# RESEARCH NOTES

# LEADER-MEMBER EXCHANGE AND SUPERVISOR CAREER MENTORING AS COMPLEMENTARY CONSTRUCTS IN LEADERSHIP RESEARCH

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The literature on transformational and transactional leadership suggests integrating the leader-member exchange (LMX) approach with research on mentoring. Using LISREL VII confirmatory factor analysis and 183 managerial dyads, we show LMX and mentoring to be empirically distinct from the supervisors' perspective but not from the subordinates'. LMX and mentoring each also accounted for meaningful incremental variance over the other with respect to rated performance, salary progress, and promotion rate. Implications are briefly discussed.

The domain of leadership theory and research has had many conceptualizations proposed over the years; one that seems to have generated substantial recent interest is the distinction between transformational and transactional leadership (Bass, 1990). Yukl (1989) noted that transformational leaders get followers to act as they desire by transforming or changing the followers. One way in which this is accomplished is by using the personal resources, including time, knowledge, and experience, involved in "serving as coach, teacher, and mentor" (Yukl, 1989: 211). Unlike transformational leaders, transactional leaders pursue a cost-benefit exchange approach that does not change subordinates and uses positional (organizational) resources "to meet subordinates' . . . needs in return for 'contracted' services rendered by the subordinate" (Bass, 1985: 14). Although these two forms of leadership might appear to be opposite ends of a continuum, most theorists seem to agree with Bass (1985) that they are not mutually exclusive and that "while conceptually distinct, transformational and transactional leadership are likely to be displayed by the same individuals in different amounts and intensities" (Bass, 1985: 26; cf. Yukl, 1989).

Research on the transformational-transactional distinction is still in its infancy, but one finding that has been obtained across multiple samples is

that of the augmentation effect, in which measures of transformational leadership explain significant amounts of incremental variance in different dependent variables, including performance, over and above that explained by transactional leadership measures alone (Bass, 1990). Thus, since most existing leadership approaches are transactional (Bass, 1990), the augmentation effect findings clearly suggest that adding transformational concepts to existing frameworks may be highly beneficial for advancing knowledge about leadership and supervisory practices. Although there are undoubtedly numerous aspects of transformational leadership that might be examined to augment transactional approaches to leadership, both Bass (1990) and Yukl (1989) strongly urged increased research on the mentoring of subordinates by leaders or supervisors. In particular, Bass noted that: "The mentor is a trusted counselor who accepts a guiding role in the development of a younger or less-experienced member of the organization. Mentors use their greater knowledge, experience, and status to help develop their protégés, not to simply pull the protégés up the organization on the mentors' coattails" (1985: 90).

Thus, the current investigation explored the general research question of whether supervisory mentoring can be viewed as a meaningful augmenter of one major transactional leadership model. We conceptualized supervisory mentoring as a transformational activity involving a mutual commitment by mentor and protégé to the latter's long-term development, as a personal, extraorganizational investment in the protégé by the mentor, and as the changing of the protégé by the mentor, accomplished by the sharing of values, knowledge, experience, and so forth (Hunt & Michael, 1983; Kram, 1985).

## LEADER-MEMBER EXCHANGE THEORY

One approach to the study of leadership that has been extensively examined during the past two decades is the leader-member exchange (LMX) model of Graen and his colleagues (Dansereau, Graen, & Haga, 1975; Graen & Cashman, 1975). Although not infrequently described in theoretical terms that imply some overlap between leader-member exchange and mentoring (cf. Graen & Scandura, 1986, 1987), the former has traditionally not been measured in the same terms as mentoring.[1] Thus, as actually studied empirically, the LMX model is a transactional approach that "describes how leaders use their position power [organizational resources] to develop different exchange relationships with different subordinates" (Yukl, 1989: 40). For example, when high levels of leader-member exchange exist, subordinates see themselves as having good working relationships with their supervisors and as knowing how satisfied their supervisors are with their performance (cf. Graen, Novak, & Sommerkamp, 1982). High leader-member exchange has been associated with increased subordinate satisfaction and

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[1] Our Instrumentation subsection elaborates this point and gives details on prototypical LMX measurement.

productivity (e.g., Graen et al., 1982) and with decreased rates of employee turnover (e.g., Ferris, 1985); the results of a group of longitudinal studies, referred to as the Japanese career progress studies (Wakabayashi, Graen, Graen, & Graen, 1988), also indicate that leader-member exchange may predict subordinates' career outcomes.

