Effects of Transformational Leadership Training on Attitudinal and Financial Outcomes: A Field Experiment

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A pretest-posttest control-group design (N = 20) was used to assess the effects of transformational leadership training, with 9 and 11 managers assigned randomly to training and control groups, respectively. Training consisted of a 1-day group session and 4 individual booster sessions thereafter on a monthly basis. Multivariate analyses of covariance, with pretest scores as the covariate, showed that the training resulted in significant effects on subordinates' perceptions of leaders' transformational leadership, subordinates' own organizational commitment, and 2 aspects of branch-level financial performance.

One significant development in understanding leadership in the past decade has been the emergence of theories of charismatic and transformational leadership (e.g., Bass, 1985; Conger & Kanungo, 1987; House, 1977; Locke et al., 1991). Although the terms charisma and transformational leadership are often used synonymously, Bass (1985, 1990) separates them, with charisma forming a part of transformational leadership. Within Bass's approach, transformational leadership includes charisma (providing a vision and a sense of mission, and raising followers' self-expectations), intellectual stimulation (helping employees emphasize rational solutions and challenge old assumptions), and individualized consideration (developing employees and coaching); transformational leadership also goes beyond transactional leadership (or contingent reward, i.e., the exchange of rewards for efforts) in elevating leaders and helping followers achieve higher levels of organizational functioning. In addition, the relationship between transformational and transactional leadership is clarified in the augmentation hypothesis, which is that charisma contributes unique variance to performance after the effects of contingent reward are considered (Waldman, Bass, & Yammarino, 1990). Bass's transformational leadership theory is now generating increasing levels of conceptual and empirical interest.

Several studies now document significant correlations between transformational leadership facets and organizational functioning. For example, subordinates' satisfaction with their supervisors is associated with the extent to which supervisors manifest transformational leadership (e.g., Hater & Bass, 1988; Koh, Steers, & Terborg, 1995). Higher levels of transformational leadership are also associated positively with subordinates' organizational commitment, irrespective of the commitment measure used (Bycio, Hackett, & Allen, 1995; Koh et al., 1995), organizational citizenship behavior (Koh et al., 1995), and performance (Bass, 1985; Howell & Avolio, 1993). Similarly, a school principal's transformational leadership is associated indirectly with student performance (Koh et al., 1995). In a somewhat different context, shop stewards' transformational leadership was associated with rank-and-file members' commitment to, and participation in, the union (Fullagar, McCoy, & Shull, 1992; Kelloway & Barling, 1993).

Added support for the importance of transformational leadership comes from Howell and Avolio's (1993) findings that branch managers' transformational leadership (defined as charisma, intellectual stimulation, and individual consideration) predicted consolidated business unit performance 1 year later. Methodologically, their study improved on previous studies in that they used longitudinal data and did not rely on single-source data.
At least two studies using experimental designs have also indicated the importance of transformational leadership as a precursor to performance. Howell and Frost (1989) found that student participants working under charismatic leaders demonstrated higher task performance than those working under considerate leaders. Importantly, the effects of charismatic leadership emerged regardless of the productivity norms.

Kirkpatrick and Locke (1996) conducted a laboratory simulation with business students, in which they manipulated (by using trained confederates) three core aspects of charismatic leadership, namely, vision, vision implementation through task cues, and communication style. Only vision and vision implementation affected performance outcomes and attitudes, with the exception that leaders' charismatic communication style influenced followers' perceptions of charisma.

Nonetheless, the utility of transformational leadership cannot be gleaned adequately without a demonstration that changing leadership styles is both possible and likely to result in changes in subordinates' perceptions, attitudes, or performance. Some evaluations of the effects of transformational leadership training have been reported. For example, Popper, Landau, and Ghuskinos (1992) described a transformational leadership training program for infantry cadets in the Israeli army. Popper et al. argued that the training was successful because it helped participants crystallize their roles and their intention to implement what they had learned. However, although interesting, these data are grounded primarily on reaction outcome criteria and hence are limited. Even when quantitative data were reported, one-item scales were used, and no inferential statistics compared the effects of transformational programs with what Popper et al. described as traditional (p. 7) leadership programs.

