the coworkers as expressive ties and 32% of the coworkers as instrumental ties. Individuals were more likely to seek, provide, and accept information for procedural justice issues than for interactional justice issues. The respective means for the procedural justice issue were 3.03, 2.72, and 2.71 and those for interactional justice were 2.37, 1.90, and 2.20.

The results of the QAP regression analyses for procedural justice and interactional justice are shown in Tables 2 and 3, respectively. These results can be interpreted in the same manner as OLS regression (Shah, 1998). For each justice issue, three QAP

Table 1. Descriptive Statistics and Quadratic Assignment Procedure (QAP) Correlations

	M	SD	1	2	3	4	5	6	7	8	9	10	11	12	13
1 Expressive ties	0.17	0.38													
2 Instrumental ties	0.32	0.47	**0.09**												
3 PJ-seek	3.03	1.08	**0.35**	**0.20**											
4 PJ-voluntarily provide	2.72	1.02	**0.65**	**0.26**	**0.44**										
5 PJ- accept of information provided voluntarily	2.71	0.85	**0.53**	**0.18**	**0.53**	**0.52**									
6 IJ-seek	2.37	0.93	**0.61**	**0.25**	**0.46**	**0.70**	**0.53**								
7 IJ-voluntarily provide	1.90	0.78	**0.68**	**0.07**	**0.40**	**0.50**	**0.54**	**0.55**							
8 IJ-accept of information provided voluntarily	2.20	0.94	**0.52**	**0.13**	**0.47**	**0.58**	**0.51**	**0.71**	**0.62**						
9 Age	38.09	8.15	**-0.09**	0.02	-0.05	**-0.09**	**-0.12**	-0.04	-0.06	-0.05					
10 Department	0.12	0.32	**0.20**	**0.33**	**0.10**	**0.18**	**0.14**	**0.19**	**0.18**	**0.15**	0.00				
11 Education	0.31	0.46	0.03	**0.05**	0.02	0.02	0.01	**0.04**	0.02	0.01	-0.04	0.05			
12 Gender	0.73	0.45	**0.11**	0.05	**0.13**	0.07	0.07	**0.14**	**0.08**	0.09	0.08	0.05	-0.02		
13 Hierarchical status	0.68	0.47	0.01	-0.05	-0.02	-0.08	**-0.11**	-0.01	-0.05	-0.05	0.05	0.00	**0.10**	0.01	
14 Tenure	13.57	6.40	-0.04	0.04	0.01	-0.02	-0.05	0.00	-0.03	-0.01	**0.52**	0.00	-0.02	0.07	0.04

Note. All boldface correlations are significant at $p < .05$; *PJ* = procedural justice; *IJ* = interactional justice.

Table 2. Procedural Justice: Network Ties on Information Sharing and Acceptance of Information Provided Voluntarily

	Seeking information			Volunteering information			Acceptance of information provided voluntarily		
Model	1	2	3	1	2	3	1	2	3
Covariates									
Age	–0.08	–0.08[*]	–0.05	–0.11[**]	–0.11[**]	–0.05	–0.13[**]	–0.12[**]	–0.07[*]
Department	0.09[***]	0.03[*]	–0.03	0.17[***]	0.10[***]	–0.01	0.14[***]	0.08[***]	0.00
Education	0.02	0.01	0.00	0.01	0.01	–0.01	0.00	0.00	–0.01
Gender	0.12[*]	0.12[*]	0.08	0.07	0.07	0.00	0.07	0.06	0.00
Hierarchical status	–0.02	–0.02	–0.03	–0.08	–0.07	–0.07	–0.11[**]	–0.10[**]	–0.10[**]
Tenure	0.05	0.04	0.04	0.04	0.03	0.03	0.02	0.01	0.01
Network ties									
Instrumental ties (IT)		0.19[***]	0.18[***]		0.22[***]	0.20[***]		0.15[***]	0.14[***]
Expressive ties (ET)			0.33[***]			0.63[***]			0.52[***]
R^2	0.03[***]	0.06[***]	0.16[***]	0.05[***]	0.09[***]	0.46[***]	0.05[***]	0.07[***]	0.32[***]
ΔR^2		0.03	0.1		0.04	0.37		0.02	0.25

[*]$p < 0.05$; [**] $p < 0.01$; [***] $p < 0.001$.