Despite broad acceptance of the basic tenets of the LMX model (Yukl, 1989), concerns about it still remain. In particular, Dienesch and Liden (1986) suggested that LMX studies need to expand the domain of variables examined as part of the leader-subordinate interaction process; as noted above, augmenting the LMX approach with aspects of transformational leadership, such as mentoring, may be very beneficial. This benefit seems particularly likely because even high ratings on leader-member exchange may not necessarily imply that a supervisor is committed to the long-term development of a subordinate (Graen & Scandura, 1986). Thus, adding mentoring to LMX expands the boundaries of the leader-subordinate relationship considerably. It adds longer-term commitment and the leader's personal resources, in addition to more strongly emphasizing the development of the subordinate through coaching and other developmental processes (cf. Graen & Scandura, 1986; Kram, 1985).

Since researchers have usually seen mentoring as consisting of two related but distinct functions, basically involving career development and socioemotional support (Dreher & Ash, 1990; Kram, 1985; Noe, 1988), the issue of whether one or both dimensions should augment leader-member exchange is pertinent. In this regard, however, Dienesch and Liden (1986) suggested that the psychosocial, or support, dimension may already be at least partially incorporated into measures of the LMX construct. Thus, since Bass (1985, 1990) also suggested that supervisory support is unlikely to have transformational effects, and since research by Kram (1985) and by Scandura (1992) has indicated that supervisor career mentoring, which Kram called "vocational mentoring," is more likely to enhance traditional career outcome measures than is mentor support, the current study focused strictly on supervisor career mentoring (SCM) as an augmenter of traditional leader-member exchange relationships.[2]

## HYPOTHESES

The literatures on leader-member exchange (e.g., Graen & Scandura, 1987; Wakabayashi et al., 1988) and mentoring (e.g., Dreher & Ash, 1990; Kram, 1985; Scandura, 1992) have established clear links between the developmental activities of superiors, or mentors, and the career outcomes of subordinates, or protégés. Thus, since supervisor career mentoring can be

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[2] We should briefly mention that Morgan (1989) first examined the perceptual distinctiveness of leadership and mentoring, using exploratory factor analysis. Although mentoring emerged as a separate dimension, the respondent-to-item ratio (less than two to one) and the mixing of data gathered from supervisors and subordinates (cf. Nunnally, 1978) raises serious interpretative concerns about this study.

conceptualized as a type of transformational relationship in leader-subordinate dyads (Bass, 1985; Yukl, 1989), we expected supervisor career mentoring to have an incremental effect on the career outcomes of protégés, augmenting the effects of leader-member exchange (Bass, 1990). Hence,

> *Hypothesis 1: Supervisors and subordinates will perceptually distinguish between leader-member exchange and supervisor career mentoring as constructs.*

> *Hypothesis 2: With leader-member exchange controlled, supervisor career mentoring will be positively related to subordinate (a) rated performance, (b) salary growth, and (c) promotion rate.*

We examined Hypothesis 2 using measures of both supervisors' and subordinates' perceptions of LMX and SCM, both to maintain consistency with Hypothesis 1 and to address the poor convergence between supervisor and subordinate reports of leadership phenomena shown in previous research (cf. Field & House, 1990; Graen & Scandura, 1987; Scandura, Graen, & Novak, 1986). Additionally, since mentoring theorists might be interested in the question of whether leader-member exchange can be viewed as an augmenter of supervisor career mentoring, we also examined a third hypothesis, again using both supervisor and subordinate perceptions:

> *Hypothesis 3: With supervisor career mentoring controlled, leader-member exchange will be positively related to subordinate (a) rated performance, (b) salary growth, and (c) promotion rate.*

## METHODS

### Site and Respondents

**Subordinates.** The data were collected as part of a larger study conducted in a large, high-technology midwestern manufacturing firm. Respondents representing the followers in the dyadic relationships were a random sample of subsection heads (middle-level managers) at a single hierarchical level but from various functional areas, including manufacturing, marketing, and information systems. They were contacted by an interdepartmental mail survey, which was accompanied by an explanatory cover letter from the company's manager of human resource development. Of 350 managers contacted, 244 returned surveys by postage-paid envelope for a response rate of 70 percent. If we found missing data in a returned survey, we contacted the respondent and mailed the omitted portion or portions. This procedure resulted in our having very little missing survey data. We obtained data on the career mobility outcomes from company records, which yielded complete data. The mean age in this predominantly male and Caucasian (97%) sample was 47 years. The mean job tenure was 14.4 years; 82 percent of the individuals held bachelor's degrees, and 45 percent of those had completed advanced degrees.

**Supervisors.** Each of the 244 respondents in the subordinate sample described above provided the name of his or her immediate supervisor. These managers, who were section (division) heads, were also asked by interdepartmental mail to participate. Of the 244 contacts, 191 provided data, a response rate of 78 percent, and we again obtained missing self-report data by contacting respondents directly. The mean age in the supervisor sample was 49; 87 percent held bachelor's degrees and 52 percent of those had advanced degrees. All the supervisors were Caucasian males and, when missing subordinate and supervisor data were taken into account, the final sample consisted of 183 unique supervisor-subordinate dyads. To maintain sampling independence, we used no data from two subordinates with the same supervisor.

**Nonresponse analysis.** The initial subordinate sample was randomly drawn, and signed permissions allowed us access to respondents' company records. Unfortunately, since permissions could not be obtained from the nonrespondents, it was impossible to determine whether meaningful differences existed between the two groups. The 70 percent response rate was fairly high in comparison to that of mail surveys (Alreck & Settle, 1985), as was the 78 percent response rate for the supervisor sample. Potential factors differentiating respondents from nonrespondents could not be identified, but analyses comparing subordinates in dyads with complete data ($N = 183$) with those providing complete data but whose supervisors were nonrespondents ($N = 52$) were feasible. Using multivariate and univariate analyses of variance (MANOVAs and ANOVAs) and separate $t$-tests, we uncovered no differences in any background variable (age, education level, number of in-house training programs attended, organizational rank, organizational tenure, starting salary with the company, and current salary) or in the independent and dependent variables subsequently examined in this research (leader-member exchange, supervisor career mentoring, salary growth rate, and promotion rate). All the above considerations warrant a reasonable level of confidence in the conclusion that the sample employed in this study does not suffer from serious sampling biases.

## Instrumentation

The surveys administered to the respondents included the following measures.[3]

**Leader-member exchange.** We employed the most consistently used measure of the construct, the seven-item LMX-7 scale (Graen et al., 1982; see Dienesch & Liden [1986] and Graen & Scandura [1987] for reviews). We employed a parallel measure of supervisor leader-member exchange (SLMX), which contains minor alterations in the LMX-7's items, and administered it to the supervisors. It should be noted that, in conformity with

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[3] The full item content of the four scales employed in this research is available upon request, as are more complete tabular presentations of all results.

typical measurements of leader-member exchange (Graen & Scandura, 1986, 1987), the LMX and SLMX measures had no items focusing on long-term subordinate development or explicitly emphasizing a leader's using personal resources for the purpose of changing a follower. Two illustrative LMX-7 scale items are, "How would you characterize your working relationship with your manager" (extremely effective, extremely ineffective) and "Do you know where you stand . . . do you know how satisfied your manager is with what you do?" In these data, the LMX measure had a coefficient alpha reliability of .86, and the SLMX measure had a .72. Both estimates are acceptable (Nunnally, 1978) and well within the range of normally reported LMX and SLMX alphas (cf. Graen et al., 1982; Liden, Wayne, & Stilwell, 1992; Scandura et al., 1986).