In this study, we used three different levels of outcome criteria in assessing the effectiveness of training branch-level managers in transformational leadership. First, if the training is effective, subordinates would see changes in their managers' leadership behaviors; no change would be manifested if there was no training. Second, where transformational leadership is enhanced, subordinates' commitment to the organization would change (e.g., Koh et al., 1995; Mathieu & Zajac, 1990). Third, if transformational leadership is enhanced and subordinates' commitment to the organization increases, financial performance of the unit in question may be enhanced (Howell & Avolio, 1993).

To our knowledge, there do not appear to be any published empirical evaluations of training programs based specifically on transformational leadership theory that use "hard" outcome criteria. The aim of the current study was to provide such an analysis. In doing so, we conducted a field experiment in which bank branch managers were assigned randomly to either a training or control condition. Our use of a true experimental design allows us to extend the current literature by assessing the causal influence of transformational leadership on subordinates' perceptions, attitudes, and performance.

**Method**

**Participants and Setting**

The study took place in one region of one of the five largest banks in Canada. There were 20 branches in the region, each with its own manager. We classified branches by size according to the number of full-time employees. There were three large branches (between 40 and 60 full-time employees), eight medium-sized branches (15–39 full-time employees), and nine small branches (14 or fewer full-time employees).

The managers of each of the branches, which were geographically isolated from each other, were randomly assigned to either the control or the training intervention. In the training group, there was one manager from a large branch, four from medium-sized branches, and four from small branches. The training group had five male and four female managers; the control group had six male and five female managers. At the same time that each manager was initially approached, they were asked to nominate five employees who reported directly to them to complete the relevant questionnaires. Where numbers allowed (i.e., in large, medium, and some small branches), managers were asked to provide names of employees who reported to them directly. In some smaller branches this was not always possible, and all available employees were asked to participate.

**Questionnaires**

There were three different outcome variables, namely, subordinates' perceptions of their branch managers' transformational leadership, subordinates' own organizational commitment, and two indices of branch-level financial performance.

To assess the dependent variables, we used the Multifactor Leadership Questionnaire (MLQ)—Form 5 (Bass & Avolio, 1990) for subordinates' rating of their managers' leadership. Through the MLQ—Form 5, we obtained measures of three aspects of transformational leadership: (a) charisma, obtained by combining idealized influence ("makes me proud to be associated with him/her") and inspirational motivation ("has a vision that spurs me on"); (b) intellectual stimulation ("enables me to think about old problems in new ways"); and (c) individualized consideration ("gives personal attention to those who seem neglected"). Ratings of transactional leadership and laissez-faire leadership can be obtained but were of no conceptual interest and were thus excluded because they would only have increased the family-wise error rate (i.e., Type I errors), which was a concern given the relatively small sample size. The reliability of these subscales was satisfactory in Bass and Avolio's (1990) samples (α > .77). As measured by subordinates' perceptions, these scales were internally consistent at both pretesting and posttesting: Intellectual stimulation and individualized consideration were .96 at both time periods, and charisma was .98 and .97 at pretesting and posttesting, respectively.
Subordinates completed the nine-item short form of the Organizational Commitment Questionnaire (Mowday, Porter, & Steers, 1982). (Mowday et al. showed that the internal consistency of this shortened form is equal to that of the full questionnaire.) In our study, the internal consistency for all subordinates was highly satisfactory ($\alpha = .96$ at both testing periods).

We used two variables to assess financial performance at the branch level. Because transformational leadership might influence sales performance (Jolson, Dubinsky, & Yammarino, 1993), we used the number of personal loan sales, as well as the number of credit card sales. The data for both these variables were taken from the region's regular records, and we chose these two specific variables because they may be responsive to branch managers' transformational leadership, which would presumably raise employee expectations, clarify the mission, challenge old assumptions about unproductive performance methods, and coach employees. Moreover, these particular measures were thought to be responsive to leaders' behavior within the time frame of the current study as opposed to other measures of financial performance (e.g., overall profitability) that would be less responsive to individual behaviors in the short term. Financial-outcome data were weighted by the number of full-time staff employed in each branch to control for branch size.

