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The Role of Leader-Follower Relationships in Leader Communication: A Test Using the LMX and Motivating Language Models

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This paper provides evidence on the necessity of congruency between leader behavior and communications in order to maximize worker outcomes. The study uses structural equation model comparisons to test competing models of leader communication and behavior. Results show that the best model is one where leader behavior (as encapsulated through the LMX model) fully mediates the relationship between leader communication (as measured using the motivating language framework) and worker performance and job satisfaction.

Key Words: motivating language, LMX, leader communication, structural equation model, mediation analysis

I. Introduction

Much attention in the business world is focused on leader communication—how such communication affects workplace outcomes, what makes for better leader communication, and how to improve leader communication. And although many leader communication models exist, the motivating language (ML) theory provides a parsimonious, well-tested framework for understanding the leader communication process (J. Mayfield 2009; J. Mayfield and M. Mayfield, 2009(a); J. Mayfield, M. Mayfield, and Kopf 1995, 1998; M. Mayfield 2004). However, many ML aspects remain untested. Chief among these aspects is the theory's contention that leader communication must be congruent with leader behavior (J. R. Mayfield 1993; J. Mayfield and M. Mayfield 2002; Sullivan 1988). Although this tenet has an intuitive appeal, its validity and mechanism of operation remains obscure. This paper explores this aspect of the ML theory; providing support for the role of leader behavior in the leader-follower communication process. In fact study findings indicate that leader behaviors fully mediate the relationship between leader communication and worker performance and job satisfaction.

In addition to the greater theoretical understanding these results provide for the ML/leader communication process, the findings also lend themselves to improved training applications. The analysis indicates the strong need to combine leader behavior training with leader communication training. As such, the findings can provide a practical road map for developing communication training programs.

These research findings will be fully developed in the following sections: background on motivating language theory and (LMX)–the leader framework used in

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this study, a methodological description, analysis results, and study conclusions and recommendations for future work.

II. Background

This section provides details on the leader communication and leader behavior frameworks used in this study: the motivating language and leader-member exchange theories. Although motivating language is a well- established leader communication theory (Sharbrough, Simmons and Cantrill 2006; J. Mayfield and M. Mayfield 2006; McMeans 2001), much of how actual leader communication translates into worker outcomes changes remains unclear. Specifically for this paper's purpose, the theory still has major assumptions that need to be tested about the role leader behaviors play in supporting leader communication. The LMX theory provides a useful framework for analyzing the leader communication-behavior link since it is a highly regarded theory of leader behavior with a dyadic nature that is congruent with ML theory (Cashman, Dansereau, G. Graen and Haga 1976; G. B. Graen and Cashman 1975; Liden and G. B. Graen 1980; J. Mayfield and M. Mayfield 1998; J. R. Mayfield, 1993; M. R. Mayfield 1994; Rosse and Kraut 1983). The following paragraphs provide specifics on motivating language theory itself, pertinent findings from ML research, an overview of LMX theory and how it relates to this current research, and proposed models of how ML operates within a leadership context.

Motivating language theory provides a comprehensive, easily applicable model of leader-to-follower work communication. The theory was originally proposed by Sullivan (1988), greatly developed by Mayfield and Mayfield (J. Mayfield and M. Mayfield, 2009(b); J. Mayfield and M. Mayfield 2007; J. Mayfield et al. 1995, 1998; Sharbrough et al. 2006) and further tested by many other researchers (Zorn, Jr. and Ruccio 1998; McMeans 2001; Sharbrough et al. 2006). The theory is well grounded in speech act theory, a widely accepted and utilized communication model (Sullivan 1988). As such, ML provides a robust theoretical framework for understanding how leader communication can affect and improve worker outcomes. In addition the ML model is parsimonious enough that it provides a stable platform for analysis and further development. In short, ML theory is a well-grounded and validated model of leader communication that can be easily adapted and applied to daily leader communication implementation.

In essence, ML theory proposes that all leader-to-follower work speech communication can be categorized into one of three speech types. These speech types are direction-giving language, empathetic language, and meaning-making language. Each of the three speech types composes non-overlapping, comprehensive categories. Although each speech type plays separate roles in leader communication, ML theory holds that a leader must use all three types synergistically in order to improve worker outcomes. Also, the communication process is dyadic rather than a simple expression of inherent leader ability. The original theory proposes that each leader-worker communication relationship will be unique, and the follower outcomes will be influenced by this dyadic relationship.

The first ML component is direction-giving language. Leaders use direction-giving language to provide workers with specifics on expected workplace performance activities and outcomes. These specifics can include quantity and quality performance components. The language should also detail any time frame performance requirements. Such language is expected to improve worker performance through means similar to goal-setting theory. In addition this language component is expected to improve worker affect (such as job satisfaction) by helping reduce worker anxiety over workplace requirements, decreasing task ambiguity, and uncertainty as to performance specifics (J. Mayfield et al. 1998; Sullivan 1988; Zorn, Jr. and Ruccio 1998).

The second ML component is empathetic language. A leader will use this speech category when he or she expresses genuine caring about a worker's emotional well being through oral communication means. It is used to develop stronger workplace emotional bonds with a worker. It is also used to show that a worker is valued for more than his or her workplace performance abilities—as a human being rather than simply an organizational asset. This language use is a method for leaders to communicate consideration (as within the initiating structure and consideration leadership styles theory). Worker outcomes are expected to improve through many mechanisms. One of the strongest mechanisms is that empathetic language is expected to increase worker loyalty and thus increase both worker performance and job satisfaction. Additionally, by showing value and validation for a worker's emotions, the worker's job satisfaction should increase (J. Mayfield and M. Mayfield 2002; McMeans 2001; Sharbrough et al. 2006).

The final aspect of ML theory is meaning-making language. This language is used by leaders to convey to a worker an organization's culture and what workplace behaviors are culturally appropriate. This ML aspect provides a unique addition to previous leadership communication theory. It is expected that as a worker better understands a workplace's cultural norms, he or she will be able to perform better by adapting his or her workplace performance to methods that will be more effective and efficient within the given organizational setting. In addition, worker job satisfaction should be enhanced through reduced anxiety—both about cultural expectations and from decreased emotional labor required to operate within an organization (S. Law, M. Mayfield and J. Mayfield 2009; J. Mayfield and M. Mayfield 2002, 2007; J. Mayfield et al. 1998).