**Career mentoring.** The supervisor career mentoring (SCM) measure we employed consisted of six items drawn from an instrument developed by Clawson (1979) in a study of superior-subordinate relationships. We chose the Clawson items because they implicitly refer to long-term processes and involve the leader devoting personal resources to subordinate change and development; additionally, these items were designed to assess career mentoring between superiors and subordinates in middle-management positions. As with the LMX scales, we used parallel items on both surveys and called them supervisor SCM and subordinate SCM, for supervisor career mentoring as seen by the supervisor and subordinate in a studied dyad, respectively; two illustrative supervisor SCM items are "How much do you coach this manager about how to manage his/her career?" and "How often do you discuss with this manager how his/her job, career, and goals fit into the broader perspective of the company's future and goals?" The supervisor SCM coefficient alpha was .79, and it was .85 for subordinate SCM.

**Career outcome variables.** In the research literature on careers, career outcomes have generally been examined in terms of (1) rate of advancement, (2) salary growth, and (3) supervisory ratings of performance (Feldman, 1988; Hall, 1976), and it has been suggested that career studies should assess all three variables because salary growth may not be significantly related to promotion rate, and performance ratings may not reflect salary growth. Hence, we used all three criterion variables and the following measures, on which higher values indicate higher performance, salary growth, and rate of promotion. Performance was assessed using a 16-item scale developed by the company; items included ratings of a manager's distinctive competence in areas such as coping with failure, flexibility, and resource allocation. In this organization, supervisory performance ratings were considered important indicators of future management potential. The items were unit-weighted to form a single scale with a coefficient alpha of .93.

The manager's salary growth rate was represented by a Consumer Price Index—corrected measure, using constant dollars, for which we substracted the manager's inflation-adjusted starting salary from his or her inflation-adjusted current salary and divided by company tenure; salary decisions

within the company were based upon multilevel performance evaluations and were approved by the plant manager.

The promotion rate of each manager was measured as the managers' current organizational level minus starting level with the company, divided by company tenure. Interviews with the organization's human resources staff verified that, in this company, advancement in level usually represented a meaningful promotion—an increase in job responsibilities as well as in compensation.

## Analyses

**LMX and SCM independence.** To carefully and fully examine the distinctiveness of leader-member exchange and supervisor career mentoring (Hypothesis 1), we conducted three sets of LISREL VII maximum likelihood confirmatory factor analyses (Jöreskog & Sörbom, 1989). The first set of analyses involved only the subordinate-provided exchange and mentoring measures (LMX and subordinate SCM), and the second included only the supervisor-provided measures (SLMX and supervisor SCM). The final set of analyses examined all four measures together.

The method of assessing construct independence involved examining the "disattenuated" (corrected for measurement error) factor correlations produced by the LISREL VII program. Because supervisors and subordinates have different perspectives and because previous research has shown poor convergence between supervisor and subordinate descriptions of leadership-phenomena (cf. Field & House, 1990; Graen & Scandura, 1987; Scandura et al., 1986), we treated the items from the four scales as empirical indicators of separate but correlated constructs (latent variables). Each item was assigned a loading on only the factor representing its construct, with no cross-loadings estimated to inflate model fit (cf. MacCallum, 1986), and the error terms were specified as being uncorrelated among themselves or with the latent variables. We assessed model goodness-of-fit by the Bentler and Bonett (1980) generalization of the Tucker and Lewis (1973) coefficient (rho), whose use has been strongly recommended by a number of theorists (e.g., Mulaik, James, Van Alstine, Bennett, Lind, & Stilwell, 1989; Tanaka, 1993). Finally, we compared models using the chi-square likelihood test for nested models recommended by Bentler and Bonnet (1980) and others (e.g., Jöreskog & Sörbom, 1989).[4]

