

THE IMPACT OF SAME-SEX LMX DYADS ON PERFORMANCE EVALUATIONS

Arup Varma and Linda K. Stroh

Numerous studies have found that supervisors rate women lower than men for similar levels of performance, suggesting that for female employees, performance alone may not be able to guarantee fair ratings. What is not clear is whether this disparity is a function of the gender composition of the supervisor–subordinate dyad or simply a case of male supervisor rating behavior. Based on data from supervisor–subordinate dyads in four organizations, we found that after controlling for performance, both male and female supervisors exhibit a positive bias toward subordinates of the same sex and rate members of the same gender higher. © 2001 John Wiley & Sons, Inc.

Introduction

Performance evaluations are the primary means by which merit increases and organizational rewards are determined. Investigating the variables that influence supervisors' ratings is therefore critical to better understand why females are rated lower than males, controlling for performance. For this study, we used the tenets of the leader–member exchange model (Graen, 1976) and interpersonal affect (Tsui & Barry, 1986) to test several hypotheses that explain the reasons that, controlling for performance, females often receive lower ratings than males.

Leader–member exchange (LMX) theory (Graen, 1976; Graen & Cashman, 1975; Graen & Scandura, 1987) proposes that supervisors do not treat or evaluate all their subordinates in the same way. Instead, because of limited time and resources, supervisors

broadly categorize their subordinates into two groups, often referred to as “in” groups and “out” groups. Those in the in groups receive more of the supervisors' time, support, and trust, while those in the out groups receive comparatively less of the same. According to LMX theory, as a result of receiving disproportionately more attention, the members of in groups receive higher performance evaluations, have lower turnover rates, and are more satisfied with their relationships with their supervisors. Several empirical tests of the LMX model have confirmed that supervisors/managers—or leaders, according to this model—often allot membership to in groups and out groups based on personal characteristics unrelated to performance (Dansereau, Graen, & Haga, 1975; Dienesch & Liden, 1986; Graen, Liden, & Hoel, 1982).

The overwhelming support received by the LMX model makes it clear that LMX quality

... because of limited time and resources, supervisors broadly categorize their subordinates into two groups, often referred to as “in” groups and “out” groups.

... other studies, in both the laboratory and the field, have begun to pay greater attention to the impact of interpersonal affect on performance evaluations and other personnel decisions.

has a significant impact on the subordinate's work place experience, in addition to having a significant impact on the performance ratings of the subordinate (Vecchio & Gobdel, 1984). As such, it follows that the work place experience of both male and female employees, and their performance ratings in particular, will also be significantly influenced by the quality of LMX relationship that is established between these individuals and their supervisors, especially since supervisors are reported to form relationships of different qualities in nearly each case (Dansereau et al., 1975; Graen & Cashman, 1975). Before we can determine whether the sex of the supervisor and/or subordinate affects the formation and quality of supervisor-subordinate relationships, it is crucial to examine the determinants of the quality of these relationships.

Determinants of Quality in Leader-Member Relationships

Several researchers have identified what they consider to be the determinants of quality in LMX relationships. Dienesch and Liden (1986), for example, emphasize the importance of such individual characteristics as sex, race, and educational background. They suggest that initial task performance and nonperformance behaviors may also affect these relationships.

Emphasizing the role of differentiated interpersonal affect, Varma, DeNisi, and Peters (1996) have proposed that supervisors may develop strong levels of such affect (i.e., liking) toward subordinates who are high performers. In turn, the level of this liking may be a strong influence in determining the quality of the relationship. Liden and Mitchell (1988) support this position, arguing that, in addition to individual characteristics and task behaviors, liking is an important determinant of the quality of LMX relationships. Also building on LMX theory, several researchers have argued that whether a supervisor likes a subordinate is an important influence in whether the subordinate is accepted into the in group or is relegated to the out group (e.g., Wayne & Ferris, 1990). Finally, other studies, in both the laboratory and the field, have begun to pay greater attention to the impact of interpersonal affect on performance evaluations and other

personnel decisions (Cardy & Dobbins, 1986; Engle & Lord, 1997; Robbins & DeNisi, 1994).

Most of the research on the impact of liking on LMX relationships suggests that one's sex may be a predictor of being liked and, therefore, of being selected for the in group (leader-member exchange). Further, according to these studies, most of which employed laboratory techniques, in groups and out groups may have a dominance of same-sex members. One can conclude, therefore, that the gender of one's subordinates may have an impact on how one rates their performance. In short, LMX theory and the notion of affective perceptions should be very useful in explaining persistent disparities in male-female career patterns.