Subordinates completed the MLQ and Organizational Commitment Questionnaire 2 weeks before the training program commenced and 5 months thereafter. Measures of branch-level financial performance were taken at the same time.

### Training Intervention

There were two different aspects involved in the training program. A 1-day group-based training session was held for all branch managers in the experimental group, and this was followed by a series of four individual booster sessions.

**Group-based training program.** The purpose of the 1-day training session was to familiarize participants with the central concepts of transformational leadership and to discuss and role-play how transformational leadership might be implemented in their work context. In the first segment, participants were asked to identify sequentially the characteristics of the best and worst leaders they had ever encountered. The characteristics identified were placed in the context of transformational, transactional, and laissez-faire leadership (i.e., the workshop facilitator related each identified characteristic to the relevant leadership theory). Thereafter, participants were introduced in a more formal manner to transformational, transactional, and laissez-faire leadership and to research findings demonstrating correlations with relevant outcomes.

The second segment was designed to help participants take the conceptual constructs and apply them to their own work situations. Participants were first introduced to the notion of goal setting (Locke & Latham, 1984), specifically the notion that performance is maximized when goals are specific and difficult but attainable. Participants were placed in groups and assigned various exercises; the initial exercises focused on assigning goals for themselves concerning their own transformational leadership (e.g., encouraging employees to generate their own solutions rather than merely providing them with solutions). Other exercises included the role playing of changed leadership behaviors and identifying specific leadership behaviors that would be consistent with their organizational mission statement. On completion of each exercise, plenary sessions were held for group discussions.

**Individual booster sessions.** The first individual session took place the day after the group training. Each manager in the training group met individually with the first author. The purpose of this initial session was two-fold. First, feedback on the managers' leadership style was provided based on data from the self-report and subordinate questionnaires. Second, specific personal action plans for the following month were developed for each manager. Goals were then set together with the individual managers relevant to achieving their own action plans. In all cases, participants were reminded of the importance of setting specific, attainable goals. In addition, the importance of maintaining any changes in their own behavior over time was emphasized. In the subsequent three sessions, the implementation of these leadership plans over the prior month was considered and modified as appropriate.

Two additional points about the training program should be mentioned. First, primary emphasis was placed on the notion of becoming intellectually stimulating: This was invariably the lowest transformational score at pretesting for both the control and intervention groups. Arguably, intellectual stimulation is easier to change than charisma. Because this score was the lowest for everyone, there is less likelihood of scores having been influenced by a ceiling effect. Effecting any changes in subordinates' perceptions of leaders' charisma and individualized consideration may take longer than directly challenging their assumptions. It would be consistent with recent calls for organizational leaders to generate ideas and novel approaches in the organization (e.g., Drucker, 1995). Second, managers in the training group were encouraged to discuss ideas and experiences with other members of the group but to refrain from having similar discussions with managers in the no-training control group or subordinates in either of the two experimental groups. (Although managers in the trained group were told that there was a second comparison group, the nature of the experimental design and hypotheses were not revealed until after the study had concluded.)

### Results

Descriptive statistics and intercorrelations for all attitudinal variables at pretest and posttest are presented in Table 1. We began by assessing group differences on the pretest scores using a multivariate analysis of variance. A significant multivariate effect was obtained, $F(4, 76) = 5.24, p < .01$. However, none of the follow-up univariate analyses of variance (ANOVAs) attained significance, although one (subordinate ratings of charisma) approached significance, $F(1, 79) = 3.75, p < .06$. To further explore pretest differences, we conducted a series of Roy-Bargman stepdown analyses. The three measures of leadership were assessed first in the order in which they were emphasized in the training program (i.e., intellectual stimulation, individual consideration, and charisma). Organizational commitment was entered on the
Table 1