ML theory also appears to be generalizable to many settings. It has been tested across a wide range of leader-follower types. Also importantly, ML findings (both at theoretical and scale/implementation levels) seem robust for across many organizational settings and worker levels (from non-skilled to professional/managerial workers). In addition, ML theory has seen testing using multiple measures, and these alternate ML measures have lead to similar ML-outcome results (J. Mayfield and M. Mayfield 2006; McMeans 2001; Sharbrough et al. 2006; Zorn, Jr. and Ruccio 1998).

Leader motivating language use has been shown to be linked to many worker outcomes (even beyond the performance and job satisfaction outcomes discussed so far). However, leader ML use has shown a consistent link with worker performance outcomes. Studies have indicated that for every 10 percent increase in leader ML use, a worker's performance is expected to improve by approximately 1.4 percent. Job satisfaction has shown an even stronger relationship, with a 4 percent increase expected for every 10 percent increase in motivating language (J. Mayfield and M. Mayfield 1998; J. Mayfield et al. 1998). Beyond these two outcomes, motivating language has been significantly linked to improvements in worker innovation, decision making, and intent-to-turnover (J. Mayfield and M. Mayfield 1998, 2007, 2002, 2006; M. Mayfield and J. Mayfield 2004).

These and other studies have established ML's link with desirable workplace outcomes. Similarly, strong evidence also exists for

ML's theoretical validity but one of the theory's major assumptions still remains largely unexplored. A central tenet of ML theory is that leader behavior must be congruent with ML communication in order for leader communication to be able to positively affect worker outcomes. In short ML theory has posited that if leader behavior does not support leader communication, then outcomes will be negatively affected (J. Mayfield and M. Mayfield 1998, 1995; J. R. Mayfield 1993; M. Mayfield and J. Mayfield 2004; Sullivan 1988). Some support for this hypothesis has been provided by Mayfield (1993). However, it is still unclear how this process occurs, and even the early ML theory foundations (Sullivan 1988) remained silent on potential mechanisms. One potential mechanism is that leader behavior mediates the relationship between leader communication and worker outcomes, but this potential mechanism has not been tested.

LMX theory provides a useful framework for testing as a potential mediator between ML use and worker outcomes. LMX theory is considered to be one of the most valid leadership (and management) theories (Miner 2005), and therefore, is a good theory for leadership testing. It also provides a concise measure of the relationship developed between a leader and an individual subordinate. Also important for this study, LMX has been shown to be strongly linked to leader communication (G. B. Graen and Cashman 1975; G. B. Graen and J. A. Graen 2006; Liden and G. B. Graen 1980; J. Mayfield and M. Mayfield 1998; M. Mayfield and J. Mayfield 2004). As such, it is a good leadership framework to test the role that leader behavior plays in the ML leader-follower relationship.

LMX theory posits that a leader's relationship with an individual worker has a significant effect on the worker's outcomes. This theory has been well supported across many work types, worker settings, and measurement methods. LMX relationships have also been shown to be strongly linked with worker performance, turnover, job satisfaction, and other relevant worker outcomes (K. Carson and P. P. Carson 2002; Gerstner and Day 1997; Ilies, Nahrgang and Morgeson 2007; Lapierre and Hackett 2007; M. Mayfield and J. Mayfield, 2008). Also, experimental design research has given strong indications that LMX's relationship to worker outcomes is of a causal nature, and not simply correlational (Miner, 2005).

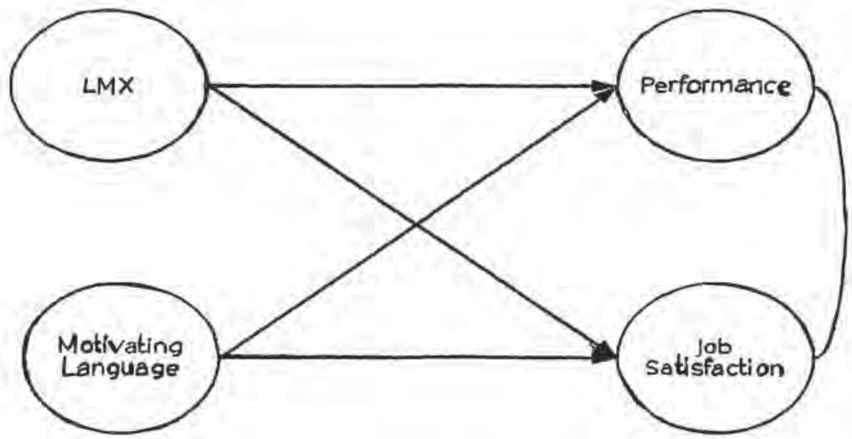
Importantly for this study, LMX relationships are dyadic in nature rather than simply based fully in leader skills. Leaders and followers negotiate their work relationship early on, and this relationship tends to remain stable throughout the existence of the dyad (Miner, 2005). The dyadic nature of the relationship means that it is congruent with and on the same level as ML relationships. This congruency means that LMX will be useful to test the ML-leadership-worker outcome relationship.

Based on the preceding background, four potential models can be constructed. The first model is a fully independent model. The second is a covariance model. The third is a partially mediated model. The fourth is a fully mediated model. (Although it is expected that these relationships will hold for all worker outcomes, for testing purposes the models are confined to worker performance and job satisfaction.) Full details on these four models and the implications of each model on ML theory will be detailed in the following paragraphs.

The fully independent model supposes that leader communication and leader behavior are completely independent of each other. This model is not expected to be supported, but needs to be included for completeness in the testing process. This model assumes that leader behavior can occur independently of leader communication. If

Figure 1

Independent Variables

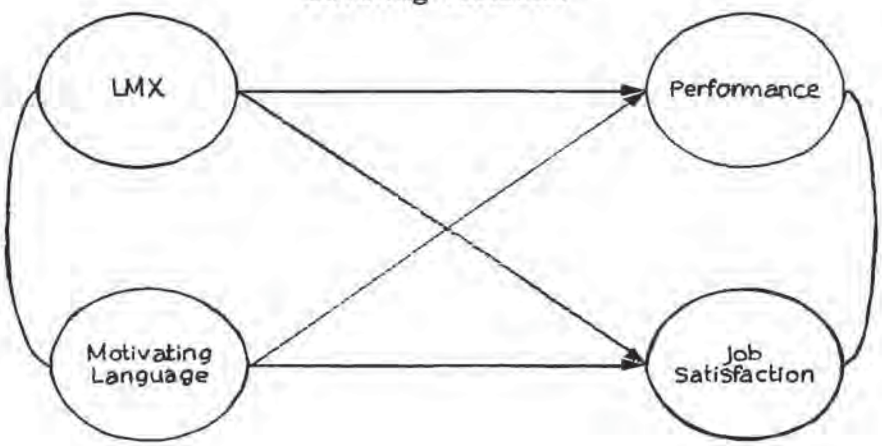


this model is supported, then serious flaws will be evident in ML theory as currently conceptualized. In addition, support would also call in to question previous research indicating the necessity of congruence between leader communication and behavior (Mayfield, 1993). This model is presented in Figure 1.

