Dimensions of transformational leadership: Conceptual and empirical extensions

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Abstract

This study identified aspects of transformational leadership theory that have resulted in a lack of empirical support for the hypothesized factor structure of the model, and very strong relationships among the leadership components. We proposed five more focused subdimensions of transformational leadership including vision, inspirational communication, intellectual stimulation, supportive leadership, and personal recognition. Confirmatory factor analyses provided support for the hypothesized factor structure of the measures selected to assess these subdimensions, and also provided support for the discriminant validity of the subdimensions with each other. After controlling for the effects of common method variance, a number of the subdimensions of transformational leadership demonstrated significant unique relationships with a range of outcomes. Results provided initial support for the five subdimensions of transformational leadership that were identified.

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1. Introduction

Bass’ (1985) model of transformational leadership has been embraced by scholars and practitioners alike as one way in which organizations can encourage employees to perform beyond expectations. Despite the degree of interest in transformational leadership, a number of theoretical issues have been identified with this model. Most importantly, there is ambiguity concerning the differentiation of the subdimensions of transformational leadership (Bryman, 1992; Yukl, 1999a). Empirically, this issue has been reflected in a lack of support for the hypothesized factor structure of the transformational model and for the discriminant validity of the components of the model with each other (e.g., Avolio, Bass, & Jung, 1999; Bycio, Hackett, & Allen, 1995; Carless, 1998).

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As a result of mixed empirical support for the transformational model, authors such as Carless (1998) and Tepper and Percy (1994) have argued that the higher-order factors of transformational leadership and transactional leadership should be examined rather than the individual components of the model. To address these issues, we identify a set of more focused and theoretically distinct subdimensions of transformational leadership. The empirical properties of measures selected to assess these subdimensions are examined, and a nomological network, relating the leadership factors with theoretically selected outcomes, is developed and tested.

1.1. Transformational leadership theory

Burns (1978) was the first author to contrast “transforming” and transactional leadership. Transactional leadership involves an exchange relationship between leaders and followers such that followers receive wages or prestige for complying with a leader’s wishes. Transactional leadership encompasses contingent reward and management-by-exception.

In contrast, transformational leaders motivate followers to achieve performance beyond expectations by transforming followers’ attitudes, beliefs, and values as opposed to simply gaining compliance (Bass, 1985; Yukl, 1999a, 1999b). Bass identified a number of subdimensions of transformational leadership including charisma (which was later renamed idealized influence), inspirational motivation, intellectual stimulation, and individualized consideration.

Despite the popularity of transformational leadership theory, concerns have been raised about the way in which the subdimensions of the model have been defined. In particular, theoretical distinctions between charisma and inspirational motivation have become blurred over time (Barbuto, 1997). The diversity of behaviors encompassed by individualized consideration and contingent reward has also been identified as problematic (Yukl, 1999a, 1999b). An even more critical problem has been identified with contingent reward. Authors have argued that ways of operationalizing this construct assess both transactional and transformational processes (Goodwin, Wofford, & Whittington, 2001).

The above issues have meant that empirical research has provided mixed support for the differentiation of the components of the transformational model. Below, we review empirical evidence concerning the factor structure of the most commonly used measure of transformational leadership, the Multifactor Leadership Questionnaire (MLQ).

1.2. Empirical support for the transformational leadership model

Research has not provided convincing evidence in support of the transformational leadership model (Bycio et al., 1995; Tepper & Percy, 1994). Conflicting evidence has been reported concerning the factor structure of the model, and very strong relationships have been reported among the leadership factors (Avolio et al., 1999; Carless, 1998; Tejeda, Scandura, & Pillai, 2001).

Using the MLQ-1, Bycio et al. (1995) found that a five-factor model including charisma, intellectual stimulation, individualized consideration, contingent reward, and management-by-exception, was a good fit to the data. However, a two-factor model representing an active and passive leadership factor was also a good fit to the data. Latent factor correlations revealed that the transformational leadership scales were highly intercorrelated (rs ranged from .83 to .91), and the contingent reward scale was strongly associated with the transformational scales (rs ranged from .79 to .83). The average latent factor
intercorrelation among the transformational scales was .88, while the average latent factor intercorrelation between the transformational scales and contingent reward was .81.