In combination, LMX theory and the notion of affective perceptions provide persuasive theoretical support for the argument that the quality of the supervisor-subordinate (leader-member) relationship and the level of interpersonal affect may be directly gender-related. In other words, women may like working with and for women better, and men may prefer working with and for men, in large part because of the greater ease of communicating and of understanding each other's communication styles. One might further expect that women supervisors would be more willing to accept women subordinates into their in groups and that male supervisors would be more willing to accept male subordinates into theirs.

Overview of the Study

The LMX Model

Several recent tests of the LMX model have proposed that liking is an important determinant of the quality of supervisor-subordinate relationships (Engle & Lord, 1997; Liden & Maslyn, 1998). One element that is believed to be significant in the development of leader-member exchange relationships is the similarity-attraction paradigm (Byrne, 1971). This paradigm suggests that individuals who share certain characteristics in common elicit positive responses in one another and hence form positive rela-

tionships. Interpersonal attraction and liking are critical to the development of this relationship. Several studies (Deluga, 1998; Engle & Lord, 1997; Phillips & Bedeian, 1994) have empirically confirmed the impact of similarity in key dimensions on the quality of the relationship that develops between individuals. Other studies examined an aspect of this relationship that perhaps more directly addresses the key question: Do demographic features affect the quality of LMX relationships? Both Turban and Jones (1998) and Wayne, Shore, and Liden (1997), for example, report that demographic similarity (e.g., gender) has a significant impact on the perception of similarity and thus on the “liking” the supervisor develops for the subordinate. This, in turn, impacts the quality of the relationship that develops between supervisors and subordinates. Specifically, supervisors perceive themselves to be “more” similar to subordinates whose demographic profiles are similar to their own and tend to include demographically similar subordinates in their in-groups more than they include other subordinates. In line with this argument, we propose:

Research Question 1: Subordinates who are liked more will have significantly higher-quality relationships with their supervisors than will subordinates who are liked less.

The classification of subordinates into members of in groups or out groups leads to differential treatment of the two groups of subordinates. Research indicates that, among other reasons, subordinates are put in in-groups because the superior believes that the subordinate is motivated to assume greater responsibility within the organization (Liden & Graen, 1980). As a result, members of this group become the objects of the superior’s attention; and those in this group receive more information, exert greater influence, have more confidence, and are of greater interest to their superior (Dansereau et al., 1975). Further, the in groups are characterized by high trust, interaction, support, and formal/informal rewards, including performance ratings (Dienesch & Liden, 1986; Lagace, Castleberry, & Ridnour, 1993).

Given the overwhelming support that the LMX model has received, the research suggests that those subordinates who are in their supervisors’ in groups (i.e., have high LMX) will receive significantly higher performance ratings than will subordinates who are in out groups. As such, we propose:

Research Question 2: Subordinates who receive higher LMX scores will also receive significantly higher performance ratings than will subordinates who receive lower LMX scores.

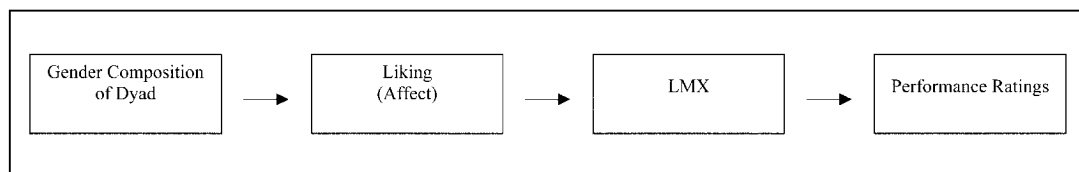
Gender-based Model

Previous research has shown that the sex of the individual is an important determinant of the level of interpersonal affect that develops between that individual and others. In line with this research, Byrne (1971) argued, in developing the “similarity attraction paradigm”, that people like people who are similar to them more than they like people who are different. In this connection, the overwhelming number of male managers in the workplace combined with the findings of the LMX literature is useful in explaining the disparity in male–female salaries, as well as ratings. To summarize, because there are more male supervisors, on average, females will receive lower performance evaluations than will males, making differential ratings received by male and female subordinates in the workplace mainly a function of the sex of the supervisor. Figure 1 represents the model proposed in this study and depicts the hypothesized relationships between same-sex dyads and performance ratings.

Although some studies suggest that men systematically receive higher performance evaluations than women (Cohen, Bunker, Burton, & McManus, 1978), others indicate females are favored (Abramson, Goldberg, Greenberg, & Abramson, 1977; Pulakos & Wexley, 1983). One reason this literature remains so equivocal, perhaps, is because only a few researchers (e.g., Bartol & Butterfield, 1976; Pulakos & Wexley, 1983) have examined the gender composition of the supervisors and subordinates. As Pulakos, White, Opler, and Borman (1989) note, however,

... among other reasons, subordinates are put in in-groups because the superior believes that the subordinate is motivated to assume greater responsibility within the organization.