The second model assumes that leader communication and behavior are correlated, but behavior does not mediate leader communication and worker outcomes. Such a model would indicate overlapping skills for both ML and LMX, but that each set leader activities are not dependent on the other. Support for this model would also create questions about ML validity, but not necessarily invalidate previous statistical findings. Rather, it would indicate that previous research findings must be re-interpreted as showing a merely correlational relationship, or indicating a missing third variable that influences both leader communication and leader behavior. This proposed model is presented in Figure 2.

Figure 2

Covaring Variables



The next model posits that leader communication is partially mediated by leader behaviors. This model would provide support for existing ML theory but would also raise new questions. Under this model, ML communication efficacy would be partly dependent on leader behavior, but would also have an effect independent of leader actions. With this variable ordering, ML efficacy would only be partly dependent on leader behaviors. Therefore, leader behaviors would not have to be congruent with leader communication in order for ML to improve worker outcomes. However, such congruency would partly influence worker outcomes. Therefore, this model would be in-line with previous research findings, but also require a new conceptualization of previous study conclusions. This proposed model is presented in Figure 3.

There is also a fully mediated model. In this model, ML use is fully mediated by leader behaviors (as captured through LMX theory). This model is congruent with current ML conceptualizations. It is also supportive of prior research findings, though it expands theoretical understanding of previous research. If this model is supported, then there will be further evidence that leader behavior must be in line with leader communication in order for the leader communication to be effective, and there will also be a justifiable theoretical backing for why such a congruence must occur. This proposed model is presented in Figure 4.

Figure 3

Partially Mediated Model

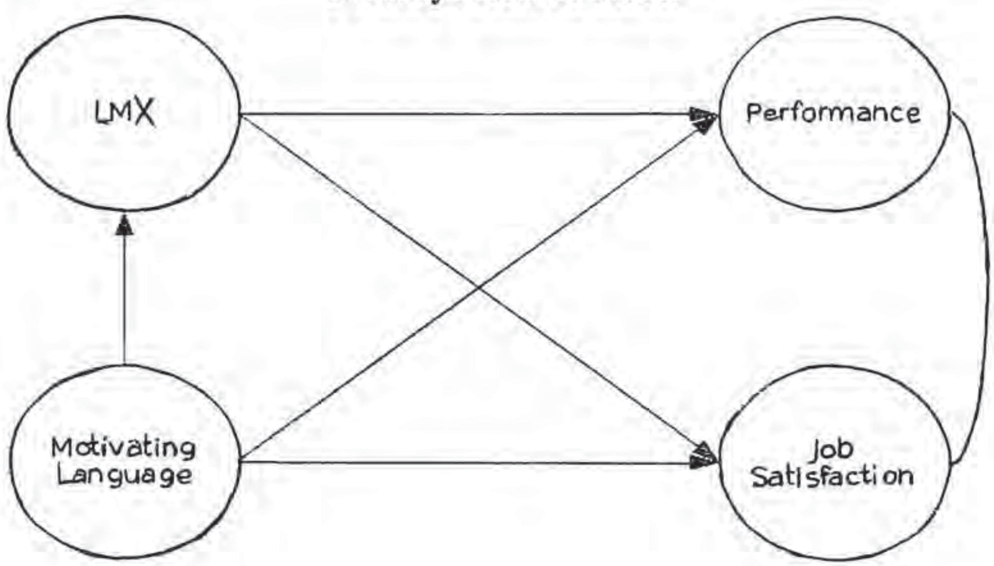
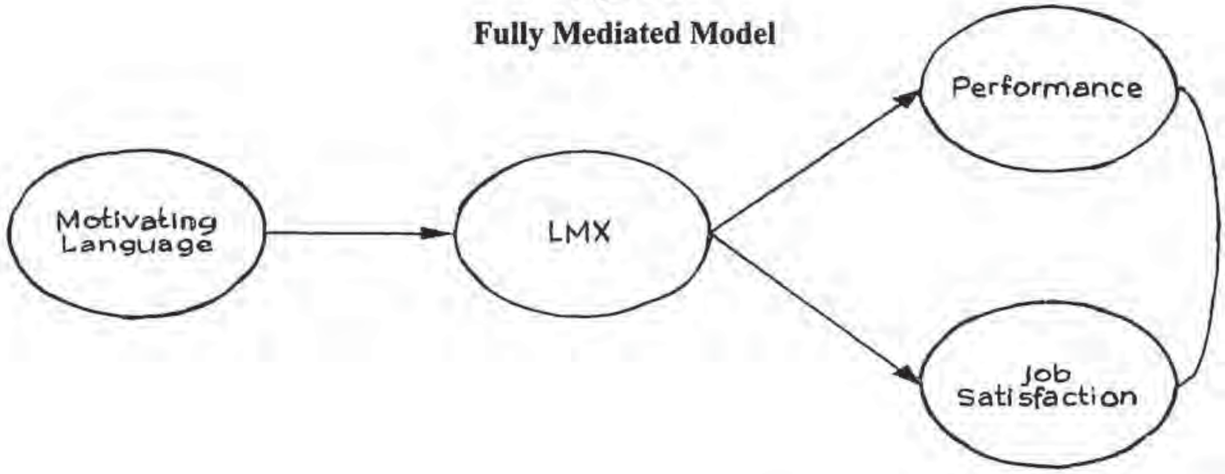


Figure 4

Fully Mediated Model



III. Methodology

The preceding models and literature review are distilled in the following hypothesis (stated as an alternative hypothesis for sake of clarity):

> H_A: Model 4 (the fully mediated model) provides a better fit with the observed data than the other potential models.

This hypothesis can be further explicated through more specific hypotheses. These hypotheses are also based on the previous literature review, and a brief delineation of the hypothesis is provided following each statement.

> H_{1A}: Leader motivating language is positively related to LMX.

