

WHY WE SHOULD CARE ABOUT EXCHANGE RELATIONSHIPS WITH COWORKERS AS WELL AS SUPERVISORS: BOTH FELLOW EMPLOYEES AND THE ORGANIZATION BENEFIT

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An integrative model of social exchange relationships was used to investigate whether coworker exchange relationships, in addition to leader-member exchange (LMX), contribute to outcomes beneficial for fellow employees and their organization. Data from university alumni showed both LMX and coworker support significantly related to perceived organizational support (POS). As predicted, LMX exhibited a stronger relationship with POS than coworker support. Furthermore, POS mediated relationships of both perceived coworker support and LMX with supervisor ratings of employees' restraint from behaviors detracting from productivity. Only coworker support related to supervisor ratings of altruistic behaviors. Thus, perceived coworker support may play an important role in contributing to positive attitudes about the organization, help given coworkers and restraint from behaviors that detract from productivity.

Key words: Coworker support; Leader-member exchange; Perceived organizational support; Social exchange; Organizational citizenship behavior.

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INTRODUCTION

Employees develop global beliefs concerning the extent to which their work organization values their contributions and cares about their well-being (perceived organizational support, or POS; Eisenberger, Huntington, Hutchison, & Sowa, 1986; Rhoades & Eisenberger, 2002). Organizational support theory considers the development, nature, and outcomes of POS (e.g., Ase-lage & Eisenberger, 2003; Rhoades & Eisenberger, 2002; Shore & Shore, 1995). Organizational support theory is a social exchange approach, according to which employees trade commitment and efforts aimed at helping the organization in exchange for tangible incentives, such as pay and benefits, and socio-emotional benefits, such as esteem, approval, and caring (Blau, 1964; Eisen-berger et al., 1986). Based on the reciprocity norm, POS creates a felt obligation to help the or-

ganization reach its objectives (Coyle-Shapiro & Conway, 2005; Eisenberger, Armeli, Rexwinkel, Lynch, & Rhoades, 2001).

Organizations offer several avenues for social exchange relationships, including coworkers and supervisors (Aryee, Budhwar, & Chen, 2002; Cropanzano, Prehar, & Chen, 2002; Erdogan & Enders, 2007; Lavelle, Rupp, & Brockner, 2007). High quality social exchange relationships with coworkers and supervisors are instrumental in providing employees with social support within organizations (e.g., Baruch-Feldman, Brondolo, Ben-Dayan, & Schwartz, 2002; Viswesvaran, Sanchez, & Fisher, 1999; Winefield, Winefield, & Tiggeman, 1992); thus, relationships with coworkers and supervisors should be beneficial to employees' overall perception that the organization cares about them. Consistent with this notion, high quality exchange relationships with supervisors have been consistently found to contribute to POS (e.g., Kottke & Sharafinski, 1988; Rhoades, Eisenberger, & Armeli, 2001; Stinglhamber & Vandenberghe, 2003; Wayne, Shore & Liden, 1997; Yoon & Lim, 1999; see Rhoades & Eisenberger, 2002, for review). Support from coworkers has also been widely studied as an important source of social support within organizations (see Viswesvaran et al., 1999, for review). However, the potential contribution of perceived coworker support to POS and to outcomes that aid the organization has been little explored.

Many social exchange models to date have considered only exchanges with one's supervisor (leader-member exchange or LMX) and the organization (POS; e.g., Wayne et al., 1997), or exchanges with one's teammates and supervisor (e.g., Kamdar & Van Dyne, 2007). Theorists have argued that to advance our knowledge of social exchange relationships in organizations, we should begin to test models that incorporate exchange relationships with coworkers, supervisors, and the organization simultaneously (Cole, Shaninger, & Harris, 2002; Lavelle, et al., 2007). Coworker relationships are the least studied of the three exchange relationships, but scholars argue that they are increasing in importance as a focus of study given the increased use of teams and the flattening of organizational hierarchies (e.g., Bishop, Scott, & Burroughs, 2000; Cole et al., 2002; Hey, Pietruschka, Bungard, & Jöns, 2000; Lavelle et al., 2007; LePine, Erez, & Johnson, 2002). Thus, examining the consequences of coworker support for the organization (in combination with the exchange relationship with leaders and the organization) is an important next step. Indeed, Cole et al. (2002) mentioned the lack of studies simultaneously incorporating exchange relationships with coworkers, leaders, and the organization and called for empirical studies of integrative models of social exchange to include coworkers. There is still a lack of such studies.

In the present study, we address the lack of studies simultaneously incorporating exchange relations with coworkers, leaders, and the organization by developing an integrative model of these three main social exchange relationships in organizations to help demonstrate the importance of coworkers. By doing so, we build on organizational support theory by considering the relative contribution of coworker support as well as leader-member exchange to POS. Also, the integrative model allowed us to test whether coworker support is the primary type of exchange relationship related to altruistic behaviors aimed at helping individuals in the organization, based on the target similarity model proposition (Lavelle et al., 2007) that coworkers are the most proximal focus of exchange for such behaviors. Finally, the integrative model allowed us to examine whether enhanced POS that may result from coworker support does not backfire for the organization by resulting in behaviors detrimental to the organization, such as spending time in idle conversations and complaining about the organization.

Relationships of Leader-Member Exchange and Perceived Coworker Support with POS

Leader-Member Exchange and POS

The influence of supervisors on POS is well-established (see Rhoades & Eisenberger, 2002, for review). In their meta-analysis Rhoades and Eisenberger (2002) found an average weighted correlation (when corrected for attenuation), between POS and LMX and similar measures of supportive supervisor treatment of .64. Perhaps the strongest evidence that supervisor relationships contribute to POS is from Eisenberger, Stinglhamber, Vandenberghe, Sucharski, and Rhoades (2002) who found, with a longitudinal panel design, retail employees' perceptions of supervisor support were positively related to employees' changes in POS over time and not vice versa.