**Correlational and regression analyses.** We next constructed unit-weighted scales for the measures that had significant perceptual distinctiveness in the LISREL VII analyses and computed a coefficient alpha for each scale. We then computed Pearson product-moment correlations between the

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[4] It should be mentioned that rho is relatively unaffected by sample size once a sample exceeds approximately 200 individuals (cf. Mulaik et al., 1989). Our sample of 183 is below that cutoff but only slightly so, and rho is robust and strongly recommended as an index of model fit (Tanaka, 1993). Thus, although serious sample-size bias appears reasonably unlikely, some degree of such bias cannot be entirely ruled out.

leader-member exchange and supervisor career mentoring measures and the career outcomes. Finally, hierarchical multiple regression analysis was used to test Hypotheses 2 and 3 by determining the incremental variance in the career outcome measures accounted for by supervisor career mentoring over that contributed by leader-member exchange and vice versa (cf. Cohen & Cohen, 1983).

## RESULTS

### Construct-Scale Independence Results

**Subordinate results.** The initial two-factor LISREL VII model produced significant ($p < .01$) item loadings for all the LMX and subordinate SCM items. The obtained rho was .87, a value indicating that the model marginally fit the data. Examining the estimated disattenuated correlation between the latent exchange and mentoring factors indicated a very serious lack of independence ($r = .94, p < .01$), and testing that correlation for a significant departure from a true value of 1.0 yielded a nonsignificant $t$ of 1.70 (cf. Jöreskog & Sörbom, 1989: 112), indicating the correlation cannot be assumed to differ from unity. Specifying a single-factor model in which all the LMX and subordinate SCM items loaded on one factor yielded a slightly enhanced rho (.88). More important, however, a nonsignificant chi-square resulted from the likelihood test ($\chi^2 = 2.46$, $df = 1$, n.s.), indicating that the two-factor model did not fit the data better than the single-factor model. These results, then, clearly do not support Hypothesis 1 from the subordinates' perspective.

**Supervisor results.** The two-factor LISREL VII model produced significant ($p < .01$) item loadings for all the supervisor-based leader-member exchange and supervisor career mentoring (SLMX and supervisor SCM) items, and the obtained rho was .92, indicating an acceptable fit of the data to the model. Here, the estimated disattenuated correlation between the latent exchange and mentoring factors was significant ($r = .43, p < .01$) but also significantly different from unity ($t = 7.26, p < .01$). Furthermore, testing this two-factor model against its single-factor rival, which had a rho of .87, yielded both a meaningful (.05) decrement in rho (cf. Widaman, 1985) and highly significant chi-square likelihood results ($\chi^2 = 103.30$, $df = 1$, p $< .01$). These results therefore indicate strong support of Hypothesis 1 from the supervisors' perspective.

**Combined results.** For the supervisor and subordinate data combined, the initial four-factor model produced significant ($p < .05$) item loadings for all the LMX, SLMX, and supervisor and subordinate SCM items. The obtained rho was .88, indicating a marginal model fit. Examining the estimated factor correlations indicated that the LMX and subordinate SCM constructs were about as highly correlated as when the subordinate data were analyzed alone ($r = .95, p < .01$). Testing the .95 correlation for a significant difference from 1.0 yielded a nonsignificant $t$ of 1.61, and reestimating the four-factor model with the correlation between LMX and subordinate SCM con-

strained to equal 1.0 produced both a nonsignificant chi-square ($\chi^2 = 2.27$, $df = 1$, n.s.) and no decrement in rho.

Estimating a three-factor model, with the leader-member exchange and supervisor-based leader-member exchange and supervisor career mentoring (LMX, SLMX, and supervisor SCM) items each loading on separate dimensions, produced a rho of .90, indicating reasonable model fit. All the items had significant factor loadings ($p < .01$), and none of the factor correlations were sufficiently large to cause serious concerns about construct redundancy (the LMX-SLMX, SLMX–supervisor SCM, and LMX–supervisor SCM disattenuated correlations were .54, .43, and $-.02$, respectively). Although the LMX-SLMX and SLMX-supervisor SCM correlations were significant ($p < .01$), all three factor correlations were also significantly different from 1.0 ($p < .01$). These results, then, further supported Hypothesis 1 from the supervisors' perspective but not from the subordinates' viewpoint. These results also suggested that the subordinates' SCM items and dimension should be deleted from all subsequent analyses because of their very clear and strong redundancy. Hence, we kept supervisor SCM as the sole measure of supervisor career mentoring and subsequently referred to it as simply SCM.[5]