Figure 1. Proposed gender-dyad model.



studies that have examined gender effects have primarily been conducted in the laboratory, which further limits the ability to make strong inferences about the role of gender in performance ratings.

In this connection, an interesting finding is reported by Sackett, DuBois, and Noe (1991), who found that women were rated lower than men when they comprised a small (less than 20%) part of the work group. On the other hand, when women made up more than half the work group, they were actually rated higher than men. As Alimo-Metcalf (1994) points out, explaining sex-based differentials in performance evaluations becomes increasingly difficult as women enter the work force and gain power in the workplace. That is, as the tasks women perform become more managerial (and less easy to quantify), assessment becomes more subjective; therefore, being accepted into a supervisor's in group may become a more important determinant of one's performance evaluations the higher one advances in the corporate hierarchy.

Other research shows a sex link in the personal characteristics supervisors value in other managers. Thus, male managers tend to believe successful managers have more "male" characteristics than "female" characteristics, whereas female managers are more willing to believe that successful managers can also have female characteristics as well as male characteristics (Brenner, Tomkiewicz, & Schein, 1989; Schein, Mueller, & Jacobson, 1989; Schein, Mueller, Lituchy, & Liu, 1996). Schein et al. (1996) note that "with large numbers of women in management and strong efforts for continuing change, females do not sex type the managerial position" (p. 40). Their study suggests that women supervisors may be more willing to view female subordinates as good performers, whereas men may be more reluctant to do so. Based on these findings, we propose a gender-based model as an alter-

native to the classical LMX model and examine the following:

Research Question 3: Supervisors will report significantly higher affect (or liking) toward same-sex subordinates when compared to the affect reported toward opposite-sex subordinates.

Research Question 4: Same-sex dyads will have a significant and positive effect on LMX ratings, and this relationship will be mediated by interpersonal affect.

Research Question 5: Same-sex dyads will have a significant and positive impact on performance ratings; however, this relationship will be mediated by interpersonal affect and LMX quality, in that order.

A fundamental tenet of the classic LMX model is that cultivating relationships in the workplace, in particular, the relationship between the supervisor and the subordinate, benefits the subordinate positively and significantly at the time of performance evaluations. Further, research in gender studies has shown that in both their personal and professional lives women are often more relationship oriented (Fairhurst, 1993; Rosener, 1990; Helgesen, 1990; Eagly & Johnson, 1990). In contrast, men are more often depicted as task oriented.

According to Gilligan (1982), who was the first to note the greater importance of relationship building to women, women are "weavers" (Gilligan, 1979) of relationships and rely heavily on those relationships for help in accomplishing their tasks. Gilligan further notes that women have been inculcated with values that foster nurturing and care-giving, characteristics typically viewed as "female" by both supervisors and subordinates. The work of Gilligan (1979, 1982) suggests that workplace relationships are of greater importance to

women than to men. One might also conclude that women would be more likely to be influenced by the quality of these relationships (e.g., to include those they like in their in-groups and to give women higher performance ratings as a result). Therefore, we propose:

Research Question 6: In same-sex dyads, the female supervisor will report a significantly higher LMX and performance rating for female subordinates than the male supervisor will report for the male subordinates.

Procedure

Few studies have used laboratory techniques to examine the supervisor–subordinate relationship. Even fewer have examined these relationships empirically in the field.

In an effort to expand this small but growing body of literature, our study used field data from four organizations in the communications/electronics industry. With the help of contact persons, we sent nearly 500 questionnaires to approximately 100 supervisors. Each supervisor was sent several copies of the survey asking him/her to rate each of his/her subordinates on the following scales: performance, quality of the leader–member relationship, and interpersonal affect. Respondents were also asked for demographic data about their race, gender, number of years with the company, and so forth. In order to ensure anonymity for all subjects, supervisors were asked to identify their subordinates only by a unique code number that was provided to them.

An individual in each of the four organizations' HR departments then provided us demographic information on the subordinates and helped us match supervisor-and-subordinate information.

Of the 500 surveys sent out, nearly 250 were returned to the contact persons. In nearly 30 cases, however, we were unable to match a supervisor and a subordinate. These cases were discarded, resulting in 220 usable surveys, for a return rate of 44 percent.

Measures

Our final sample was comprised of 42 male supervisors and 18 female supervisors. The

number of subordinates who took part in our study was divided as follows—117 males and 103 females.