According to organizational support theory, treatment by supervisors relates to POS primarily because supervisors are often seen as agents of the organization (Aselage & Eisenberger, 2003; Rhoades & Eisenberger, 2002). Levinson (1965) noted actions by agents of the organization are often viewed as indications of the organization's intent, rather than being attributed solely to a particular individual. Supervisors are often viewed as organizational agents because they have responsibility for directing, evaluating, and rewarding subordinates (Eisenberger et al, 2002).

Coworker Support and POS

Whether perceived coworker support relates to POS has been virtually unexplored. Bishop et al. (2000), Ladd and Henry (2000), Yoon, Han, and Seo (1996), and Yoon and Lim (1999) conducted studies that included measures of both perceived coworker support and POS. Although these studies included a significant positive correlation between coworker support and POS in their table of descriptive statistics, the authors did not theorize about why coworker support may relate to POS.

First, coworkers/peers are an important source of social support, and have been linked to reduced strain (Beehr, Jex, Stacy, & Murray, 2000; Viswesvaran et al., 1999), psychological well-being (Winefield et al., 1992), as a buffer to the stress associated with role overload and role ambiguity and can reduce work-family conflict (Jimmieson, McKimmie, Hannam, & Gallagher, 2010; Thompson & Cavallaro, 2007). Coworker support has also been associated with several organizational level attitudes such as increased job satisfaction, organizational commitment, organizational identification (Ng & Sorensen, 2008; Sluss, Klimchak, & Holmes, 2008) and even job performance (Baruch-Feldman et al., 2002; Colquitt, Conlon, Wesson, Porter, & Ng, 2001; Ng & Sorensen, 2008). Thus, it appears that support from coworkers may not only have implications for an employee's well-being but may also have implications for organizational attitudes. Even though coworker support may mostly be a reflection of the relationship between coworkers, given their day-to-day contact with fellow employees, support from coworkers may also contribute substantially to the perception of the organization overall as a caring place to work.

In addition, it may also be that coworkers, in addition to supervisors, are viewed as organizational representatives to some extent. Based on organizational support theory, treatment by any organizational member viewed as a representative of the organization acting on its behalf

would contribute to POS. Researchers have theorized coworkers may be viewed as agents of the organization (e.g., Cole et al., 2002; Liao, Joshi, & Chuang, 2004; Seers, 1989). For example, Cole et al. (2002) suggest that an employee's team can serve as "a surrogate for the overall organization in the mind of the employee" (p. 147). Coworkers may also be viewed as agents acting on behalf of the organization for reasons other than teamwork. Although coworkers often have little formal authority over fellow employees, they play an important role in influencing fellow employees' perceptions of, and experiences with, the organization (Allen, 1992, 1995; Ladd & Henry, 2000; Liao et al., 2004; Major, Kozlowski, Chao, & Gardner, 1995; Seers, 1989). Coworkers have the potential to influence perceptions of the organization because employees spend more time interacting with peers than other organizational members (Seers, 1989). Bishop et al. (2000) note because individuals' reactions to any environment (like an organization) are determined to a great extent by the proximity and salience of its perceived elements, much of the impact an organization has on its members is derived from people with whom the member associates in the course of organizational activities. Thus, it is not surprising that both Ng and Sorensen (2008) and Sluss et al. (2008) found that coworker support was related to the extent that employees identify with the organization.

Through their interactions, coworkers provide information about the organizational context, including what an organizational member should be like (Allen, 1992; Major et al., 1995). Coworkers also provide cues about the organization's actions, views, or intentions toward employees (Allen, 1992). They are important conduits of messages that convey the organization's culture and how the employee fits in with the organization's culture (Allen, 1992; Liao et al., 2004). Therefore, both supervisors and coworkers may have an important role as agents in the employee-organization relationship.

Relative Contribution of LMX and Coworker Support to POS

The higher the status of the organizational members, the more closely aligned they would be with the organization, and thus the more their behavior should be indicative of POS. Supervisors are of higher status and rank and often have at their disposal unique positional resources that coworkers lack (Seers, 1989).

Although the relative contributions of supervisor and coworker support to POS have not yet been explored, a similar issue has been explored with other work attitudes such as commitment, job satisfaction, and turnover intentions. For example, Redman and Snape (2005) investigated to what extent employees' commitment to both coworkers and supervisors contributed to organizational commitment. They found that even though both commitment to the supervisor and to coworkers correlated significantly with commitment to the organization, the correlation between supervisor commitment and organizational commitment was larger than that between coworker commitment and organizational commitment. Redman and Snape proposed that coworker commitment appears to have a smaller relationship with organizational commitment than is the case for supervisor commitment because coworker commitment is not as closely tied to the organization (it is more "cognitively remote" whereas supervisor and organizational commitment are more closely connected in the minds of employees). Similarly, supportive relationships with coworkers, even though related to POS, may represent a more "cognitively remote" focus in re-

gard to POS than a supportive relationship with the supervisor and thus have a smaller relationship with POS than LMX. Similar findings were reported in a recent meta-analysis, which indicated that perceived supervisor support was more strongly related to organizational commitment, job satisfaction and turnover intentions compared to perceived coworker support (Ng & Sorensen, 2008). Together, these findings are similar to the organizational support theory view that the higher the status of the organizational members, the more closely aligned they would be with the organization. Therefore we expect that leader-member exchange, an indication of perceived supervisor support, will contribute more strongly to POS than perceived coworker support.

Hypothesis 1: leader-member exchange will be positively related to POS.