## Correlational and Hierarchical Regression Analysis Results

**Correlational results.** Table 1 shows the means, standard deviations, alpha reliabilities, and correlations among the retained variables.

**Regression results: Mentoring as an augmenter.** Table 2 presents results of the separate hierarchical regression analyses conducted for each of the three dependent variables (performance, salary rate, and promotion rate). As the top half of Table 2 shows, LMX and SLMX are jointly both significant predictors of the subordinates' rated performance (with $p$'s < .05 and .01, respectively). However, when examined jointly, neither is significant with respect to salary or promotion rate. Examining the augmenting effect of supervisor career mentoring and adding that variable at the second step of the analyses yields nonsignificant results for performance but significant increases in explained variance for both salary and promotion rate (both $p$'s < .01). These results thus support Hypothesis 2 with respect to salary and promotion rate but not with respect to performance.

**Regression results: Leader-member exchange as an augmenter.** As can be seen in the bottom half of Table 2, when SCM is entered first it is not a significant predictor of performance but, again, it is significant for both salary and promotion rate (both $p$'s < .01). Entering LMX and SLMX at the

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[5] The LMX and subordinate SCM items could have been combined into one dimension or scale, given the very high LISREL VII factor correlations. However, since the LMX scale employed in this study has been used in substantial previous research (Graen & Scandura, 1987), combining these items would impair the comparability and additivity of results between this study and others. Thus, the best decision seemed to be to simply drop the subordinate SCM items and dimension.

## TABLE 1
## Descriptive Statistics and Correlations[a]

| Variables | Means | s.d. | 1 | 2 | 3 | 4 | 5 |
|-----------|-------|------|-----|-----|-----|-----|-----|
| 1. LMX | 26.40 | 4.65 | (.86) | | | | |
| 2. SLMX | 24.68 | 2.29 | .30 | (.72) | | | |
| 3. SCM | 18.49 | 3.71 | .05 | .42 | (.79) | | |
| 4. Performance | 5.66 | 0.94 | .27 | .45 | .15 | (.93) | |
| 5. Salary rate | 2,873.44 | 1,199.34 | .08 | .11 | .24 | .23 | |
| 6. Promotion rate | 0.34 | 0.27 | .09 | .08 | .25 | .15 | .27 |

[a] The correlation coefficients reach statistical significance at .16 ($p < .05$) and at .21 ($p < .01$). Coefficient alpha internal consistency reliabilities are shown in parentheses on the main diagonal.

second regression step shows each to jointly add significant explained variance with respect to the subordinates' rated performance ($p$'s $< .05$ and .01, respectively). However, jointly neither is significant for salary or promotion rate. These results thus support Hypothesis 3 for performance but not for salary and promotion rate.

## DISCUSSION

Our LISREL VII results support the idea that leader-member exchange (LMX) and supervisor career mentoring (SCM) are different constructs since we obtained separate factors with the supervisor data and these variables

## TABLE 2
## Results of Hierarchical Regression Analysis

| Step | Variables | Performance $\Delta R^2$ | $\beta$ | Salary Rate $\Delta R^2$ | $\beta$ | Promotion Rate $\Delta R^2$ | $\beta$ |
|------|-----------|-----|-----|-----|-----|-----|-----|
| | Supervisor career mentoring | | | | | | |
| 1 | LMX | | .16* | | .06 | | .07 |
| | SLMX | .21** | .39** | .02 | .09 | .01 | .06 |
| 2 | SCM | .00 | −.03 | .05** | .24** | .06** | .27** |
| | Leader-member exchange | | | | | | |
| 1 | SCM | .02 | .15 | .06** | .24** | .06** | .25** |
| 2 | LMX | | .16* | | .08 | | .10 |
| | SLMX | .19** | .41** | .01 | −.01 | .01 | −.06 |
| | Overall[a] | | | | | | |
| | Total $R^2$ | .21** | | .07** | | .07** | |
| | F | 16.17** | | 3.96** | | 4.66** | |
| | df | 3,179 | | | | | |