Avolio et al. (1999) proposed several alternate conceptual models of the factor structure underlying the MLQ-5X. The originally hypothesized model did not produce an adequate fit to the data because of the high latent factor intercorrelations among the transformational leadership factors, and the high latent correlations among the transformational factors and contingent reward. Ultimately, a six-factor model using a reduced set of items produced the best fit to the data when compared to a series of nested models. However, the average latent factor intercorrelation among the transformational scales was .94 ($r$s ranged from .91 to .95), and the average correlation among the transformational scales and contingent reward was .90 ($r$s ranged from .86 to .93).

Carless (1998) examined the MLQ-5X, and reported that a hierarchical model with charisma, individualized consideration, and intellectual stimulation representing facets of a second-order construct called transformational leadership was a good fit to the data. The subscales of the MLQ were highly correlated, and a high proportion of the variance of these scales was explained by the higher-order construct. Carless suggested that the MLQ-5X does not assess separate transformational leadership behaviors, but measures a single, hierarchical construct of transformational leadership.

The above findings have led researchers to use a number of tactics when examining transformational leadership. Some authors have opted to use a global measure of transformational and transactional leadership as opposed to examining the individual subdimensions (e.g., Pillai, Schriesheim, & Williams, 1999). Other researchers have used a reduced set of items to measure transformational leadership (e.g., Tejeda et al., 2001). This latter strategy has been largely driven by empirical results and has not been accompanied by a strong theoretical rationale to explain the allocation of items to factors.

Other authors, such as Podsakoff, MacKenzie, Moorman, and Fetter (1990), have developed their own measures of transformational and transactional leadership. While these three approaches may all prove useful in some situations, we argue that it is important to adopt a theoretically driven approach when evaluating the subdimensions of transformational leadership. As a result, we re-examine the theoretical model developed by Bass (1985) to identify five subdimensions of transformational leadership that will demonstrate discriminant validity with each other and with outcomes.

1.3. Vision

We identify vision as an important leadership dimension encompassed by the more general construct of charisma. Bass (1985) argued that the most general and important component of transformational leadership is charisma. Empirical findings support this statement, with meta-analytic results indicating that charisma is most strongly associated with measures of effectiveness such as satisfaction with the leader (Lowe, Kroeck, & Sivasubramaniam, 1996).

Authors have been critical of the way in which charisma has been defined (Barbuto, 1997; Beyer, 1999). Beyer argued that the essential components of charisma have been dramatically downplayed or ignored. Weber (1968) stated that charisma involves five components including an extraordinarily gifted person; a social crisis; a set of ideas providing a radical solution to a problem; a set of followers who are attracted to the exceptional person and believe that the leader is linked to transcendent powers; and the validation of the leader’s extraordinary gifts through repeated success.

Charisma, as discussed in the transformational model, does not incorporate all of these components. The contribution of the situation surrounding leaders and followers, the personal qualities linked with
charisma, and the association that followers make between a charismatic leader and transcendent powers are not explored.

A common theme when discussing charisma is the importance of articulating a vision. Weber (1968) identified vision as one of the five elements that contribute to charisma, and House (1977) stated that charismatic leaders demonstrate a number of behaviors including articulating an ideology that enhances goal clarity, task focus, and value congruence.

The current study focuses on vision as opposed to the broader construct of charisma or idealized influence proposed by Bass and his colleagues. House (1977) defined vision as a transcendent ideal that represents shared values, and which is ideological in nature. McClelland (1975) suggested that vision results in the internalization of organizational values and goals, which encourages individuals to adopt behaviors because of the attractiveness of the behavior itself as opposed to the attractiveness of a given leader. In this study, we define vision as:

The expression of an idealized picture of the future based around organizational values.

1.4. Inspirational communication

Although inspirational motivation has been identified as an important component of transformational leadership, this construct has been variously defined (Barbuto, 1997). Bass (1985) stated that charismatic leaders use inspirational appeals and emotional talks to arouse follower motivations to transcend self-interest for the good of the team.