Hypothesis 2: coworker support will be positively related to POS.

Hypothesis 3: leader-member exchange will relate more strongly to POS than coworker support.

Relationships of Perceived Coworker Support, LMX and POS with Altruism and Restraint from Anticitizenship Behaviors

Organizational citizenship behaviors (OCBs) are a commonly studied outcome of exchange relationships. Typically, only exchanges with supervisors and the organization or exchanges with coworkers and supervisors have been included simultaneously in studies with organizational citizenship behaviors as outcomes (e.g., Kamdar & Van Dyne, 2007; Kim, O'Neill, & Cho, 2010; Moorman, Blakely, & Neihoff, 1998; Settoon, Bennett & Liden, 1996; Wayne et al., 1997). Lavelle et al., (2007) and Cole et al. (2002) suggested research that focuses on both exchange relationships with coworkers as well as supervisors and the organization would help fill in the previously missing piece of the social exchange network.

Overall, organizational citizenship behaviors have been defined as behaviors that contribute “to the maintenance and enhancement of the social and psychological context that supports task performance” (Organ, 1997, p. 91). Although many dimensions and conceptualizations of OCBs exist (LePine et al., 2002), some theorists have distinguished between behaviors directly helping individuals and those directly helping the organization (e.g., Coleman & Borman, 2000; Williams & Anderson, 1991). Lavelle et al.’s (2007) work on a proposed target similarity model argues that the distinction between the individual versus the organization as the beneficiary is relevant to the social exchange literature, given the various avenues for social exchange in organizations (i.e., coworkers, supervisors, and the organization: e.g., Cropanzano et al., 2002; Erdogan, Sparrowe, Liden, & Dunegan, 2004).

Individuals are expected to direct their reciprocation behaviors to benefit the exchange partner providing the support (Cropanzano et al., 2002; Erdogan et al., 2004; Lavelle et al., 2007). In addition, Kamdar and Van Dyne (2007) argue that such matching of the target of an attitude and the related behavior is expected based on Ajzen’s (1988) principle of compatibility. They found that coworker relationships better predicted helping fellow employees than did supervisor relationships. Given that supervisors are expected to more strongly represent the organization, coworker support should be more directly relevant for enhancing behaviors that help indi-

viduals whereas LMX and POS should be more directly relevant for behaviors that help the organization.

Coworker Support and Altruism

In the present study we focused on demonstrating the importance of coworker support for enhancing assistance given to coworkers (altruism), the commonly studied form of citizenship behavior conceptualized as a result of good coworker relationships (e.g., Kamdar & Van Dyne, 2007; Stamper & Masterson, 2002). Cole et al. (2002) stated that the quality of the coworker exchange relationship depicts an employee's willingness to engage in citizenship behaviors that help other coworkers accomplish their goals. Podsakoff, MacKenzie, Moorman, and Fetter's (1990) altruism dimension of OCB is intended to capture helping fellow coworkers reach their goals. Thus, altruism seemed the most appropriate for the current study to provide empirical support for Cole et al.'s proposition and establish the importance of coworker support. Consistent with this notion, Kamdar and Van Dyne note that employees with high quality coworker relationships will reciprocate toward coworkers by helping them as a way to show that they value these relationships.

Although LMX and POS have been found to relate to such individual helping behaviors (e.g., Liden, Wayne, Kraimer, & Sparrowe, 2003; Rhoades & Eisenberger, 2002; Settoon et al., 1996; Wayne et al., 1997), these studies did not include support from coworkers. Supportive relationships with coworkers should relate more strongly to behaviors that help fellow employees than LMX or POS because such behaviors directly serve as a means of reciprocating the support received from coworkers (Erdogan et al., 2004; Ladd & Henry, 2000; Lavelle et al., 2007). Given that altruism is more individually targeted, LMX and POS may not influence altruism if coworker relationships are also considered. Limited research has investigated the relationship between coworker support, POS, and OCBs. In one study, Ladd and Henry (2000) found that coworker support related only to individually targeted OCBs, and POS related only to organizational OCBs. However, Ladd and Henry (2000) did not include a key exchange relationship partner in their study, supervisors, nor test the contribution of coworker support and POS to each type of OCB simultaneously. Similarly, in a recent meta-analysis, Chiaburu and Harrison (2008) found that coworker support was positively related to organizational citizenship behaviors directed toward the individual as well as citizenship behaviors directed toward the organization but the effect size was larger for organizational citizenship behaviors directed toward individuals than for organizational behaviors directed toward the organization. However, this meta-analysis focuses exclusively on coworker support and does not consider other organizational relationships. Chiaburu and Harrison discuss the need for researchers to bring together what they describe as the separate streams of research investigating coworker and supervisor support and mention "stepping outside the boundaries of lateral relationships, theoretical advances could be made by *simultaneously* examining influences emanating from coworkers, leaders, and the organization" (p. 1096).

Although no study to date has considered supportive relationships from coworkers, supervisors and the organization simultaneously in predicting altruism, we draw from the target similarity model for support for our model (Lavelle et al., 2007). Lavelle et al. argue that when considered simultaneously, social exchange relationships with coworkers should best predict citizenship behaviors directed at helping coworkers whereas LMX and POS should predict supervi-

sor or organizationally targeted citizenship behaviors. A relevant example is in the area of multiple foci of commitment. Redman and Snape (2005) found that when employees' commitment to the supervisor, customers, co-workers, and the organization were entered into a regression equation, only commitment to coworkers significantly predicted altruism (Study 3). Redman and Snape propose that their findings are consistent with social exchange theory; commitment to coworkers, which they propose reflects a perception of favorable social exchanges, predicts helping behavior (altruism). Thus, we expect a similar finding when using more direct measures of exchange relationships than commitment. Coworker support is a *measure* of the quality of the relationship whereas commitment is more of an *outcome* of a high quality relationship.