Descriptive Statistics and Intercorrelations of the Attitudinal Variables at Pretest and Posttest for the Intervention and Control Groups

<table>
<thead>
<tr>
<th>Variable</th>
<th>Intervention</th>
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<td>1. Intellectual stimulation</td>
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<td>2. Individualized consideration</td>
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<td>3. Charisma</td>
<td>2.63</td>
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<td>4. Organizational commitment</td>
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<td>Posttest</td>
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<td>5. Intellectual stimulation</td>
<td>2.83</td>
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<td>6. Individualized consideration</td>
<td>2.82</td>
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<td>7. Charisma</td>
<td>2.80</td>
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<td>8. Organizational commitment</td>
<td>5.85</td>
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Note. n = 9 for training group managers, and n = 11 for control group managers.
*p < .01.

last stage of the stepdown analyses. Only one significant effect emerged: Subordinates' pretest ratings of charisma were higher in the control group than they were for the training group, $F(1, 77) = 19.43, p < .01$.

To assess the effects of leadership training, we conducted a multivariate analysis of covariance using the posttest subordinate ratings of transformational leadership as the dependent measure, the pretest ratings as the covariate, and group membership as the independent variable. Significant multivariate effects were obtained for the covariates, $F(16, 220) = 12.06, p < .01$. The pretest measures were related to posttest measures of intellectual stimulation, $F(4, 75) = 52.50, p < .01, R^2 = .74$; individual consideration, $F(4, 75) = 68.39, p < .01, R^2 = .79$; charisma, $F(4, 75) = 78.56, p < .01, R^2 = .81$; and organizational commitment, $F(4, 81) = 2.51, p > .05, R^2 = .12$.

A significant effect also emerged for training, $F(4, 72) = 6.88, p < .01$. To assess the training effects on individual variables we conducted a series of univariate ANOVAs and a Roy-Bargman stepdown analysis. Significant univariate effects emerged for all four dependent measures: intellectual stimulation, $F(1, 75) = 16.32, p < .01, \eta^2 = .156$; individual consideration, $F(1, 75) = 12.76, p < .01, \eta^2 = .142$; charisma, $F(1, 75) = 7.54, p < .01, \eta^2 = .069$; and organizational commitment, $F(1, 75) = 5.72, p < .02, \eta^2 = .057$. However, in the stepdown analysis, which accounts for the intercorrelations among the dependent variables, only two effects were retained. Subordinates of the trained leaders reported significantly more positive perceptions of leaders' intellectual stimulation, adjusted $M = 2.92$ vs. $2.53, F(1, 75) = 16.32, p < .01$; comparable levels of both individual consideration, $F(1, 74) = 1.55, p > .05$, and charisma, $F(1, 73) = 1.34, p > .05$; and significantly higher organizational commitment, adjusted $M = 5.96$ vs. $5.47, F(1, 72) = 6.63, p < .02$, than subordinates of untrained leaders.

To assess the effects of leadership training on financial outcomes, we conducted a series of univariate analyses of covariance controlling for pretest financial information (because financial data are based on the branch, the amount of available data did not permit a multivariate approach to these data). Given the limited number of data points available, we adopted a level of significance of less than .10 for these tests. Training effects were significant for the number of personal loan sales, $F(1, 17) = 7.69, p < .02, \eta^2 = .193$, $Ms$ adjusted for branch-level size: .73 vs. .48, and marginally significant for the number of credit card sales, $F(1, 17) = 3.32, p < .09, \eta^2 = .143$, $Ms$ adjusted for branch-level size: 1.10 vs. .87, in the presence of substantially reduced power. As shown in Table 2, the effects were in the expected direction with the branches in which managers participated in the training reporting better financial outcomes than those in the control group.