This hypothesis is based on existing theory (J. Mayfield & M. Mayfield, 1995; J. Mayfield et al., 1995, 1998,; J.R. Mayfield, 1993; M. Mayfield & J. Mayfield, 2004; Sullivan, 1998) indicating that leader communication is a key component of leader behavior. While this hypothesis has not been tested with the motivating language construct, existing literature supports the possible link (Gerstner and Day, 1997; Ilies et al., 2007; J. R. Mayfield, 1993; Yrle, Hartman, & Galle Jr., 2003).

> H_{2A}: LMX is directly and positively related to worker job satisfaction.

This hypothesis is based on extensive findings from LMX research that shows a strong link between the LMX relationship and worker job satisfaction (Erdogan & Enders, 2007; Gerstner & Day, 1997; G. B. Graen & Cashman, 1975; G. B. Graen, Novak, & Sommerkamp, 1982; Ilies et al., 2007; Liden & G. B. Graen, 1980; Mardanov, Sterrett, & Baker, 2007; McClane, 1991; Rosse & Kraut, 1983).

> H_{3A}: LMX is directly and positively related to worker job performance.

This hypothesis is also based on extensive, existing LMX findings demonstrating the significant relationship between LMX and worker performance (Bauer, Erdogan, Liden and Wayne 2006; Gerstner and Day 1997; Ilies et al. 2007;

Kacmar, Witt, Zivnuska and Gully 2003; Schyns and Wolfram 2008; Varma and Stroh 2001; Wang, H., Law and Chen 2008).

> H_{4A}: LMX mediates the relationship between motivating language and worker performance and job satisfaction.

This hypothesis is based on previously developed theory (J. Mayfield, 2009; J. Mayfield and M. Mayfield, in press; J. Mayfield and M. Mayfield, 1995; J. Mayfield et al. 1995, 1998; J. R. Mayfield, 1993; McMeans, 2001; Sullivan, 1988; Zorn, Jr. and Ruccio, 1998) that indicates leader behavior should be a mediator of leader communication and worker outcomes. This theory has not been tested with the motivating language construct, but existing literature supports this supposition.

All variables were captured using well-established scales. A leader's motivating language use was measured through the motivating language scale (J. Mayfield et al. 1995; J. R. Mayfield 1993). Leadership skills were captured using the LMX-7 scale (Cashman et al. 1976; G. B. Graen and Cashman 1975; Liden and G. B. Graen 1980). Worker performance was evaluated by the leader using the employee rating scale (Cashman et al. 1976; G. B. Graen and Cashman 1975; G. B. Graen et al. 1982). Finally, worker job satisfaction was examined through the Hoppock (1935) job satisfaction scale.

Structural equation modeling (SEM) was used to capture the variable relationships and compare the potential models. SEM is a useful technique for comparing complex models with latent variables. Latent variables are those that cannot be directly measured but can be estimated through their effects on manifest variables (such as questionnaire items). SEM also provides many diagnostic methods for evaluating model quality and comparing models for fit adequacy (Bollen and Long 1993).

Unlike most statistical analysis methods, testing SEM model fit adequacy relies on evaluating several diagnostic measures. A chi-square test was the earliest measure of model fit. The chi-square test provides information on how close a fit exists between the proposed model and the observed data. Significant results indicate a worse fit. However, the chi-square significance test is generally considered to be overly sensitive to trivial model-data discrepancies and less reliable than other fit measures. Another use of the chi-square test is to check the ratio of chi-square statistic to degrees of freedom. If this number is less than three, the model is generally considered to fit the data well.

Goodness of Fit indices have been developed that are considered to be better measures of model-data congruence. The GFI provides a good measure, and any score over 0.90 indicates a good model-data fit with measures over 0.85 being acceptable. More modern fit measures have been developed as well with similar score requirements. Using multiple measures provides a better view of model fit adequacy, and a model is generally considered to fit the data well when most of these measures indicate model-data congruency (Bollen and Long 1993; Raftery 1993; Schumacker and Lomax 1996).

Finally, the RMSE (root mean square error) provides another indication of model-data fit. This measure ranges between 0 and 1, with lower scores indicating better fits between the data and a proposed model. Models are generally considered to have an acceptable fit with the data when the RMSE is below 0.10, and to have very good fits when the RMSE is below 0.05. There is an alternative RMSE measure (SRMR– standardized root mean residual) that provides other model insights and has similar score properties.

With SEM models, many potential models may fit the observed data. Although each of these models may provide a potentially adequate fit, some models will fit better than others. Initial model selection should be guided by theory. Once a theoretically, sustainable set of models have been selected, direct model fit comparisons can be made. The BIC (Bayesian Inference Coefficient) provides a readily usable comparison method. Lower BIC scores indicate better model fits. A difference of 5 points shows strong evidence for model difference, and a 10-point difference indicates near incontrovertible evidence of model difference (Bollen and Long 1993).

IV. Results

Study respondents were drawn from a southeastern U.S. health-care facility. This subject pool consisted of 475 workers with 151 providing usable responses–generating a 32 percent response rate. Female respondents were in the majority (reflecting the facilities demographic balance) with 68.9 percent of the sample group being female. The average work team consisted of 11.6 workers. The mean organizational tenure was 11 years, and the mean team tenure was 4.8 years.

All measures showed acceptable reliability levels. Scale reliability ranged from a high of 0.91 for direction-giving language to a low of 0.71 for job satisfaction. Although the Hoppock scale's reliability was lower than the other measures, it still fell within generally acceptable guidelines for adequate reliability. Also, measure reliabilities seemed to be in line with previous research using these measures. Scale inter-relationships, and descriptives are presented in Table 1. Scale reliabilities are presented in Table 2.

Additional analyses were performed to test for scale convergent and divergent validity based on Fornell and Larcker's (1981) recommendations, and these results indicated good scale properties. For positive indications of convergent validity, individual manifest items showed high reliabilities (all above 0.95), and latent construct reliabilities were similarly high (all 0.98 or higher). The average variance extracted (AVE) for each latent variable was also well above the author's recommended 50 percent level, indicating that the latent variables were showing true construct validity. Furthermore, the results indicate good divergent validity in addition to the previous convergent validity properties. Each latent variable's construct reliability and AVE was substantially higher than its associated Gamma^2. Specifically, the ratio of these quantities exceeded 1.5 in all cases. Information on these tests is presented in Table 3.