Hypothesis 4: perceived coworker support will be the only exchange relationship significantly positively related to altruistic OCBs aimed at helping fellow employees.

Coworker Support and Refraining from Behaviors Harmful to the Organization

In addition, we wanted to show that having supportive coworker relationships would not backfire for the organization and result in deviant or negative organizationally targeted OCBs that might occur if employees were concerned only with their relationships with coworkers at the expense of the organization. Ball, Trevino, and Sims (1994) call these anticitizenship behaviors and argue that they detract from organizational functioning. Given that coworker support is expected to relate positively to POS, which would be expected to result in behaviors that aid the organization, we argue that coworker support will result in restraint from anti-productive citizenship behaviors. This argument is consistent with Stamper and Masterson (2002), who argued that good organizational citizens go beyond their duties to help fellow employees and also refrain from behaviors that detract from organizational functioning. Empirical work also suggests that it might be the case. For example, Liao et al. (2004) found that even though coworker satisfaction related to organizational deviance behaviors, such as taking long breaks and damaging company property, they found coworker support did not have a significant relationship with these organizational deviance behaviors. More recently, Chiaburu and Harrison (2008) in their meta-analysis on coworker effects on attitudes and outcome behaviors found that coworker support was negatively related to counterproductive work behaviors as well as intention to quit, reduction in effort, absenteeism and turnover. These findings suggest that support from coworkers may not only benefit fellow employees, but also result in employees refraining from acts that damage the organization's welfare. Thus, if coworker support does relate positively to POS as expected, coworker support would be expected to not only aid fellow peers, but also aid the organization.

To examine this idea, we chose two behaviors similar to those used by Liao et al. (2004) and Stamper and Masterson (2002) that were particularly relevant to coworker relationships but that would also benefit the organization (refraining from idle conversation and refraining from spending time complaining about the organization). It may be that coworkers engage in idle conversation and complaints about the organization if they are concerned only about coworkers and not the organization. Because these behaviors are targeted toward the organization, POS should relate positively to them (Ladd & Henry, 2000). To the extent that coworkers and supervisors are seen as representing the organization, and thus relate positively to POS, positive relationships

with coworkers and supervisors can be expected to have a positive association with these two citizenship behaviors indirectly through POS.

Hypothesis 5: POS will be positively related to restraint from anticitizenship behaviors.

Hypothesis 6: POS will mediate the relationship between leader-member exchange and restraint from anticitizenship behaviors.

Hypothesis 7: POS will mediate the relationship between perceived coworker support and restraint from anticitizenship behaviors.

METHOD

Sample and Procedure

The 160 participants were part of a larger study of the working lives of university alumni. For the study, names and phone numbers of 1,500 alumni (ages 25 to 65) were randomly generated from the university's records. Each prospective participant was contacted by phone following the guidelines approved by the Institutional Review Board. Sixty-six percent of the contacted alumni agreed to participate, resulting in a pool of 987 potential participants. These alumni were mailed a packet containing informed consent information, a survey, which also asked them for the name of their supervisor, a postage-paid return envelope, and a university sticker as an incentive for participation. No monetary or contingent incentives were offered. Following Dillman's (2000) suggestions for maximizing return rates, we followed up with noncompliant participants twice, once approximately at seven days and, if needed, again three weeks after the initial mail request. The seven-day follow-up consisted of a reminder phone call. The three-week follow-up was a mailed packet with a letter stressing the value of the research and the importance of participation, along with a duplicate questionnaire and postage-paid envelope. Forty-nine percent of those agreeing to participate (484 alumni) returned completed questionnaires.

Thus, 32% of those initially contacted (484 of 1,500) returned questionnaires containing information about their coworker support, LMX, and POS. This rate is the same (32%) as the rate experienced by Kaplowitz, Hadlock, and Levine (2004), who also used the Dillman method except they used an initial postcard instead of a telephone call and surveyed current students instead of alumni. It should be noted that alumni surveys not following the Dillman method have lower return rates. For example, Masterson, Moye, and Bartol (2003) reported a 7.3% return rate.

Regarding the supervisor-rated measures (altruism and restraint from anticitizenship behaviors), 41% of those returning the completed survey (199 alumni) allowed us to contact their supervisor to obtain this information. We sent a short survey to the supervisors along with a cover letter. Eighty-percent of the supervisors returned a completed evaluation, for a sample of 160. Thus, the participants were the 33% of the total 484 respondents, or, in other words, 11% of the participants initially contacted. Lastly, the demographic information for the respondents for whom we received supervisor surveys did not differ substantially from those for whom we had none.

Of the final set of respondents, 36% worked in large organizations (more than 700 employees), 37% in mid-size organizations (200-700 employees), and 27% in small organizations (less than 200 employees). Respondents had been with their organizations on average close to 14 and a half years ($SD = 9$). Sixty-one percent were female. Overall, 60% worked in education-

related jobs, 6% in technical/computer-related jobs, 6% in financial jobs, 8% in medical/health-related jobs, 1% in sales, 3% in scientific jobs, and 16% in other job types.

Measures

For all employee-rated measures (coworker support, LMX, and POS), a 5-point Likert-type scale (1 = *strongly disagree*, 5 = *strongly agree*) was used. For the supervisor-rated measures (altruism and restraint from anticitizenship behaviors), a 7-point Likert-type scale (1 = *agree slightly or not at all*, 7 = *very strongly agree*) was used.