At a later date, Bass (1999) stated that both charisma and inspirational motivation are displayed when a leader envisions a desirable future, articulates how it can be reached, sets an example to be followed, sets high standards of performance, and shows determination and confidence. This description suggests vision and inspirational motivation might be combined into a single construct. However, other researchers have argued that it is useful to maintain a distinction between vision and inspirational motivation (e.g., Barbuto, 1997; McClelland, 1975). Below, we present a theoretical rationale for making a distinction between the constructs of inspirational leadership and the vision component of charisma.

Downton (1973) defined inspiration as the action or power of moving the intellect or emotions. In contrast, Bass (1985) restricted the use of the term inspirational leadership to instances when a leader employs or adds nonintellectual, emotional qualities to the influence process. He stated that inspirational leaders add affective qualities to the influence process through the use of inspirational talks and emotional appeals. Similarly, Yukl (1981, p. 121) suggested that inspiration refers to “the extent to which a leader stimulates enthusiasm among subordinates for the work of the group and says things to build subordinate confidence in their ability to perform assignments successfully and attain group objectives.”

A recurring element within existing definitions of inspirational leadership is the use of oral communication to motivate and arouse followers’ emotions. As a result, we focus on inspirational communication, or the use of appeals and emotion-laden statements to arouse followers’ emotions and motivation, as opposed to the broader construct of inspirational motivation proposed by Bass and his colleagues. In this study, we suggest that inspirational communication is a distinct construct, defined as:

The expression of positive and encouraging messages about the organization, and statements that build motivation and confidence.
1.5. Supportive leadership

One factor that distinguishes transformational leadership from other New Leadership theories is the inclusion of individualized consideration. Bass (1985) initially stated that individualized consideration occurs when a leader has a developmental orientation towards staff and displays individualized attention to followers and responds appropriately to their personal needs.

More recently, discussions of individualized consideration have focused on one component of this construct, supportive leadership. For example, Avolio and Bass (1995, p. 202) stated “the leader displays more frequent individualized consideration by showing general support for the efforts of followers.” Other authors in the transformational leadership field have also focused on supportive leadership as opposed to the broader construct of individualized attention. Podsakoff et al. (1990) examined individualized support, which was defined as behavior on the part of a leader that indicates that he or she respects his or her followers and is concerned with followers’ feelings and needs.

We focus on supportive leadership here, and use the extensive research that has been conducted on this topic to guide our discussion. Supportive leadership is a key aspect of effective leadership in path–goal theory (House, 1971). House (1996, p. 327) defined supportive leader behavior as “behavior directed toward the satisfaction of subordinates’ needs and preferences, such as displaying concern for subordinates’ welfare and creating a friendly and psychologically supportive work environment.” We define supportive leadership as:

Expressing concern for followers and taking account of their individual needs.

1.6. Intellectual stimulation

The most underdeveloped component of transformational leadership is intellectual stimulation (Lowe et al., 1996). This leadership factor encompasses behaviors that increase followers’ interest in and awareness of problems, and that develop their ability and propensity to think about problems in new ways (Bass, 1985). The effects of intellectual stimulation are seen in increases in followers’ abilities to conceptualize, comprehend, and analyze problems and in the improved quality of solutions that they generate (Bass & Avolio, 1990).

While this leadership factor has not been the subject of extensive research, this construct encompasses a more focused, and internally consistent set of behaviors than the other subdimensions of transformational leadership. As a result, the definition of intellectual stimulation adopted by Bass and his colleagues is retained in this study. Based on the work of Bass (1985), we define intellectual stimulation as:

Enhancing employees’ interest in, and awareness of problems, and increasing their ability to think about problems in new ways.

1.7. Personal recognition

Our fifth dimension is based on the body of research that has found a strong link between transactional leadership and the subdimensions of transformational leadership. Transactional leadership encompasses contingent reward and management-by-exception. Contingent reward involves rewarding followers for attaining specified performance levels. Bass (1985) suggested that praise for work well
done, recommendations for pay increases and promotions, and commendations for excellent effort are all examples of contingent reward behaviors.