[a] The total model statistics shown are for both supervisor career mentoring and leader-member exchange as augmenting variables. Both models involved the same set of variables; the only differences were in the order of variable entry into the regressions.
  * $p < .05$
  ** $p < .01$

yielded.consistent but different patterns of bivariate correlation and regression relationships with the three dependent variables.

However, the supervisor distinctiveness results notwithstanding, it also seems particularly noteworthy that the subordinates did not distinguish between LMX and SCM. Although there are many potential explanations for this finding, one that seems particularly plausible to us is that, being the actors, the supervisors knew the intent of their behaviors—they knew whether they meant to engage in exchange (transactional) relationships with their subordinates or sought to develop mentoring (transformational) relationships. Conversely, the subordinates, observers of the supervisors' behaviors, might be expected to have had difficulty in inferring their supervisors' intentions. This difficulty may have resulted in subordinates' perceiving and reporting only global supervisory behavior, involving an amalgam of all supervisory interactions. Obviously, this explanation is speculative, but the evidence suggesting perceptual problems in supervisor-subordinate descriptions of leadership phenomena is probably too consistent for future investigators to ignore.

Most studies of LMX have reported only the subordinate view, precluding examination of convergence between the perspectives of both parties. However, to satisfy our curiosity, we searched the available literature and found that our disattenuated (LISREL-estimated) LMX-SLMX correlation of .54 and our raw LMX-SLMX correlation of .30 (see Table 1) were not low relative to others in existing research on this relationship. However, this consistency across studies still does not suggest strong convergence and the literature, in fact, suggests that convergence varies by sample (e.g., Graen & Cashman, 1975; Liden & Graen, 1980; Liden et al., 1992; Scandura et al., 1986). It therefore appears that future research should be devoted to this important issue. It also seems worthwhile to suggest that future LMX researchers would be well advised to obtain exchange reports from both supervisors and subordinates when possible.

With respect to LMX and SCM as augmenters of each other, the current research found supervisor career mentoring to add significantly to the levels of explained variance in rated salary progress and promotion rate over that accounted for by leader-member exchange. However, LMX did not augment the effects of SCM for these variables.[6] The results for performance, however, showed no augmenting effect for SCM but did indicate significant relationships between LMX and performance—when LMX was considered as the primary independent variable or when it was treated as an augmenter of SCM. These results can probably be explained overall (and post hoc) by the

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[6] We should mention that, in the interest of thoroughly examining the relationships among the variables of this study, we also conducted multiple regression analyses that included (in subsequent entry steps) all two- and three-way interactions between the independent variables of the models shown in Table 2. However, none were significant (all p's > .05), indicating that LMX and SCM had augmenting, or additive, effects but not moderating (interactive) effects with respect to our three dependent variables.

fact that supervisory exchange (LMX) focuses on providing the positional resources necessary for positive short-term career outcomes, such as good performance appraisal ratings. However, supervisory mentoring (SCM) is developmental and therefore more related to long-term outcomes, such as salary and promotion growth over time. Thus, viewing managerial success as a multidimensional outcome suggests the necessity of subordinates' having both good exchange and mentoring relationships with their supervisors. This view seems highly plausible; but it is also at least somewhat speculative, given certain interpretive concerns, which are discussed below. Additional exploration therefore seems needed to examine this possibility.