As hypothesized, the fully mediated model proved to be the best fit with the observed data. The fully mediated model had a BIC score of -527.19, with the next best fitting model (the partially mediated model) having a BIC of -520.88. The difference of 6.31 between the two models provides a substantial indication of differences between the two models. Model BIC scores are presented in Table 4.

Table 1

Variable Descriptives and Inter-relationships

	Motivating Language			LMX							Performance (ERS)						Job Satisfaction (Hoppock)			
	DG	Emp	MM	1	2	3	4	5	6	7	1	2	3	4	5	6	1	2	3	4
Direction Giving	**0.77**	**0.75**	**0.53**	**0.52**	**0.54**	**0.55**	**0.58**	**0.46**	**0.44**	**0.58**	**0.28**	**0.21**	**0.18**	**0.17**	**0.13**	**0.10**	**0.26**	**0.41**	**0.33**	**0.23**
Empathetic	0.84	**1.04**	**0.58**	**0.61**	**0.66**	**0.66**	**0.70**	**0.55**	**0.52**	**0.62**	**0.33**	**0.28**	**0.30**	**0.27**	**0.22**	**0.21**	**0.38**	**0.44**	**0.36**	**0.31**
Meaning	0.64	0.60	**0.90**	**0.38**	**0.41**	**0.44**	**0.50**	**0.32**	**0.37**	**0.41**	**0.15**	**0.14**	**0.17**	**0.17**	**0.15**	**0.11**	**0.25**	**0.30**	**0.21**	**0.24**
LMX 01	0.61	0.61	0.41	**0.95**	**0.63**	**0.62**	**0.60**	**0.52**	**0.43**	**0.56**	**0.25**	**0.19**	**0.25**	**0.20**	**0.19**	**0.15**	**0.19**	**0.33**	**0.23**	**0.21**
LMX 02	0.65	0.62	0.45	0.63	**0.89**	**0.63**	**0.68**	**0.51**	**0.44**	**0.57**	**0.31**	**0.23**	**0.28**	**0.22**	**0.19**	**0.13**	**0.25**	**0.31**	**0.32**	**0.22**
LMX 03	0.59	0.61	0.43	0.60	0.63	**1.12**	**0.90**	**0.62**	**0.54**	**0.62**	**0.43**	**0.34**	**0.40**	**0.31**	**0.26**	**0.16**	**0.27**	**0.38**	**0.37**	**0.27**
LMX 04	0.52	0.55	0.42	0.49	0.57	0.67	**1.58**	**0.62**	**0.55**	**0.66**	**0.32**	**0.27**	**0.31**	**0.32**	**0.25**	**0.18**	**0.24**	**0.21**	**0.22**	**0.17**
LMX 05	0.62	0.64	0.41	0.63	0.64	0.69	0.59	**0.70**	**0.48**	**0.61**	**0.33**	**0.21**	**0.25**	**0.26**	**0.19**	**0.18**	**0.20**	**0.33**	**0.29**	**0.18**
LMX 06	0.55	0.56	0.42	0.48	0.52	0.56	0.48	0.63	**0.83**	**0.61**	**0.21**	**0.12**	**0.15**	**0.13**	**0.09**	**0.07**	**0.30**	**0.37**	**0.30**	**0.08**
LMX 07	0.65	0.60	0.43	0.57	0.60	0.58	0.52	0.72	0.66	**1.03**	**0.28**	**0.24**	**0.27**	**0.24**	**0.22**	**0.15**	**0.31**	**0.52**	**0.31**	**0.17**
ERS 01	0.29	0.29	0.14	0.24	0.30	0.37	0.23	0.36	0.21	0.25	**1.23**	**0.94**	**0.91**	**0.78**	**0.77**	**0.66**	**0.16**	**0.39**	**0.29**	**0.29**
ERS 02	0.24	0.27	0.15	0.20	0.23	0.32	0.21	0.25	0.13	0.23	0.83	**1.03**	**1.02**	**0.91**	**0.87**	**0.74**	**0.15**	**0.27**	**0.15**	**0.29**
ERS 03	0.18	0.25	0.15	0.22	0.25	0.33	0.21	0.26	0.14	0.23	0.71	0.86	**1.36**	**1.08**	**1.03**	**0.89**	**0.20**	**0.25**	**0.10**	**0.23**
ERS 04	0.18	0.24	0.17	0.19	0.21	0.27	0.24	0.20	0.14	0.22	0.65	0.83	0.86	**1.16**	**0.92**	**0.83**	**0.14**	**0.23**	**0.10**	**0.23**
ERS 05	0.15	0.22	0.16	0.20	0.20	0.25	0.20	0.23	0.10	0.21	0.70	0.87	0.79	0.86	**0.99**	**0.83**	**0.14**	**0.27**	**0.06**	**0.23**
ERS 06	0.12	0.21	0.13	0.16	0.14	0.16	0.15	0.22	0.08	0.15	0.63	0.77	0.81	0.82	0.89	**0.90**	**0.11**	**0.14**	**0.02**	**0.20**
Job Sat 01	0.25	0.36	0.25	0.19	0.25	0.24	0.19	0.23	0.31	0.29	0.14	0.14	0.17	0.13	0.14	0.12	**1.07**	**0.84**	**0.55**	**0.51**
Job Sat 02	0.36	0.33	0.24	0.26	0.25	0.28	0.13	0.30	0.31	0.39	0.27	0.20	0.16	0.16	0.21	0.12	0.62	**1.70**	**0.83**	**0.62**
Job Sat 03	0.33	0.31	0.19	0.21	0.29	0.31	0.15	0.31	0.29	0.27	0.23	0.13	0.08	0.08	0.06	0.01	0.47	0.56	**1.29**	**0.53**
Job Sat 04	0.27	0.31	0.26	0.22	0.25	0.27	0.15	0.22	0.09	0.18	0.27	0.29	0.21	0.22	0.24	0.22	0.51	0.50	0.49	**0.91**
Mean	3.57	3.38	2.53	3.59	3.64	3.53	3.34	4.26	4.00	3.89	3.87	3.80	3.68	3.86	3.85	4.16	5.30	5.29	5.03	4.04
Standard Dev	0.88	1.02	0.95	0.97	0.94	1.06	1.26	0.83	0.91	1.01	1.11	1.01	1.16	1.08	0.99	0.95	1.03	1.30	1.14	0.95

Covariances are in bold, correlations are in normal text

Table 2

Measure Reliabilities

Measure	Lower Confidence Limit	Cronbach's Alpha	Upper Confidence Limit
Direction Giving	0.94	0.95	0.95
Empathetic	0.94	0.95	0.95
Meaning Making	0.93	0.94	0.95
LMX	0.91	0.92	0.93
Performance (ERS)	0.95	0.95	0.96
Job Satisfaction	0.78	0.81	0.83

Once the fully mediated model was established as being the best fitting model, the quality of this model's fit was tested and found to be acceptable. The chi-square test was significant, but the ratio was 1.79, well within acceptable guidelines for this measure. The GFI score was a bit low at 0.83, but the alternative GFI scores could be considered acceptable, ranging from 0.94 to 0.88. In addition the RMSE score was 0.07, and the SRMR was 0.05; both; scores indicating a good fit between the model and the observed data. Model fit statistics are presented in Table 5.