A variable called *Dyad* was created to identify the gender of both the supervisor and the subordinate in each pair. Dyad was measured in two forms. In one form, dyad was a linear variable (for ANOVA and correlation analyses) in which 0 = different-sex supervisor/subordinate dyads and 1 = same-sex supervisor/subordinate dyads. In the other form, dyad was measured as a categorical variable. Dyads were categorized as composed of a male supervisor and a male subordinate, a female supervisor and a female subordinate, a male supervisor and a female subordinate, and a female supervisor and male subordinate. The numbers for the gender-dyad combinations were as follows:

Dyad 1 had 30 male supervisors and 105 male subordinates,

Dyad 2 had 12 male supervisors and 75 female subordinates,

Dyad 3 had 11 female supervisors and 28 female subordinates, while

Dyad 4 had 7 female supervisors and 12 male subordinates.

The average age of the male supervisors was 41, whereas the average age of the female supervisors was a significantly older, 48. Both male and female supervisors had been with their companies for approximately 12 years. The average age of both male and female subordinates was 35. These employees had been with their companies for approximately five years.

Control variables such as age, number of years with the company, and race were measured using open-ended/multiple choice questions. Since all the participants in the study worked in the communications/electronics industry, this variable was controlled for naturally.

LMX quality was measured using a scale adapted from a seven-item scale Graen (1976) developed. This scale includes questions such as, "Does your subordinate know where he/she stands with you?" and "Does he/she usually know how satisfied you are with his/her

The work of Gilligan suggests that workplace relationships are of greater importance to women than to men.

performance?" These questions were presented on a five-point Likert scale ranging from 1 = rarely to 5 = very often. Scores could range from a minimum of 7 to a maximum of 35.

Scores for individual items were summed to arrive at composite scores. The Cronbach alpha for the LMX Quality scale was .79. It should be noted that the LMX measure is used as both a dependent and independent variable in this study (see Table III on page 316).

Interpersonal affect was measured using a five-item scale developed by Tsui and Barry (1986). This scale includes questions such as, "I would like to spend more time with this individual" and "I would like to get to know this person better". Each question was presented with a scale ranging from 1 = strongly disagree to 5 = strongly agree. Total scores could vary from 5 to 25. Again, scores for individual items were summed to create a composite interpersonal affect score (alpha = .82). Like the LMX measure, the interpersonal affect measure is used as both a dependent and an independent variable in this study (see Table III).

Performance ratings were measured using an eight-item scale developed for this study. This scale included seven questions on the quality and quantity of each subordinate's work and on other performance-related matters and one question on the individual's overall performance. Each item was scored on a five-point scale (alpha = .77). Total scores could vary from 8 to 40. The performance rating measure is used only as a dependent vari-

able in this study (see the Appendix for a list of the actual items).

Analysis

t-tests, *F*-tests, and correlations were conducted to determine mean differences between predicted relationships in research questions 1, 2, and 3, and ANOVA analysis was used to test the amount of variance accounted for by each dependent variable (research questions 3, 4, 5, and 6).

All the control variables included in this study (age, number of years with the company, race, industry) were found to be nonsignificant predictors in the analyses. We were specifically interested in whether the age of a supervisor had any significant effect on the key variables since the average age difference between male and female supervisors was significant—nearly seven years. However, all the control variables, including age, proved to have nonsignificant effects on the key variables—LMX, affect, and performance ratings. As such, these variables were dropped from the model (see Figure 1) and are not reported in our tables. Details of these analyses are available from the authors.

Results

Table I presents the means, standard deviations, correlations, and scale reliabilities for the key variables in this study. As in previous research, all the scales used in this study were considered highly reliable (alphas = .79, .82, .78).

TABLE I Means, Standard Deviations, and Correlations.

Variable	Mean	S.D.	1	2	3
1. LMX	25.19	5.49	(.79)		
2. Affect	15.73	3.98	.62*	(.82)	
3. Perf. Ratings	28.50	6.03	.77*	.78*	(.77)

Note:

- * $p < .01$
- Coefficient alphas are on the diagonal

The Classical LMX Model

Research Questions 1 and 2 tested the classical LMX model. Research Question 1 predicted that subordinates who receive significantly higher ratings for interpersonal affect will also receive significantly higher ratings for LMX when compared with subordinates who receive low ratings for interpersonal affect. Correlation results ($r = .62, p < .01$) confirmed that, indeed, there was a significant positive relationship between affect and LMX (see Table I). Further, as can be seen in Table III, affect had a significant main effect on LMX ($F = 32.68, p < .01$). Thus, this research question received strong support.