Table 3. Interactional Justice: Network Ties on Information Sharing and Acceptance of Information Provided Voluntarily

	Seeking information			Volunteering information			Acceptance of information provided voluntarily		
Model	1	2	3	1	2	3	1	2	3
Covariates									
Age	–0.06	–0.06	–0.02	–0.05	–0.05	0.02	–0.07	–0.05	0.01
Department	0.17[***]	0.12[***]	0.03	0.15[***]	0.14[***]	0.02	0.14[***]	0.13[***]	0.02
Education	0.03	0.02	0.01	0.02	0.02	0.00	0.01	0.01	0.00
Gender	0.12[*]	0.12[*]	0.07	0.11[*]	0.11[*]	0.04	0.09	0.10[*]	0.04
Hierarchical status	–0.01	–0.01	0.00	0.00	0.00	0.00	–0.05	–0.04	–0.04
Tenure	0.03	0.02	0.02	–0.04	–0.04	–0.04	0.02	–0.01	0.00
Network ties									
Instrumental ties (IT)		0.15[***]	0.14[***]		0.03	0.01		0.06[*]	0.04
Expressive ties (ET)			0.49[***]			0.66[***]			0.59[***]
R^2	0.05[***]	0.07[***]	0.30[***]	0.04[***]	0.04[***]	0.45[***]	0.04[***]	0.04[***]	0.37[***]
ΔR^2		0.02	0.23		0.00	0.41		0.00	0.33

[*]$p < 0.05$; [**] $p < 0.01$; [***] $p < 0.001$.

regression analyses were done for each dependent variable: information seeking, volunteering, and acceptance. In Model 1, we entered only the covariates, then, in Model 2, we added the independent variable instrumental ties, and, finally, in Model 3, we included expressive ties. This approach is similar to hierarchical regression and thus allowed us to compute and statistically test for the significance of the change in R^2 contributed by a predictor.

In general, for the procedural justice issue, both expressive and instrumental ties were positively related ($p < .001$) to information seeking, volunteering, and acceptance. The beta coefficients for expressive ties (β varied from .33 to .63) were larger than those of instrumental ties (β varied from .13 to .20) across all dependent variables. QAP regression analyses with only the covariates were compared with those that included the covariates and one of the two ties found that the R^2 values contributed by expressive ties over the covariate models were also larger (ΔR^2 varied from 0.11 to 0.38) than those contributed by instrumental ties (ΔR^2 varied from .02 to .04). This result is perhaps not surprising because individuals are more likely to seek information from those with whom they are personally close (Reagans & McEvily, 2003).

However, in the case of the interactional justice issues, the role of expressive ties as compared to instrumental ties appears even more important. The beta coefficient of expressive ties was highly significant ($p < .001$) and larger (β varies from .49 to .66) for all three dependent variables as compared to those for the procedural justice issue. The effects of instrumental ties, in contrast, were largely not significant. The only significant beta coefficient was the dependent variable information seeking ($\beta = .14$, $p < .001$). Again, QAP regression analyses with only the covariates were compared with those that included the covariates, and one of the two ties found that the R^2 values contributed by expressive ties over the covariate models were also larger (ΔR^2 varied from .23 to .41) than those contributed by expressive ties on the procedural justice issue (ΔR^2 varied from .11 to .38). In contrast, the variance contributed by instrumental ties was 1% for information seeking and 0% for voluntary provision of information and accepting information.