The results also indicated significant links between all tested variables, and these findings supported our proposed hypothesis and sub-hypotheses. Such significant linkages are necessary in order to support the hypothesized model since a model may show a good fit with data but have hypothesized links that are non-significant. These results are presented graphically in Figure 5 and numerically in Table 6.

Furthermore, the model does an adequate job of explaining the data's variance. The model explains 18 percent of the variance in a worker's performance and 37 percent of the variance in a worker's job satisfaction. In addition to the variance explained in the model's latent variables, the model explains 86 percent of the manifest variables' variance. The R^2 equivalent of these numbers would be 0.18 for worker performance, 0.37 for worker job satisfaction, and 0.87 for the relationship between the latent variables and the manifest variables. Such R^2 results can be considered to be quite respectable (J. Cohen & P. Cohen, 1983; J. Cohen, P. Cohen, West, & Aiken, 2003; Fox, 1991, 1997, 2002).

V. Conclusion

This research provides evidence that appropriate leader behaviors are needed in order to support leader-follower communication. Results indicate that the fully mediated model is the best fit with the observed data. This finding indicates that leader-follower communication occurs within the context of a given leader-follower relationship – not simply as an independent process of leader information transmission. As such, these results provide new insights into the motivating language theory and leader communication in general.

An important aspect of this work is that it provides evidence for one of the largely untested ML theory assumptions. These results underline the necessity of leader behavior congruence with leader communications. Since ML communications appear to be fully mediated by leader behavior, poor leader behavior can neutralize good leader communications. Even more strongly stated, one interpretation of the results is that good leader communication cannot take place without a good leader-subordinate relation-ship. This last interpretation would give greater weight to the necessity

Table 3

Convergent and Discriminant Validity Test Results

Variable	Reliability[1]	AVE	AVE to Gamma² Ratio	Construct Reliability to Gamma² Ratio
Motivating Language	0.997	99.4%	1.768	1.771
LMX	0.999	99.1%	1.763	1.775
Performance	0.999	99.7%	5.931	5.945
Job Satisfaction	0.994	98.3%	2.127	2.150
Direction Giving	1.000	NA	NA	NA
Empathetic	0.996	NA	NA	NA
Meaning Making	0.990	NA	NA	NA
LMX 01	0.991	NA	NA	NA
LMX 02	0.993	NA	NA	NA
LMX 03	0.993	NA	NA	NA
LMX 04	0.989	NA	NA	NA
LMX 05	1.000	NA	NA	NA
LMX 06	0.991	NA	NA	NA
LMX 07	0.992	NA	NA	NA
ERS 01	0.994	NA	NA	NA
ERS 02	0.997	NA	NA	NA
ERS 03	0.998	NA	NA	NA
ERS 04	0.998	NA	NA	NA
ERS 05	1.000	NA	NA	NA
ERS 06	0.997	NA	NA	NA
Job Sat 01	0.985	NA	NA	NA
Job Sat 02	1.000	NA	NA	NA
Job Sat 03	0.982	NA	NA	NA
Job Sat 04	0.983	NA	NA	NA

1 Reliability is construct reliability for the latent variables and item reliability for the manifest variables.

Table 4

BIC Comparison and Fit Statistics

Model	BIC
Independent Variables	-395.58
Covaring Variables	-520.88
Partially Mediated Model	-520.88
Fully Mediated Model	-527.19

Table 5

Fully Mediated Model Fit Statistics

Model	BIC	Chi-Square	Chi-Square to df ratio	GFI	Bentler-Bonnett NFI	Tucker-Lewis NNFI	Bentler CFI	RMSEA	SRMR
Fully Mediated Model	-527.19	296.64, df=166	1.77	0.83	0.88	0.93	0.94	0.07	0.05

Figure 5

Latent Variable Relations with Standardized Coefficients for the Fully Mediated Model