Research Question 2 predicted that subordinates who receive higher LMX scores would also receive significantly higher performance ratings when compared with subordinates who receive significantly lower ratings for LMX. Correlation results ($r = .77, p < .01$) confirmed that, again, there was a significant positive relationship between receiving high LMX scores and high performance ratings (see Table I). Again, the ANOVA results (Table III) show that LMX had a significant main effect on performance ratings ($F = 50.54, p < .01$).

Thus, this research question also received strong support.

Gender Dyad Model

Research Questions 3–6 tested our proposed gender dyad model. Research Question 3 predicted that supervisors would report significantly higher affect for same-sex subordinates when compared to opposite-sex subordinates. As can be seen in Table II, reported affect scores for the same-sex dyads were 17.78 for the male dyads and 17.39 for the female dyads. In opposite-sex dyads, the scores were 12.64 for the dyads composed of male supervisors and female subordinates and 13.17 for the dyads composed of female supervisors and male subordinates.

Comparisons of the *t*-tests for these means revealed significant differences for the supervisors of both sexes: for male supervisors, $t = 4.39, p < .001$; for female supervisors, $t = 6.29, p < .001$. In addition, as shown in Table III, being in a same-sex dyad was a significant predictor of supervisor's interpersonal affect (liking) for his/her subordinates ($F = 131.52, p < .01$). Thus, Research Question 3 received further strong support.

TABLE II Cell Means—By Dyad.

	Dyad 1		Dyad 2	
	Supervisor = Male ($n = 30$) Subordinate = Male ($n = 105$)		Supervisor = Male ($n = 12$) Subordinate = Female ($n = 75$)	
Variable	Mean	SD	Mean	SD
LMX	27.21	3.17	20.96	3.18
Affect	17.78	3.13	12.64	2.96
Perf. Ratings	32.01	3.25	22.25	3.98
=====				
	Dyad 3		Dyad 4	
	Supervisor = Female ($n = 11$) Subordinate = Female ($n = 28$)		Supervisor = Female ($n = 7$) Subordinate = Male ($n = 12$)	
Variable	Mean	SD	Mean	SD
LMX	29.00	3.56	24.92	2.94
Affect	17.39	3.39	13.17	4.06
Perf. Ratings	33.75	3.56	24.50	3.75
=====				

TABLE III ANOVA Results.

Effect	Dependent Variables		
	Affect	LMX	Rating
	<i>F</i>	<i>F</i>	<i>F</i>
Dyad ^a	131.52*	57.60*	81.91*
Affect	-	32.68*	88.61*
LMX	-	-	50.54*

Note: * $p < .01$; ^aDyad is measured, 0 = different sex dyad, 1 = same sex dyad.

Research Question 4 predicted that same-sex dyads would have a significant and positive effect on LMX, and that this relationship would be mediated by interpersonal affect. This hypothesis was tested using LMX as the dependent variable, and dyad and affect as the independent variables (in that order). Results confirmed that, indeed, the composition of the dyad had a strong positive effect on supervisors' ratings of LMX and that interpersonal affect mediated this relationship ($F = 57.60, 32.68, p < .01$, respectively). These data suggest that in addition to being "liked" by one's supervisor, being of the same sex exerts an important influence on whether one will be selected as a member of the supervisor's in group.

Research Question 5 predicted that (same-sex) dyads would have a significant and positive effect on LMX and that this relationship would be mediated by interpersonal affect and LMX as proposed in our model (Figure 1). This research question was tested using performance ratings as the dependent variable in the ANOVA and entering LMX, then affect, and then dyad as the independent variables. Results (see Table III) confirmed that the composition of the dyad was a predictor of performance ratings ($F = 81.91, p < .01$) and that affect and LMX mediated this relationship ($F = 88.61, 50.54, p < .01$ respectively). Although LMX (being in the "in group") is a significant predictor of performance rat-

ings, interpersonal affect (liking) and being in a same-sex dyad had a significant influence above and beyond LMX. As such, this research question, too, received strong support.

Finally, Research Question 6 predicted that female subordinates in same-sex dyads would receive significantly higher LMX and performance rating scores (given the greater importance women place on relationships) than would male subordinates in same-sex dyads. Results for LMX ($\text{mean}_{\text{male}} = 27.21, \text{mean}_{\text{female}} = 29.00, t = 4.72, p < .01$) confirmed that, indeed, female subordinates in same-sex dyads did receive significantly higher LMX scores than did male subordinates in same-sex dyads. Although female subordinates in same-sex dyads also received higher performance ratings than male subordinates in same-sex dyads, the differences in means were nonsignificant. Nonetheless, these findings indicate partial support for Gilligan's (1982) theory that workplace relationships are of more importance to female than male employees.