Perceived organizational support (POS). Employees rated their agreement with six POS items. Given the high internal reliability of the survey of perceived organizational support (SPOS; Eisenberger et al., 1986), in their review, Rhoades and Eisenberger (2002) recommended that few items are needed to assess POS, as long as they encompass both facets of the definition of POS (valuation of employees' contributions and care about employees' well-being). Consistent with this recommendation we used the same six POS items from the SPOS that have been used in previous research (e.g., Roch & Shanock, 2006). Sample items include "My work organization values my contribution to its well-being" and "My work organization strongly considers my goals and values."

Perceived coworker support. Coworker support is commonly measured with items assessing an overall view of the supportiveness of one's coworkers (e.g., Ladd & Henry, 2000; Taormina & Bauer, 2000; Yoon et al., 1996; Yoon & Lim, 1999). Thus, like Ladd and Henry, who investigated the separate influences of coworker support and POS on helping behaviors, we assessed perceived coworker support by having employees rate their agreement with the same six POS items described above, but modifying them by replacing the words "my organization" with "my coworkers."

Leader-member exchange (LMX). Aryee et al. (2002) state that POS represents the exchange relationship between employees and the organization and that LMX represents the relationship between supervisor and employee. LMX is commonly used to operationalize supportive relationships between employees and their leaders (e.g., Masterson, Lewis, Goldman, & Taylor, 2000; Roch & Shanock, 2006; Wayne et al., 1997). Thus, we followed the recommendation of Graen and Uhl-Bien (1995) and had employees rate their agreement with the seven items on the Scandura and Graen (1984) LMX measure. Sample items include "My working relationship with my supervisor is extremely effective," and "I have enough confidence in my supervisor that I would defend and justify his/her decision if he/she were not present to do so."

Altruism. Supervisors rated their agreement with items assessing their subordinates' altruism. We used Podsakoff et al.'s (1990) three-item altruism scale. Example items are "This employee is always ready to help or lend a helping hand to those around him/her" and "This employee willingly gives of his/her time to help others."

Restraint from anticitizenship behaviors. Supervisors provided ratings for two items from Williams and Anderson (1991) capturing behaviors that particularly may occur if employees supported by coworkers are considerate of their coworkers' success but not the organization. These items were "This employee spends time in idle conversation" and "This employee consumes a lot of time complaining about trivial matters." This measure was reverse coded in all analyses to be consistent with the other measures and in a direction consistent with the usual positive operationalization of OCBs.

RESULTS

Means, standard deviations, internal reliabilities, and intercorrelations among the variables are reported in Table 1. All measures showed acceptable internal reliabilities, except the two item restraint from anticitizenship behavior measure.¹ However, one of the benefits of structural equation modeling is that the use of latent factors allows for relationships to be tested accounting for measurement error (Tabachnick & Fidell, 2001).

TABLE 1
 Means, standard deviations, correlations, and measure reliabilities

Variable	Mean	SD	1	2	3	4	5
1. POS	3.70	0.76	(.90)				
2. Coworker support	4.11	0.57	.47	(.89)			
3. Leader-member exchange	3.84	0.66	.57	.32	(.88)		
4. Supervisor-rated altruism	6.06	1.19	.22	.36	.23	(.91)	
5. Supervisor-rated restraint from anticitizenship behaviors	1.84	1.08	.27	.19	.15	.29	(.52/.36*)

Note. $N = 160$. Alpha reliabilities are reported on the diagonal. POS = perceived organizational support. All correlations are significant at $p < .05$, except for the relationship between leader-member exchange and restraint from anticitizenship behaviors, $p = .05$. Both the altruism and restraint from anticitizenship behavior measures are on a 7-point Likert type scale. All other measures are on a 5-point Likert type scale. Lastly, * denotes the correlation between the two items in the restraint from anticitizenship behavior measure.

Discriminant Validity of the Constructs

Before imposing the structural model, we first tested a series of nested models to assess whether all variables were distinct from each other and that the items loaded onto their intended latent variables. Due to the conceptual similarity among the three social exchange measures (perceived coworker support, LMX, and POS), we especially wanted to provide evidence that these are distinct. We used AMOS software (Arbuckle & Wothke, 1999) with maximum likelihood estimation to compare the fit of three nested models (please see Table 2 for a description of each model as well as their fit). To set the metric of the latent variables, we chose the highest loading item from each measure as a reference indicator; the loadings for these indicators were set to a value of one.

Each more differentiated model showed a significantly better chi-square statistic (James, Mulaik, & Brett, 1982). Further, the model treating each hypothesized construct as a separate construct (five-factor model) showed the best fit (see Table 2). In addition, all items in the five-factor models loaded reliably on their predicted factor (lowest loading was .49). Thus, it appears that the variables in the five-factor model were distinct from each other and the items loaded onto their intended latent variables.

TABLE 2
 Confirmatory factor analyses model fit indices

Model	CFI	TLI	GFI	AGFI	χ^2	<i>df</i>	Difference	RMSEA
1 Factor	.50	.46	.51	.42	1342.69*	252		.17
2 Factor	.64	.61	.57	.48	1037.09*	251	305.60*	.14
5 Factor	.92	.91	.83	.79	410.35*	242	626.74*	.07

Note. *N* = 160. The one-factor model includes perceived organizational support (POS), perceived coworker support, leader-member exchange, restraint from anticitizenship behaviors, and altruistic behaviors. The two-factor model combines POS, perceived coworker support, and leader-member exchange (Factor 1), and altruistic behaviors and restraint from anticitizenship behaviors (Factor 2). The five-factor model treats the five constructs as separate factors. CFI = comparative fit index; TLI = Tucker-Lewis index, also known as the NNFI (non-normed fit index); GFI = goodness-of-fit index; AGFI = adjusted goodness-of-fit index; Difference = difference in chi-square from the next model; RMSEA = root-mean-square error of approximation.