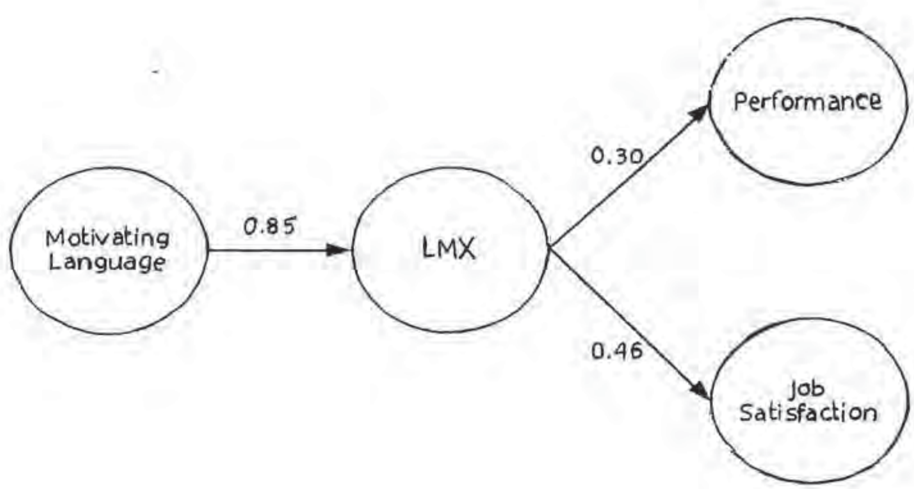


Table 6

Fully Mediated Model Path Relationships

Path	Standardized Coefficient	Unstandardized Coefficient
ML ---> Direction Giving Language	0.92	1.00[1]
ML ---> Empathetic Language	0.92	1.16
ML ---> Meaning Making Language	0.67	.79
LMX ---> LMX.01	0.75	1.03
LMX ---> LMX.02	0.79	1.06
LMX ---> LMX.03	0.80	1.20
LMX ---> LMX.04	0.71	1.25
LMX ---> LMX.05	0.85	1.00[1]
LMX ---> LMX.06	0.71	0.92
LMX ---> LMX.07	0.79	1.14
Performance ---> ERS.01	0.76	0.89
Performance ---> ERS.02	0.92	0.98
Performance ---> ERS.03	0.93	1.15
Performance ---> ERS.04	0.91	1.03
Performance ---> ERS.05	0.96	1.00[1]
Performance ---> ERS.06	0.88	0.88
Job Satisfaction ---> JS.01	0.75	0.74
Job Satisfaction ---> JS.02	0.81	1.00[1]
Job Satisfaction ---> JS.03	0.68	0.74
Job Satisfaction ---> JS.04	0.66	0.60
ML ---> LMX	0.85	0.75
LMX ---> Performance	0.30	0.41
LMX ---> Job Satisfaction	0.46	0.68
Performance <--> Job Satisfaction	NA	0.10

2 Path coefficient set to 1.00 for model identification purposes.

Table 6

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LMX ---> LMX.06	0.71	0.92
LMX ---> LMX.07	0.79	1.14
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Performance <--> Job Satisfaction	NA	0.10

2 Path coefficient set to 1.00 for model identification purposes.

for congruent leader behavior and communication than detailed in the original theory.

The results also provide a better understanding of general leader behavior. They provide information on how leader behavior mediates leader communication. Insights can also be drawn for how leader communication affects leader-follower relationship outcomes. As such, these results also provide useful information for training and human resource purposes. The findings indicate that leader communication training must be supported by leader skills training. It can also provide information for leader selection purposes. Drawing from these results, leaders should be selected based on communication and relationship building skills as well as receiving appropriate training throughout their careers.

For leaders, these findings underscore the importance of ensuring congruence between actions and spoken words. Based on our results, leader communication can only be successfully translated into higher worker performance and job satisfaction through appropriate leader behavior. In short, it is not enough to simply talk a good game, leaders must be able to put this communication into concrete, positive leader behavior. Poor leader \behavior will act as a barrier to a good leader communication, and thwart attempts at improving worker outcomes via improved communication methods.

Additionally, this research holds implications about the leader constructs of motivating language and LMX. For motivating language, it provides a new insight into how leader communication is operationalized. Previous studies have concentrated mostly on simple links between leader motivating language use and various worker outcomes–motivating language mediating and operationalization processes have not received the same level of attention. This study helps provide such attention by adding valuable information on the crucial role leader behavior plays in linking leader communication to worker outcomes. Similarly, this study can help researchers better understand LMX theory. These findings aid placing leader behaviors in the nomological net of worker performance and leader communication. As such it assists theory development by expanding understanding of the leadership process.

While this research has provided useful insights into ML theory, more work needs to be done in this area. Future work needs to examine other worker outcomes to determine if these results hold across different worker outcome variables. Alternate leadership measures should also be introduced to determine which leadership skills are necessary to facilitate leader communication. In addition, training methods need to be developed and tested to utilize these results so that appropriate intervention methods can be developed and implemented.

References

Bauer, T. N., B. Erdogan, R. C. Liden, and S. J. Wayne. 2006. "A Longitudinal Study of the Moderating Role of Extraversion: Leader-Member Exchange, Performance, and Turnover during New Executive Development." *Journal of Applied Psychology*, 91(2): 98-310.

Bollen, K. A., and J. S. Long. 1993. *Testing Structural Equation Models*. 1st ed. Newbury Park, CA: Sage Publications, Inc.

Carson, K., and P. P. Carson. 2002. "LMX Reflections: An Interview with George Graen." *Journal of Applied Management and Entrepreneurship*, 7(2): 91.

Cashman, J., F. Dansereau, G. Graen,

and W. J. Haga. 1976. "Organizational Understructure and Leadership: A Longitudinal Investigation of the Managerial Role-Making Process." *Organizational Behavior and Human Performance*, 15(2): 278-296.

Cohen, J., and P. Cohen. 1983. *Applied Multiple Regression/Correlation Analysis for the Behavioral Sciences.* 2nd ed. Hillsdale, New Jersey: Lawrence Erlbaum Associates.

Cohen, J., P. Cohen, S. G. West, and L. S. Aiken. 2003. *Applied Multiple Regression/Correlation Analysis for the Behavioral Sciences*. 3rd ed. Mahwah, New Jersey: Lawrence Erlbaum Associates.

Erdogan, B., and J. Enders. 2007. "Support from the Top: Supervisors' Perceived Organizational Support as a Moderator of Leader-Member Exchange to Satisfaction and Performance Relationships." *Journal of Applied Psychology*, 92(2): 321-330.

Fornell, C., and D. F. Larcker. 1981. "Evaluating Structural Equation Models with Unobservable Variables and Measurement Error." *Journal of Marketing Research*, 18(3): 39-50.

Fox, J. 1991. *Regression Diagnostics*. Quantitative Applications in the Social Sciences. Thousand Oaks, CA: Sage Publications."

Fox, J. 1997. *Applied Regression Analysis, Linear Models, and Related Methods*. Thousand Oaks, CA: Sage Publications.

Fox, J. 2002. *An R and S-Plus Companion to Applied Regression*. Thousand Oaks, CA: Sage Publications.

Gerstner, C. R., and D. V. Day. 1997. "Meta-Analytic Review of Leader-Member Exchange Theory: Correlates and Construct Issues." *Journal of Applied Psychology*, 82(6): 827-844.

Graen, G. B., and J. Cashman. 1975. "A Role-Making Model of Leadership in Formal Organizations: A Development Approach." *Leadership Frontiers.* Vol. 143: pp. 143-165. Kent, OH: Kent State University Press.

Graen, G. B., and J. A. Graen. 2006. *Sharing Network Leadership*. LMX Leadership. Greenwich, CT: Information Age Publishing.

Graen, G. B., M. A. Novak, and P. Sommerkamp. 1982. "The Effects of Leader-Member Exchange and Job Design on Productivity and Satisfaction: Testing a Dual Attachment Model." *Organizational Behavior and Human Performance*, 30(1): 109-131.

Hoppock, R. 1995. *Job Satisfaction*, New York: Harper and Row.