In research presented here, we attempted to avoid major criticisms of previous LMX studies. First, we employed two more objective (nonperceptual) measures of career outcomes than previous research has used. Second, LMX research has been criticized for reliance on small samples and data from public sector organizations (Dienesch & Liden, 1986; Vecchio & Gobdel, 1984). To address these criticisms, we employed a relatively large sample of managerial dyads ($N = 183$) in a private sector firm. Also, the LMX construct was measured from both the supervisors' and subordinates' perspectives, and the supervisor and subordinate SCM measures developed for this research were consistent with the literature on the career mentoring function (cf. Clawson, 1979; Kram, 1985). This is not, of course, to say that the current research was without shortcomings.

Of particular concern for this study is that the overall levels of explained variance in the regression models were not high, particularly with respect to the salary and promotion rate dependent variables. Perhaps using objective data from company records to provide dependent variables and self-reports to provide independent variables partially accounts for this finding—that is, the results were not inflated by common source or method biases. Another potential explanation is that promotion and salary rates represent long-term outcomes that may be less related to recent supervisory behavior than are current performance ratings. This timing difference among our variables also raises some interpretative concerns about our findings. For example, it could be argued that a subordinate's past promotion and salary rates may influence perceptions of LMX and mentoring or that such historical outcomes may be the product of prior LMX. Thus, we advise caution in drawing any causal conclusions from our results.

Somewhat related to this perception and causality issue is the fact that, had different measures been employed, the subordinates in our study might have distinguished between LMX and SCM. The current research cannot address this very real possibility. Thus, future investigators might consider employing additional measures to explore this issue more fully. It would clearly be desirable to replicate this study to examine factors affecting the differentiation of exchange and mentoring by subordinates and to explore exchange and mentoring relationships in other types of samples, such as professionals or individuals lower in an organizational hierarchy than those studied here.

Measurement error is a final concern. Footnote 2 mentions that error resulting from sample-size bias may have affected our index of model goodness-of-fit, and we do not want to ignore this possibility. We tried to include data from a variety of sources in our study (supervisors, subordinates, and company records) to deal with such concerns, and our estimates of internal consistency suggest that our perceptual measures were reliable by prevailing conventional standards (cf. Nunnally, 1978). We also used previously published measures of LMX and SCM to increase the likelihood of reliable measurement and to ensure that our research would be comparable with previous studies. However, we realize that these measures may be fallible and that replication of our findings is therefore very desirable.

## CONCLUSION

Research on LMX should continue to integrate that construct with other relevant theory and research. In the present study, we employed career mentoring measures since higher-level managerial dyads were the units of analysis and the outcome variables included indicators of career progress. Given that there were two dependent variables, salary and promotion rate, for which leader-member exchange did not explain significant criterion variance but supervisor career mentoring did, we suggest that measures of career mentoring be included in future investigations of leader-member exchange relationships. In fact, the current research supports the concept of augmentation effects in general (Bass, 1990), so it seems reasonable to suggest that researchers taking either a transactional or a transformational approach to leadership might consider adding elements of the other approach.

Mentoring researchers should perhaps also consider adding variables that more thoroughly reflect transactional mentor-protégé exchanges and control for the position of a given mentor—whether the mentor is a superior, peer, or subordinate. Since Kram (1985) conceptualized mentoring as potentially involving a constellation of relationships, a fruitful area for future research could be the investigation and comparison of supervisory and nonsupervisory mentors with respect to the effects of transactional and transformational relationships and their impacts on such phenomena as short-term and long-term career outcomes. Supervisor career mentoring might be expected to be more related to career outcomes, and nonsupervisory mentoring, which is likely to be based more upon role modeling and social support, might hence be expected to enhance such things as role clarity and job satisfaction (cf. Scandura, 1992). Further research in this area is thus clearly needed.

Theoretical and empirical integration of diverse literatures can advance academic understanding of key organizational processes, and we hope that the current study has contributed to this process in the leadership and mentoring domains. The literatures on leader-member exchange and mentoring both describe relationships that emerge in hierarchial dyads and suggest that these relationships relate to the career success of the lower-level party in a

dyad. The results of the present study indicate that, taken together, leader-member exchange and supervisor career mentoring provide a more complete perspective on the processes that contribute to career success.

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