* *p* < .05.

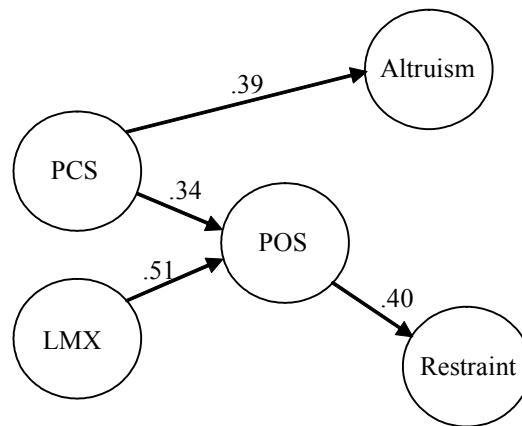
Test of the Hypothesized Model

Figure 1 presents the hypothesized structural model. The model showed adequate fit to the data; $\chi^2(247) = 426.59$; CFI = .92; TLI = .91; GFI = .82; AGFI = .79; RMSEA = .07. As predicted, both LMX and perceived coworker support were significantly related to POS. Also, the relationship between LMX and POS (.51) was significantly stronger than the relationship between coworker support and POS (.34) according to a *t*-test of the difference between these relationships, $t(157) = 1.85$, *p* < .05 (Blalock, 1972). Furthermore, POS was significantly related to restraint from anticitizenship behaviors, and only perceived coworker support was significantly related to altruism. Thus, all hypothesized direct relationships were supported (see Table 3 for the unstandardized path coefficients, confidence intervals, and *R* squared values). The combination of LMX and perceived coworker support accounted for 49% of the variance in POS. Furthermore, POS accounted for 16% of restraint from anticitizenship behavior variance, and perceived coworker support accounted for 15% of altruism variance. Cohen (1988) mentions that an *r* of .30 represents a medium effect size and that an *r* of .50 represents a large effect size. Thus, an *R*² of 9% would represent a medium effect, and an *R*² of 25% or higher would represent a large effect. The effect sizes in the current study thus range from medium to large.

Mediation Analyses

Structural equation modeling (SEM) using the Kenny, Kashy, and Bolger (1998) steps required for mediation was conducted to test our mediational hypotheses. SEM allows for a more definitive test of mediation than the traditional approach using multiple regression (Baron & Kenny, 1986) because both direct and indirect effects are specified in the same model.

In the Kenny et al. (1998) approach, one is required to demonstrate that the independent variable is significantly associated with the mediator and that the mediator is significantly associated with the outcome variables, controlling for the independent variable. In support of these steps, all of the direct relationships were significant.



Note. POS = perceived organizational support; LMX = leader member exchange; PCS = perceived coworker support; Restraint = restraint from anticitizen behaviors. All relationships are significant, $p < .01$.

FIGURE 1
 Structural model of the hypothesized relationships (standardized path coefficients).

TABLE 3
 Standardized path coefficients, 95% confidence intervals, and effect size for hypothesized model

Hypothesized path	Unstandardized path coefficient	SE	95% confidence interval	R^2
Direct paths				
% variance explained in POS				49%
LMX to POS	.63	.10	.44 to .83	
PCS to POS	.46	.10	.27 to .66	
% variance explained in restraint from anticitizen behaviors				16%
POS to restraint from anticitizen behaviors	.42	.14	.16 to .69	
% variance explained in altruism				15%
PCS to altruism	.72	.15	.42 to 1.02	

Note. The % of variance explained represents the percentage variance explained by all of the direct paths to the construct. POS represents perceived organizational support; PCS is perceived coworker support; and LMX is leader-member exchange.

The final step in the Kenny et al. (1998) mediation process involves the calculation of the indirect relationship of the independent variables with the outcome variables through the mediator (POS); POS served as the mediator variable for the two mediational hypotheses. The significance of each indirect relationship through POS was tested using the MacKinnon, Lockwood, Hoffman, West, and Sheets (2002) method.² All indirect relationships were found to be significant. To be conservative, the z 's were calculated with both the indirect and direct effects in the hypothesized model. The z ' was 1.75 for Hypothesis 6 (indirect effect = .20), and 1.69 for Hypothesis 7 (indirect effect = .14). Thus, all mediation hypotheses received support.

Alternative Model

Although LMX and POS have been found to be related to altruistic behaviors in previous work (e.g., Deluga, 1994; Wayne et al., 1997), such work has not included coworker support, which we expected to be the main target of reciprocation for such behaviors. Nonetheless, we evaluate an alternative model that includes a direct path from LMX to altruistic behaviors and from POS to altruistic behaviors. In other words, the alternative model included the hypothesized model, plus direct paths from both POS and LMX to altruistic behaviors. The results, however, showed that the path from POS to altruistic behaviors was not significant (.04) and the path from LMX to altruistic behaviors was also not significant (-.15). The rest of the hypothesized relationships in the model remained significant. The fit statistics were virtually the same as for the hypothesized model. Thus, neither LMX nor POS were significantly related to altruistic behaviors when coworker support was also considered, supporting our argument that one needs to consider the source (coworker, supervisor, or organization) in investigating consequences of exchange relationships for employee behavior.

DISCUSSION

We examined the importance of coworker support to fellow employees as well as the organization, while also considering how coworker support fits in with the other two main social exchange relationships in organizations (supervisors and the organization). Cole et al. (2002) mentioned the growing importance of exchange relationships with coworkers and called for empirical studies of integrative models to include exchanges among coworkers, leaders, and the organization. Six years later Chiaburu and Harrison (2008) repeated this call to bring the largely independent research streams investigating supervisor and co-worker support together and that theoretical advancements can be made by examining support from coworkers, supervisors, and the organization simultaneously. We included all three types of exchanges in an integrative model.