Discussion

This study was designed with two specific purposes in mind: to revisit the classic LMX model in a field setting and to test our research question that the gender composition of the supervisor-subordinate dyad is an even better predictor of performance ratings than the

quality of the supervisor–subordinate relationship alone. Results confirmed, once again, that the LMX model is an excellent predictor of the quality of the relationship a subordinate has with his/her supervisor and thus the subordinate’s performance ratings. Although this finding in itself makes an important contribution to the LMX literature, especially since our results were obtained using field data, the study offers a more significant contribution. Our results confirmed, as we had anticipated, that not only may male supervisors treat their female subordinates differentially, but female supervisors also might treat their male subordinates differentially, as well. As can be seen in Table III, the composition of the dyad explained a significant amount of the variance in all three of the other variables—interpersonal affect, LMX, and performance ratings. This is a crucial finding given the increasing number of females entering the American workplace and slowly assuming supervisory positions. What these findings suggest is that organizations must ensure that *all* supervisors are trained in the “art of performance appraisal” [see Bernardin & Beatty (1984) for a comprehensive discussion of performance appraisal issues] and that *all* supervisors are made aware of the tendency for male supervisors to favor males and female supervisors to favor females. Organizations may want to consider incorporating into management training discussion of and/or training on the dynamics of gender issues so as to enhance managers’ awareness of the ways in which personal biases can influence the performance evaluation process.

The strong support for Research Question 6 also has important organizational implications. This research question proposed that female supervisors are more influenced in their performance evaluations by the quality of their relationships with their subordinates and are more likely than male supervisors to form stronger relationships (measured by LMX quality) with subordinates of the same sex. We proposed this research question based on arguments put forth by Fairhurst (1993), Gilligan (1982), and other experts in gender issues that females typically devote more energy and attention to relationships than do men, including in their professional lives. As

evident in the nonsignificance of the findings, however, this male–female difference is not reflected in the performance ratings of subordinates in same-sex dyads. In other words, whether a strong relationship has developed between a female supervisor and a female subordinate appears to have less impact on how the supervisor rates the subordinate’s performance than does the fact that the supervisor and subordinate are of the same sex.

Challenge for Future Research

Although we believe this research makes major contributions to our understanding of the impact of gender-related issues on performance evaluations [see Bernardin, Hennessey, & Peyrefitte (1995) for an excellent review on this subject], especially since this investigation was conducted in the field, much research in this area still remains to be done. First, an investigation of the properties of performance appraisal systems in organizations should also help us understand the impact of PA system dynamics on gender bias in performance ratings. In this connection, it should be noted that previous research (see Bernardin et al., 1995) has found no evidence for the argument that PA systems or appraisal formats have a significant impact on gender bias in evaluations. Second, our hope is that future research will examine the gender composition of supervisor–subordinate relationships in environments with different samples and in industries outside communications/electronics. Third, we would hope that future studies would investigate the interaction of gender and age/race and the resultant impact on ratings. Fourth, perhaps women actually do work harder for female supervisors and men work harder for male supervisors, and the performance evaluations are an objective measure of this added effort. If so, what are the implications of this behavior for work place dynamics and careers? Fifth, perhaps supervisors define “excellent” and “good” performance differently for male and female subordinates, thereby favoring or discriminating sex-linked personal characteristics? Sixth, we hope that future studies will include “time spent working in same and/or different-sex dyads” as a key variable; this should help us understand

... it should be noted that previous research has found no evidence for the argument that performance appraisal systems or appraisal formats have a significant impact on gender bias in evaluations.

whether exposure to the dynamics of different types of dyads (e.g., opposite-sex) has an impact on supervisors and/or subordinates when they are placed in other models of dyads (i.e., same-sex).

Next, while we have proposed a one-way causal model (dyad → affect → LMX → ratings) based on prior research, questions regarding the directionality of variables arise. It is plausible that other configurations of these variables might exist, especially since ours is a field study and we did not manipulate the variables. For example, gender composition of the dyad might bias the ratings awarded to subordinates, and this might impact liking and/or LMX quality. We hope that future studies will examine alternative models to study the key issues raised here.

Lastly, while we have used the accepted operationalization of interpersonal affect, it should be noted that the published literature on affect includes questions such as “I would like to spend more time with this person”. It is perhaps time to revisit this operationalization and also investigate whether this and similar questions prime some kind of bias in the respondents’ minds, especially when these questions are asked in connection with mixed-sex dyads.

Clearly, many questions still need to be investigated. Until we not only answer these questions but witness a significant increase in the number of women managers in the workplace, we can expect women to be at a significant disadvantage when it comes to the performance evaluations they receive.