**Discussion**

The results of this study suggest the effectiveness of training managers in transformational leadership. Using a pretest–posttest control group design, ANOVAs showed that the subordinates of managers receiving training perceived their managers as higher on intellectual stimulation, charisma, and individual consideration than subordinates of managers in the no-training control group. In addition, the training program exerted significant effects on subordinates' organizational commitment, whereas some support emerges for the notion that branch-level financial indicators might be affected.
This study advances our understanding of transformational leadership in three main ways. First and foremost, this study extends previous correlational results, and together with Kirkpatrick and Locke (1996) and Howell and Frost (1989), it provides experimental evidence that transformational leadership can result in changes in subordinates' perceptions of managers' leadership behaviors, subordinates' own commitment to the organization, and some aspects of financial performance. Moreover, this study has extended the experimental findings by demonstrating that a training and goal-setting intervention is able to change leaders' transformational behaviors in the expected direction. Second, this study extends Howell and Avolio's (1993) findings based on longitudinal data and provides some indication that changing transformational leadership can exert some effects on financial performance. The fact that the bank's records were used to generate these outcomes supports the external validity of this finding. However, because the findings were based on small samples, this conclusion remains somewhat tentative. Third, because outcome data were based on branch-level financial performance, subordinates' perceptions of leadership behavior, and subordinates' organizational commitment, common source bias inherent in previous research is minimized.

Further research on the effects of enhancing transformational leadership might benefit from a focus on a number of areas. First, future research should expand the focus of outcomes considered. We need to know what employee attitudes other than organizational commitment (e.g., job satisfaction) might be affected, as well as whether other financial outcome criteria can be affected. The issue of financial outcome criteria is especially important, as the limited sample size used for the analyses of financial outcome ($n = 20$) mitigates against significant findings in this study. The limit emerges from our focus on unit-level financial performance indicators. Future research could profitably include individual-level performance indicators. Doing so would allow researchers to (a) address the statistical limitations of the current study as well as to (b) address the more conceptually important question of the appropriate level of aggregation (i.e., unit vs. individual) for assessing the effects of leadership on performance.

In a similar vein, it is possible that financial performance is an indirect effect of training in transformational leadership, mediated by changes in employees' perceptions of leaders' behaviors and attitudes (i.e., organizational commitment). Thus, the process by which transformational leadership influences performance is worth investigating for several reasons: (a) There are suggestions that the perception of leadership reflects an attributional process resulting from performance (Lord & Maher, 1991); (b) Kirkpatrick and Locke (1996) found some support for a causal linkage model of leadership effects; and (c) the results of the present study should be replicated and extended.

Second, the feasibility of including an attention placebo control group (which would control for the Hawthorne effect) and a postintervention manipulation check, both of which would address issues about internal validity (Cook & Campbell, 1979), should be considered. Third, future research might contrast the role of the group-based training program with the individual-based booster sessions and analyze their unique effects. Fourth, research might be conducted to assess whether the effects of transformational leadership training extend to other contexts such as unions (Barling, Fullagar, & Kelloway, 1992). Fifth, while the present analyses showed that the effects of the transformational leadership training program endured for 5 months, future research might investigate whether the benefits are maintained over a longer period of time.

Sixth, in this study we focused primarily on increasing leaders' intellectual stimulation and, to some extent, individualized consideration. A more comprehensive analysis of the effects of transformational leadership must include an attempt to enhance leaders' charismatic behaviors (e.g., Kirkpatrick & Locke, 1996). Without such an intervention, it is possible that our findings underestimate the effects of transformational leadership. In this regard, we also note that while our intervention dealt primarily with intellectual stimulation, the empirical data showed strong correlations between the three dimensions.
of transformational leadership we assessed. Future research needs to be directed at the development of non-redundant measures of these conceptually distinct constructs.

Seventh, we chose to study the effects of transformational leadership on performance 5 months after the initial training took place; however, this might not reflect the optimal amount of time required for leadership training to exert its effects. Although the plausibility of this argument is questioned by the significant findings obtained, future theorizing and research should focus on identifying more precisely when significant effects are expected to emerge.

In conclusion, although the present results must be replicated using, for example, larger samples, different outcome criteria, and different contexts, this study suggests that training managers in transformational leadership may well exert significant effects. If such replications are successful, the usefulness of transformational leadership would be extended.

References


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