Prior research has linked coworker support, LMX, and POS to organizational citizenship behaviors. However, these three exchange relationships have not been examined simultaneously. Incorporating all three exchange relationships into one model allowed us to test part of the target similarity model and to make a contribution to social exchange theory by examining both the unique and mediated relationships of each source of exchange with the relevant outcomes. Particularly, we wanted to add to organizational support theory by showing that coworker support contributes to POS and also contributes to aid given to fellow employees while not being harmful to the organization. It appears that coworker support does indeed have organizational level implications.

Coworker Support, LMX and POS

We found both perceived coworker support and LMX had significant relationships with POS. Previously, research investigating organizational support theory had not considered coworkers as contributors to POS. Our finding of a positive relationship between perceived coworker support and POS suggests that coworkers may be viewed as agents acting on behalf of the

organization. Researchers have noted that coworkers may at times be a proxy for the organization in the minds of the employees (Bishop et al., 2000; Cole et al., 2002). Coworkers provide information about the organizational context and cues about the organization's actions, views, or intentions toward employees (Allen, 1992; Major et al., 1995). Coworkers also help shape peers' role definitions, serve as role models regarding how to act as a member of the organization, send messages about the organization's culture and provide task-related feedback (Allen, 1992, 1995; Major et al., 1995), and thus their support appears to contribute to POS.

Although coworker support and LMX were both found related to POS, LMX had a stronger relationship with POS than perceived support from coworkers. Given supervisors' greater formal rank in the organization and responsibility for directing and evaluating employees, the finding of a stronger relationship between leader-member exchange and POS than coworker support and POS provides support for organizational support theory's assumption that treatment by organizational members will relate to POS to the extent that the member is viewed as an agent acting on behalf of the organization (Eisenberger et al., 1986; Rhoades & Eisenberger, 2002).

Although coworkers may not be viewed as agents of the organization to the same extent as supervisors, they play an important role in providing social support. Given the day-to-day contact and proximity employees have with their coworkers, coworkers would be expected to be a major source of social support (Bishop et al., 2000; Cole et al., 2002). Social support, in general, helps to decrease the effects of stressors in the work environment (Jimmieson et al., 2010; Viswesvaran et al., 1999). And, given that coworkers provide information about the organizational context and cues about the organization's actions, views, or intentions toward employees (Allen, 1992; Major et al., 1995), social support provided by the coworkers may influence the extent to which the organization as whole is perceived as supportive. Future research could explore the extent to which employees derive support from supervisors versus coworkers and to further explore the mechanisms by which this support enhances perceived organizational support.

Levels of Social Exchange and Altruism and Restraint from Anticitizenship Behaviors

We were also able to examine whether coworker support backfires for the organization by increasing behaviors detrimental to the organization. Thus, we focused on the extent to which employees refrain from spending time in idle conversation and complaining about trivial matters. We believe that using these organizational level OCB behaviors was important because it could be argued that having supportive coworkers might lead to an environment in which employees feel comfortable talking idly on the job and complaining to each other about trivial things. Thus, supportive coworkers may reciprocate to each other, but not to the organization. We wanted to demonstrate that exchange relationships with coworkers aid rather than detract from the organization.

Furthermore, previous research had shown POS related to both organizational level OCBs and altruism, an individual type of OCBs; however, Ladd and Henry (2000) argued that coworker support would relate to individual level OCBs and POS to organizational OCBs, because the target of reciprocation would match the source of support. However, the Ladd and Henry study did not examine relationships of coworker and organizational support with both types of OCBs simultaneously, not include exchange relationships with supervisors. Our study shows coworker support and LMX aid the organization by restraint from idle talk and complain-

ing about the organization through POS, but only coworker support has a significant association with altruistic citizenship behavior targeted at individuals. We believe that this is an important contribution; when coworker support is considered, POS no longer is associated with altruism; only coworker support is associated with altruism. This finding provides support for the Kamdar and Van Dyne (2007) argument that such matching of the target of an attitude and the related behavior is expected based on Ajzen's (1988) classic principle of compatibility. Future researchers should be sure to consider the compatibility of the target and the related behavior when investigating social exchange relationships.

Both Organ (1997) and Rhoades and Eisenberger (2002) suggest even citizenship behaviors aimed at helping individuals eventually help the organization to some degree, because helping coworkers fulfill their jobs will contribute to organizational effectiveness. Our emphasis was on providing evidence for the importance of coworkers to both POS and fellow employees given the paucity of research on coworker support and POS. However, a next step in terms of advancing organizational support theory and the target similarity model proposed by Lavelle et al. (2007) would be to examine outcomes relevant to each focus of exchange. For example, future research should investigate affective commitment to coworkers and to supervisors as outcomes, as well as citizenship behaviors targeted at each focus of exchange (coworkers, supervisors, and the organization).

Practical Implications

Our finding of a stronger relationship between leader-member exchange and POS than coworker support and POS also highlights the key role of supervisors in enhancing or detracting from POS within organizations. Nonetheless, our findings indicate both coworkers and supervisors can be used by the organization as representatives acting on its behalf to enhance POS. It is a positive sign for organizations that employees' view of them as a supportive organization can be transmitted through coworkers.