We found support for Hypothesis 1A and 1B, that for procedural justice issues, both expressive ties and instrumental ties were positively related (all at $p < .001$) to information seeking (expressive ties, $\beta = .33$; instrumental ties, $\beta = .18$) and volunteering (expressive ties, $\beta = .63$; instrumental ties, $\beta = .20$). We also found support for Hypothesis 2A and 2B, that for procedural justice issues, information acceptance was positively related to both expressive ties ($\beta = .52$, $p < .001$) and instrumental ties ($\beta = .14$, $p < .001$). The findings also supported Hypothesis 3A, that for interactional justice issues, expressive ties were positively related ($p < .001$) to information seeking ($\beta = .49$) and volunteering ($\beta = .66$). Although not hypothesized, the findings showed a positive relationship between instrumental ties and information seeking ($\beta = .14$, $p < .001$) but found no support for a relationship between instrumental ties and information volunteering ($\beta = .01$, n.s.), on interactional justice issues. For the interaction justice issue, expressive ties ($\beta = .59$. $p < .001$) were positively related to accepting information; instrumental ties were not ($\beta = .04$, n.s.). This finding supported Hypothesis 3B.

DISCUSSION

This study demonstrates that procedural and interactional justice issues and social network ties shape information seeking, volunteering, and acceptance among coworkers. The study enhances the justice and community psychology literatures by showing how social relations shape information flow for different types of justice issues. Adding to the social network literature, we also show not only that individuals' networks are important, but that the types of issues also affect information seeking, volunteering, and acceptance. Specifically, for the procedural justice issue, both expressive and instrumental ties were related to information seeking, volunteering, and acceptance. In comparison, for the interactional justice issue, expressive ties were related to all three dependent variables,

but instrumental ties were related only to information seeking. These findings suggest that expressive ties, more than instrumental ties, are the key to shaping information flow for interactional justice issues. We were surprised to find that for interactional justice issues, instrumental ties also predicted information seeking. One possible reason is that individuals from other social networks, more than individuals in the same social circle, tend to have information that we do not have (Granovetter, 1973). Individuals may, therefore, have little choice but to approach an instrumental tie for information, even if the issue relates to a personal relationship with a superior.

This study capitalizes on the strength of the social network methodology in mapping the relationships among all individuals in a workplace community. The methodology allowed us to examine issues in organizational justice, taking into consideration each person's instrumental and expressive ties with every person in that community. Moreover, the methodology allowed us to know whom each person in the organization will seek information from, provide information to, and accept information from. This study shows that the type of justice issues together with the type of ties shape the ways information is sought, volunteered, and accepted in a workplace community. Future studies can examine other types of social relations and the ways these relations shape information flow on other issues in community psychology.

As a foray into the social relation aspect of justice, we used two ties that have been widely used in the social network literature, namely, instrumental and expressive ties, and examined the main effects of direct ties among individuals on information flows. However, a relationship can exist between two persons even when no direct ties exist. Two individuals can be indirectly related through a third person. Although these individuals are only indirectly related, they might cooperate with each other because the third person is likely to hear of any uncooperative behaviors (Reagans & McEvily, 2003). Future research can examine how both direct and indirect ties shape information flows.

Another possible area of research is whether individuals are more likely to seek information about justice issues from structurally equivalent others. Structurally equivalent persons are those who share similar network characteristics and should, therefore, have the same outcomes. Structurally equivalent peers may, therefore, be the most appropriate persons to compare outcomes with to determine whether outcomes are equitable. In this study, we controlled for factors that were known to shape social relationships, such as age, gender, and department affiliation. Future studies can examine whether these factors moderate the effects of the social ties on information flows.