Appendix: Items Used in Performance Evaluation Scale¹

1. Considering all the information you have, how would you rate this subordinate’s overall performance?
2. How deserving is s/he of higher and better responsibilities?
3. How well does s/he understand her job?
4. How would you rate his/her skills at team work?
5. How would you rate his/her quality of work?
6. How would you rate his/her quantity of work?
7. How would you rate his/her initiative at work?
8. How would you rate his/her dependability?

ARUP VARMA (Ph.D., Rutgers University) is Associate Professor at the Institute of Human Resources and Industrial Relations at Loyola University Chicago. His research interests include performance appraisal systems, high-performance work systems, and alternative dispute resolution issues. His research has been published in several leading journals including *Academy of Management Journal*, *Journal of Applied Psychology*, *Personnel Psychology*, *Human Resource Management Review*, *Human Resource Planning*, *Journal of World Business*, *Dispute Resolution Journal*, *Journal of Alternative Dispute Resolution*, and *Organization Development Journal*, among others. He has consulted with several organizations on strategic and organization development issues.

LINDA K. STROH is a Professor at the Institute of Human Resources & Industrial Relations, Loyola University Chicago. Linda received her Ph.D. and Post-Doc from Northwestern University. She is co-author of two books—*Globalizing People Through International Assignments* and *Organizational Behavior: A Management Challenge*—and over 60 articles on organizational behavior issues. Linda was honored at the 2000 Academy of Management Meeting with the Sage Publications research scholar award and also named Graduate Faculty Member of the Year at Loyola University (2000). She has also consulted with over 30 *Fortune* 500 organizations regarding such issues as motivation, leadership, change management, problem solving, strategic planning, and global management.

1. All question presented on a five-point Likert scale with 1 = Poor, 3 = Average, and 5 = Outstanding.

REFERENCES

- Abramson, P.R., Goldberg, P.A., Greenberg, J.H., & Abramson, L.M. (1977). The talking platypus phenomenon: Competency ratings as a function of sex and professional status. *Psychology of Women Quarterly*, 2, 114–124.
- Alimo-Metcalfe, B. (1994). Gender bias in the selection and assessment of women in management. In M.J. Davidson & R.J. Burke (Eds.), *Women in management: Current research issues* (pp. 93–109). London: Paul Chapman.
- Bartol, K.M., & Butterfield, D.A. (1976). Sex effects in evaluating leaders. *Journal of Applied Psychology*, 61, 446–454.
- Bernardin, H.J., & Beatty, R.W. (1984). *Performance appraisal: Assessing human behavior at work*. Boston: PWS Kent.
- Bernardin, H.J., Hennessey, H.W., Jr., & Peyrefitte, J. (1995). Age, racial and gender bias as a function of criterion specificity: A test of expert testimony. *Human Resource Management Review*, 5(1), 63–77.
- Brenner, O.C., Tomkiewicz, J.S., & Schein, V.E. (1989). The relationship between sex role stereotypes and requisite management characteristics revisited. *Academy of Management Journal*, 32, 662–669.
- Byrne, D. (1971). *The attraction paradigm*. New York: Academic.
- Cardy, R.L., & Dobbins, G.H. (1986). Affect and appraisal accuracy: Liking as an integral dimension in evaluating performance. *Journal of Applied Psychology*, 71, 672–678.
- Cohen, S.L., Bunker, K.A., Burton, A.L., & McManus, P.D. (1978). Reactions of male subordinates to the sex-role congruency of immediate supervision. *Sex Roles*, 4, 297–311.
- Dansereau, F., Jr., Graen, G., & Haga, W.J. (1975). A vertical dyad linkage approach to leadership within formal organizations—A longitudinal investigation of the role making process. *Organizational Behavior and Human Performance*, 13, 46–78.
- Deluga, R.J. (1998). Leader–member exchange quality and effectiveness ratings: The role of subordinate-supervisor conscientiousness similarity. *Group & Organization Management*, 23, 189–217.
- Dienesch, R.M.S., & Liden, R.C. (1986). Leader-member exchange model of leadership: A critique and further development. *Academy of Management Review*, 11, 618–634.
- Eagly, A.H. & Johnson, B.T. (1990). Gender and leadership style: A meta-analysis. *Psychological Bulletin*, 108, 233–256.
- Engle, E.E., & Lord, R.G. (1997). Implicit theories, self-schemas, and leader–member exchange. *Academy of Management Journal*, 40, 988–1010.
- Fairhurst, G.T. (1993). The leader-member exchange patterns of women leaders in industry: A discourse analysis. *Communication Monographs*, 60, 321–351.
- Gilligan, C. (1979). Woman's place in man's life cycle. *Harvard Educational Review*, 49, 431–446.
- Gilligan, C. (1982). *In a different voice: Psychological theory and woman's development*. Cambridge: Harvard University Press.
- Graen, G. (1976). Role making processes within complex organizations. In M.D. Dunette (Ed.), *Handbook of industrial and organizational psychology* (pp. 1201–1245). Chicago: Rand McNally.
- Graen, G. & Cashman, J. (1975). A role-making model of leadership in formal organizations: A developmental approach. In J.G. Hunt & L.L. Larson (Eds.), *Leadership frontiers* (pp. 143–165). Kent, OH: Kent State University Press.
- Graen, G., Liden, R., & Hoel, W. (1982). Role of leadership in the employee withdrawal process. *Journal of Applied Psychology*, 67, 868–872.
- Graen, G., & Scandura, T.A. (1987). Toward a psychology of dyadic organizing. In L.L. Cummings & B.M. Staw (Eds.), *Research in organizational behavior* (Volume 9, pp. 175–208). Greenwich, CT: JAI Press.
- Helgesen, S. (1990). *The female advantage: Womens way of leadership*. New York: Doubleday.
- Lagace, R.R., Castleberry, S.B., & Ridnour, R.E. (1993). An exploratory salesforce study of the relationship between leader–member exchange and motivation, role stress, and manager evaluation. *Journal of Applied Business Research*, 9, 110–119.
- Liden, R.C., & Graen, G. (1980). Generalizability of the vertical dyad linkage model of leadership. *Academy of Management Journal*, 23, 451–465.
- Liden, R.C., & Maslyn, J.M. (1998). Multidimensionality of leader–member exchange: An empirical assessment through scale development. *Journal of Management*, 24, 43–72.
- Liden, R.C., & Mitchell, T.R. (1988). Ingratiation behaviors in organizational settings. *Academy of Management Review*, 13, 572–587.
- Phillips, A.S., & Bedeian, A.G. (1994). Leader-follower exchange quality: The role of personal and interpersonal attributes. *Academy of Management Journal*, 37, 990–1001.
- Pulakos, E.D., & Wexley, K.N. (1983). The relationship among perceptual similarity, sex, and performance ratings in manager-subordinate dyads. *Academy of Management Journal*, 26, 129–139.
- Pulakos, E.D., White, L.A., Oppler, S.H., & Borman, W.C. (1989). Examination of rater and sex effects on performance ratings. *Journal of Applied Psychology*, 74, 770–780.
- Robbins, T.L. & DeNisi, A.S. (1994). Interpersonal affect and cognitive processing in performance appraisal: Toward closing the gap. *Journal of Applied Psychology*, 79, 341–350.