Also, given the relationships of coworker support and LMX to POS, it may benefit organizations use take steps to enhance perceptions of both coworker and leader-member exchange as a means of enhancing POS. For example, Luthans, Wahl, and Steinhaus (1992) argued that employees who have healthy relationships with coworkers, feel competent in their work roles, and are exposed to a supportive supervisory style would perceive the organization as being supportive and be more committed to the organization. In addition, some recent research has shown that when the supervisors feel supported from above, it trickles down to result in supportive treatment of employees below (Shanock & Eisenberger, 2006). Similarly, it may be that when coworkers feel supported from above, they are more likely to reciprocate by treating fellow employees with support. Thus, organizations may wish to take steps, such as socialization that includes supportive interactions with coworkers and supervisors, as well as consistent messages from the organization to ensure that employees understand the organization's values so that they may help to enhance POS.

Also, our findings that both perceived coworker support and leader-member exchange related positively to refraining from time spent in idle conversation and time spent complaining, as mediated by POS, are promising. They show that organizations can have a supportive work cli-

mate based on supportive relationships with both coworkers and supervisors, and yet employees will not necessarily take this as an opportunity to engage in a great deal of idle conversation or complaining. Given our finding that coworker support is the only form of social exchange relationship that significantly related to behaviors aimed at assisting fellow coworkers, organizations can also foster coworker support as a means of more directly enhancing the assistance employees give one another.

Limitations

A limitation of our study is its cross-sectional nature, which does not allow for an assessment of the direction of causality. For example, we can not rule out the possibility that employees' support from the organization may result in greater support from coworkers and supervisors and not the reverse direction we indicate. However, organizational support theory and longitudinal research involving cross-lag panel designs provide some evidence that supervisor support leads to POS, not vice versa (Eisenberger et al., 2002).

A second limitation is that many participants did not grant us permission to contact their supervisor to obtain altruism and anticitizenship behavior ratings. We received supervisor evaluations for 33% of participants. It may be participants who did not allow us to contact their supervisor did not have good relationships with their employer and thus lower perceptions of support and citizenship behaviors. Thus, we would likely have had greater variability for our study variables with a higher permission rate. However, we believe that because we found significant relationships despite the possible restriction in range, this limitation is not a major problem.

Another possible limitation is some of our measures (the coworker support, LMX, and organizational support measures) come from the same source (the employee) and are conceptually similar. Such similarities are sources of common method variance (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003), which can provide an alternative explanation for the observed relationships between variables. To help reduce potential problems with the three support measures being too conceptually similar, consistent with Wayne et al. (1997), Settoon et al. (1996) and others, we used LMX as our measure of exchange relationships with supervisors. Even though the coworker support scale utilized an adapted version of the POS scale, and thus was a direct measure of coworker support, we did not anticipate multicollinearity concerns between perceived coworker support and POS. It should be noted again that the citizenship behaviors were provided by the supervisor and, thus, were not self report measures.

The nature of our sample may also have contributed to our findings. It may be that the relationships among the different types of support differed for workers with longer organizational tenure or according to job type, especially given 60% of our workers were in education related fields. Perhaps education workers are different than workers in other fields. Thus we explored models that controlled for tenure and for job type. However, controlling for either of these variables did not change any of the results, all paths that were initially significant remained significant and vice versa. Thus, it does not appear that either length of tenure at the organization or job type influenced the relationship among the variables in the model.

Finally, future research should consider a broader range of organizational citizenship behaviors and anticitizenship behaviors as outcomes of coworker support, LMX, and POS. In for-

ulating the first integrative model of all three social exchange relationships, we wanted to focus on the potential added contribution of coworker support given that very little research has investigated the contribution of coworker support in social exchange models, even though both LMX and POS have been well studied previously. Thus we chose behaviors that would be particularly relevant to establishing the importance of coworker support.

Conclusion

In summary, the findings indicate perceived support from coworkers contributes to POS, although LMX contributes more strongly. This finding bolsters organizational support theory's assumption that support providers who are more representative of the organization have an enhanced influence on POS (Eisenberger et al., 2002). The findings also suggest LMX and coworker support operate through POS to increase restraint from behaviors that would detract from the organization's functioning. Additionally, when considering all three types of support simultaneously, coworker support was the only type of support significantly related to altruistic behaviors aimed at helping fellow coworkers. In conclusion, it appears coworkers may play an important role in organizations by not only assisting fellow employees but by enhancing organizational support perceptions and restraint from behavior that would harm the organization's functioning.

NOTES

1. Because of the relatively low reliability of the two-item restraint OCB measure, we also ran the hypothesized model with the two items as separate OCB items instead of one restraint OCB factor. None of the results changed significantly. POS was positively related to both restraint OCB items, and the fit statistics were similar to that of the hypothesized model. $\chi^2(248) = 442.75$; CFI = .91; TLI = .90; GFI = .82; AGFI = .78; RMSEA = .07. Thus, for the sake of clarity, we kept the OCB restraint construct based on the two items. It should be noted that it is not unusual to have low reliability with a two-item measure. According to the Spearman-Brown Prophecy Formula, a five-item measure would have had adequate reliability (.74). We decided to use a two-item measure because we felt these items best assessed restraint from behaviors that may harm the organization and that may particularly be engaged in by coworkers who are supportive with one another.
2. MacKinnon et al. (2002) demonstrated that the Sobel method for calculating indirect effects suggested by Kenny et al. (1998) has low statistical power, and that the *z*-prime method provides more power and a lesser Type 1 error rate than the Kenny et al. approach. The *z*-prime method and Sobel procedure reported in Kenny et al. are the same in terms of the steps required for mediation. Both use an identical formula to calculate an indirect (i.e., mediated) effect of the independent variable on the outcome variable through the mediator. They differ only in the statistical distribution used to determine whether the indirect effect is significant. Because the estimate of the indirect effect is not normally distributed, MacKinnon et al.'s (2002) *z*-prime method uses a modified critical value for the test of significance, such that the critical value is .97, as opposed to 1.96, for the *z*.

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