Empirical evidence indicates that contingent reward is highly positively correlated with transformational leadership, and displays a similar pattern of relationships to outcomes as the transformational subdimensions (e.g., Den Hartog, Van Muijen, & Koopman, 1997; Tepper & Percy, 1994). A number of reasons have been proposed to explain these strong relationships.

Goodwin et al. (2001) hypothesized that the contingent reward scale, as assessed by the MLQ-5X, captures behaviors associated with the negotiation of rewards for good performance and behaviors associated with the provision of rewards based on performance. These authors argued that the negotiation of rewards for good performance represents a form of transactional leadership. However, rewarding followers based on their performance was argued to represent a transformational process as followers and leaders in a transformational relationship have a personal investment in the vision. As a result, followers assume that performance consistent with the vision will be rewarded.

Goodwin et al. (2001) found support for a two-factor solution for contingent reward using confirmatory factor analysis (CFA). These authors interpreted their findings as providing support for the argument that contingent reward encompasses both transactional and transformational processes. This interpretation is consistent with models of high-performance work systems (e.g., Arthur, 1994; Becker & Gerhart, 1996; Vandenberg, Richardson, & Eastman, 1999), which distinguish between reward as a control mechanism and reward as a component of a system designed to increase employee commitment.

In the current study, we use the term “personal recognition” to capture that aspect of contingent reward that is conceptually related to transformational leadership. Personal recognition occurs when a leader indicates that he or she values individuals’ efforts and rewards the achievement of outcomes consistent with the vision through praise and acknowledgment of followers’ efforts. We define personal recognition as:

The provision of rewards such as praise and acknowledgement of effort for achievement of specified goals.

In summary, the above review identified a set of more focused subdimensions of transformational leadership including articulating a vision, inspirational communication, supportive leadership, intellectual stimulation, and personal recognition. An important aim of the current study is to determine whether individuals differentiate between these subdimensions when describing their leader’s behavior. In addition, we examine whether the subdimensions demonstrate discriminant validity with each other. Below, a nomological network, relating the leadership subdimensions identified in this study with a range of theoretically selected outcomes, is developed.

1.8. The nomological network

When studying the effects of transformational leadership, researchers have focused on outcomes such as satisfaction, follower extra effort, and ratings of leader effectiveness (e.g., Lowe et al., 1996). However, theorists have also proposed that transformational leaders have a powerful influence on a range of other outcomes including motivation and attachment to the organization (e.g., Bass, 1985; Shamir, House, & Arthur, 1993).
We develop a series of hypotheses suggesting that certain subdimensions of transformational leadership are uniquely associated with a number of outcomes including affective and continuance commitment, role breadth self-efficacy (RBSE), interpersonal helping behaviors, and intentions to turnover.

### 1.8.1. Affective commitment

Affective commitment refers to the extent to which followers identify with, are involved in, and are emotionally attached to an organization (Meyer & Allen, 1997). Researchers have found that all of the subdimensions of transformational leadership and contingent reward are strongly positively associated with affective commitment (Bycio et al., 1995). We propose, however, that only vision and inspirational communication will be uniquely positively associated with affective commitment. The reasoning behind this hypothesis is presented below.

**H1.** Vision and inspirational communication have a unique positive relationship with affective commitment to the organization.

Empirical research suggests that vision has a positive impact on affective commitment. Podsakoff, MacKenzie, and Bommer (1996) examined the influence of six subdimensions of transformational leadership and a range of substitutes for leadership (Kerr & Jermier, 1978) on affective commitment to the organization. Results indicated that only one of the leadership factors, articulating a vision, was significantly positively associated with affective commitment.

Kirkpatrick and Locke (1996) conducted an experimental study with students who engaged in a simulated assembly task. These authors reported that vision positively affected congruence between the participants’ beliefs and the leader’s beliefs and values, trust in the leader, the extent to which the leader intellectually stimulated participants, and the extent to which individuals saw the leader as charismatic.