- Rosener, J.B. (1990). Ways women lead. *Harvard Business Review*, 119–133.
- Sackett, P.R., DuBois, Cathy, L.Z., & Noe, A.W. (1991). Tokenism in performance evaluation: The effects of work group representation on male–female and white-black differences in performance ratings. *Journal of Applied Psychology*, 76, 263–267.
- Schein, V.E., Mueller, R., & Jacobson, C. (1989). The relationship between sex role stereotypes and requisite management characteristics among college students. *Sex Roles*, 20, 103–110.
- Schein, V.E., Mueller, R., Lituchy, T., & Liu, J. (1996). Think manager—think male: A global phenomenon? *Journal of Organizational Behavior*, 17, 33–41.
- Tsui, A.S., & Barry, B. (1986). Interpersonal affect and rating errors. *Academy of Management Journal*, 29, 586–599.
- Turban, D.B., & Jones, A.P. (1998). Supervisor-subordinate similarity: Types, effects, and mechanisms. *Journal of Applied Psychology*, 73, 228–234.
- Varma, A., DeNisi, A.S., & Peters, L.H. (1996). Interpersonal affect and performance appraisal: A field study. *Personnel Psychology*, 49(2), 341–360.
- Vecchio, R.P. & Gobdel, B.C. (1984). The vertical dyad linkage model of leadership: Problems and perspectives. *Organizational Behavior and Human Performance*, 34, 5–20.
- Wayne, S.J., & Ferris, G.R. (1990). Influence tactics, affect, and exchange quality in supervisor-subordinate interactions: A laboratory experiment and field study. *Journal of Applied Psychology*, 75, 487–499.
- Wayne, S.J., Shore, L.M., & Liden, R.C. (1997). Perceived organizational support and leader–member exchange: A social exchange perspective. *Academy of Management Journal*, 40, 82–111.

ENDNOTE

The authors thank Drs. Angelo DeNisi and Anne Reilly for their comments on earlier versions of this manuscript.