In this study, we followed Ambrose and Schminke (2002) and explored only the relationships among procedural and interactional justice and network ties. Possibly, distributive justice and types of ties also affect information seeking, volunteering, and acceptance. Whether a distribution is fair or not depends on what others receive, and individuals may be motivated to find out what others are receiving. Culture may also affect the motivation to seek information. In collectivistic cultures more than in individualistic cultures, community members expect to be treated fairly (Tata et al., 2003). Conceivably, a stronger relationship between information seeking and tie strength could exist for distributive justice issues as compared to procedural and interactional justice issues in collectivistic cultures. However, it is also possible that given the sensitive nature of the ways rewards are distributed, individuals are reluctant to seek information from instrumental ties. For example, it may be acceptable to ask expressive ties how large a bonus they received but inappropriate to ask this question of instrumental ties. It will also be interesting to study how distributive justice relates to information volunteering. It may be that individuals who are satisfied with their rewards are less likely to volunteer this informa-

tion. For instance, if I receive a big bonus, I might not be willing to share this information, as doing so could be perceived as showing off or, worse, as demonstrating favoritism by the supervisor. Conversely, individuals who perceive that they are inadequately compensated may make efforts to find out how others are compensated to uncover inequities that may furnish a basis for redress. In this instance, perception of compensation adequacy serves as a moderator of the distributive justice to information-seeking efforts.

This study applied network methodology to study justice issues at a workplace community; the method is equally applicable to issues such as seeking, giving, and accepting information on a variety of issues, including humun immunodeficiency virus and sexually transmitted disease prevention, drug use prevention, or advice on sexual and physical abuse in any community. Given the importance of relationships to individual well-being (Buunk & Verhoeven, 1991), future research in community psychology can examine how relationships shape individual outcomes. Research in community psychology can also use social network methods to explore relationships among individuals, groups, and communities.

The findings also provide suggestions to community psychologists on how they can develop good information flow that can help clarify justice issues in the workplace or in the community. Good information flow and the resultant reduction of misunderstandings and misinterpretations can promote individual well-being. For procedural justice issues, individuals should be advised to use both their expressive and their instrumental ties to get the necessary information, but for interactional justice issues, the use of expressive ties is necessary for information exchange. Community psychologists can help increase the density of expressive ties in the organization or in the community by introducing buddy systems or creating small communities of individuals to encourage frequent social interactions. In this way, the increased density of expressive ties would facilitate social support and information flow, especially on sensitive issues and problems.

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Appendix. Scenarios and Questions

Scenario 1: Procedural Justice

Your company policies state that supervisors have to follow a set of specific procedures to assess their employees' performance. These procedures are available for every employee to examine. Suppose that in a certain performance appraisal, the assessment outcome from your supervisor is worse than your own self-appraisal. For some reason, you are not clear about how the procedures are applied, but you want to determine whether the assessment outcome is fair or not.

1. How likely are you to seek information about the specific procedures from the coworker?

2. If the coworker voluntarily provides the information to you, how likely are you to accept it? In turn, suppose that it is your coworker who experiences Scenario 1, and you clearly know about the specific procedures of performance appraisal systems.

3. How likely are you to voluntarily provide the information to the coworker even if he/she does not ask for it?

Scenario 2: Interactional Justice

The promotion policy in your company publicly states that the promotion decision is based on individual ability and performance. Performance appraisal by supervisors and individual self-appraisal are the main criteria for the promotion decision. Suppose that in a certain promotion decision, you expected yourself to be promoted according to your self-evaluation. However, the outcome of the promotion decision was against your expectation, and you were not promoted. You did not know the results of the performance appraisal by your supervisor, and he/she did not provide you with any explanation or justification about your nonpromotion. You find the lack of information troubling, and you want to know whether supervisors should provide explanations about their decisions to the candidates.

1. How likely are you to seek your coworker's opinion about whether the supervisor should provide explanations about his/her decision to you?

2. If your coworker voluntarily provides you with the information, how likely are you to accept it? In turn, suppose that it is your coworker who experiences Scenario 2, and you have your own opinions about whether supervisors should provide explanations about their decisions to the candidates.

3. How likely are you to voluntarily provide information to the coworker even if he/she does not ask for it?