Ilies, R., J. D. Nahrgang, and F. P. Morgeson. 2007. "Leader-Member Exchange and Citizenship Behaviors: A Meta-Analysis." *Journal of Applied Psychology*, 92(1): 269-277.

Kacmar, M. K., A. L. Witt, S. Zivnuska, and S. M. Gully. 2003. "The Interactive Effect of Leader-Member Exchange and Communication Frequency on Performance Ratings." *Journal of Applied Psychology*, 88(4): 764-722.

Lapierre, L. M., and R. D. Hackett. 2007. "Trait Conscientiousness, Leader-Member Exchange, Job Satisfaction and Organizational Citizenship Behaviour: A Test of an Integrative Model." *Journal of Occupational and Organizational Psychology*, 80(3): 539-554.

Law, S., M. Mayfield, and J. Mayfield. 2009. "Employee Communication, Information Technology Use, and Mandatory Training." *International Journal of Liability and Scientific Enquiry*, 2(1): 26-39.

Liden, R. C., and G. B. Graen. 1980. "Generalizability of the Vertical Dyad Linkage Model of Leadership." *Academy* *of Management Journal*, 23(3): 451-465.

Mardanov, I., J. Sterrett, and J. Baker. 2007. "Satisfaction with Supervision and Member Job Satisfaction in Leader-Member Exchange: An Empirical Study in the Restaurant Industry." *Journal of Applied Management and Entrepreneurship*, 12(3): 37-55.

Mayfield, J. 2009. "Motivating Language: A Meaningful Guide for Leader Communications." *Development and Learning in Organizations*, 23(1): 9-11.

Mayfield, J., and M. Mayfield. 1995. "Learning the Language of Leadership: A Proposed Agenda for Leader Training." *Journal of Leadership and Organizational Studies*, 2(1): 132-136.

Mayfield, J., and M. Mayfield. 1998. "Increasing Worker Outcomes by Improving Leader Follower Relations." *Journal of Leadership Studies*, 5(1): 72-81.

Mayfield, J., and M. Mayfield. 2002. "Leader Communication Strategies Critical Paths to Improving Employee Commitment." *American Business Review*, 20(2): 89-94.

Mayfield, J., and M. Mayfield. 2006. "The Benefits of Leader Communication on Part-Time Worker Outcomes: A Comparison Between Part-Time and Full-Time Employees Using Motivating Language." *Journal of Business Strategies*, 23(2): 131-153.

Mayfield, J., and M. Mayfield. 2007. "The Effects of Leader Communication on a Worker's Intent to Stay: An Investigation Using Structural Equation Modeling." *Human Performance*, 20(2): 85-102.

Mayfield, J., and M. Mayfield. 2009(a). "The Role of Leader Motivating Language in Employee Absenteeism." *Journal of Business Communication*, in press.

Mayfield, J., and M. Mayfield. 2009(b). "Leader-Level Influence on Motivating Language: A Two-Level Model Investigation on Worker Performance and Job Satisfaction." *Competitiveness Review*, in press.

Mayfield, J., M. Mayfield, and J. Kopf. 1995. "Motivating Language: Exploring Theory with Scale Development." *The Journal of Business Communication*, 32(4): 329-344.

Mayfield, J., M. Mayfield, and J. Kopf. 1998. "The Effects of Leader Motivating Language on Subordinate Performance and Satisfaction." *Human Resource Management*, 37(3-4): 235-248.

Mayfield, J. R. 1993. *The Role of Motivating Language in Leader-Member Exchange*. University of Alabama.

Mayfield, M., and J. Mayfield. 2004. "The Effects of Leader Communication on Worker Innovation." *American Business Review*, 22(2): 46-51.

Mayfield, M., and J. Mayfield. 2008. "Leadership Techniques for Nurturing Worker Garden Variety Creativity." *Journal of Management Development*, 27(9): 976-986.

Mayfield, M.R. 1994. *Dyadic Coordination: An Examination of the Leader Member Exchange Model at a Group Level*. University of Alabama.

McClane, W.E. 1991. "Implications of Member Role Differentiation: Analysis of a Key Concept in the LMX Model of Leadership." *Group & Organization Studies*, 16(1): 102-113.

McMeans, J. B. 2001. *Leader Motivating Language within an Organizational Context*. University of Hartford.

Miner, J. B. 2005. *Organizational Behavior I: Essential Theories of Motivation and Leadership*. Armonk, NY: M.E. Sharpe.

Raftery, A. E. 1993. "Bayesian Model Selection in Structural Equation Modeling." K. A. Bollen and J. S. Long, eds. *Testing Structural Equation Models,* pp: 163–180. Newbury Park, CA: Sage Publications, Inc.

Rosse, J. G., and A. L. Kraut. 1983. "Reconsidering the Vertical Dyad Linkage Model of Leadership." *Journal of Occupational Psychology*, 56 (1): 63-71.

Schumacker, R. E., and R. G. Lomax. 1996. *A Beginner's Guide to Structural Equation Modeling*. Mahwah, New Jersey: Lawrence Erlbaum Associates.

Schyns, B., and H. Wolfram. 2008. "The Relationship Between Leader-Member Exchange and Outcomes as Rated by Leaders and Followers". *Leadership & Organization Development Journal*, 29(7): 631-646.

Sharbrough, W. C., S. A. Simmons, and D. A. Cantrill. 2006. "Motivating Language in Industry: Its Impact on Job Satisfaction and Perceived Supervisor Effectiveness." *The Journal of Business Communication*, 43(4): 322-343.

Sullivan, J. 1988. "Three Roles of Language in Motivation Theory." *Academy of Management Review*, 13(1): 104-115.

Varma, A., and L. K. Stroh. 2001. "The Impact of Same-Sex LMX Dyads on Performance Evaluations." *Human Resource Management*, 40(4): 309-320.

Wang, H., Law, K. S., and Chen, Z. X. (2008). "Leader-Member Exchange, Employee Performance, and Work Outcomes: an Empirical Study in the Chinese Context." *The International Journal of Human Resource Management*, 19(10): 1809-1819.

Yrle, A. C., Hartman, S. J., and Galle Jr., W.P. (2003). "Examining Communication Style and Leader-Member Exchange: Considerations and Concerns For Managers." *International Journal of Management*, 20(1): 92-99.

Zorn, Jr., T. E., and Ruccio, S. E. (1998). "The Use of Communication to Motivate College Sales Teams." *The Journal of Business Communication*, 35(4): 468-499.