In addition, participants in the vision condition reported that the experimental task was more “interesting,” “challenging,” and “important,” while individuals in the no-vision condition reported that the task was “unstimulating,” “boring,” and “not worthwhile.” In summary, evidence suggests that articulation of a vision will increase the extent to which individuals identify with, and feel attached to an organization.

Very few researchers have examined inspirational leadership separate from charisma. As a result, there is little empirical evidence regarding the influence of inspirational leadership on employees’ attitudes and behaviors. We suggest, however, that inspirational communication will display a unique positive relationship with affective commitment. In particular, we propose that expressing positive and encouraging messages will increase the attractiveness of the organization to individuals, which will positively impact on the extent to which individuals identify with, and feel attached to the organization as a whole.

### 1.8.2. Continuance commitment

Continuance commitment refers to an employee’s awareness that there are costs associated with leaving an organization. Employees who report strong continuance commitment stay with an organization because they feel that have to (Allen & Meyer, 1990; Meyer & Allen, 1997). Bycio et al. (1995) examined relationships among the subdimensions of transformational and transactional leadership and continuance commitment. These authors hypothesized that contingent reward would be significantly positively associated with continuance commitment. Contrary to expectations, however, the only leadership factor that was associated with continuance commitment was management-by-exception.
Bycio et al. (1995) explained this result by focusing on the composition of the continuance commitment scale, which contains items measuring individuals’ perceptions of their investments in the organization and the availability of alternative employment possibilities. Bycio et al. argued that contingent reward should increase investments in an organization but would not influence individuals’ perceptions of their employment opportunities.

We use the above reasoning to propose that when leaders reward followers by recognizing their efforts, then followers’ sense of investment in an organization will increase. As a result it is proposed that:

H2. Personal recognition has a unique positive relationship with continuance commitment.

1.8.3. Role breadth self-efficacy

Shamir et al. (1993) argued that transformational leaders increase followers’ self-efficacy, which refers to individuals’ beliefs in their capabilities to organize and execute actions required to produce given attainments (Bandura, 1997). Self-efficacy is an important motivational construct that influences individuals’ choices, goals, emotional reactions, and their effort, coping, and persistence (Bandura, 1997; Gist & Mitchell, 1992).

This study focuses on one particular type of self-efficacy, RBSE, which refers to the extent to which people feel confident that they are capable of carrying out a range of proactive integrative tasks beyond prescribed technical requirements (Parker, 1998, 2000). Examples of proactive tasks include solving long-term problems, designing improved procedures, setting goals, and resolving conflicts.

Despite theoretical interest in the influence of transformational leaders on self-efficacy, only a limited number of studies have examined this relationship (Dvir, Eden, Avolio, & Shamir, 2002; Jung & Sosik, 2002). Jung and Sosik explored whether transformational leadership was related to followers’ perceptions of empowerment, group cohesiveness, and effectiveness in 47 groups from four Korean firms. These authors suggested that empowerment involves enabling group members through enhancing their self-efficacy beliefs and their intrinsic task motivation.

Jung and Sosik (2002) found that a higher-order transformational leadership factor was positively related to empowerment, group cohesiveness, and perceived group effectiveness. In addition, empowerment was positively related to collective self-efficacy, which was positively associated with perceived group effectiveness. This research provides preliminary evidence to indicate that transformational leaders do influence followers’ self-efficacy beliefs.

Bandura (1986, 1997) stated that self-efficacy beliefs are constructed from four major sources of information including enactive mastery experiences that serve as indicators of capability; vicarious experiences that alter efficacy beliefs through transmission of competencies and comparison with the attainments of others; verbal persuasion; and physiological and affective states from which people judge their capabilities, strength, and vulnerability to dysfunction.

We argue that inspirational communication is a form of verbal persuasion that will increase RBSE. When leaders communicate positive and encouraging messages, then it is likely that people will feel more capable of carrying out a range of proactive integrative tasks beyond prescribed technical requirements. Specifically, it is proposed that:

H3. Inspirational communication has a unique positive relationship with RBSE.
1.8.4. Interpersonal helping behavior

Podsakoff et al. (1990) stated that the real essence of transformational leadership is that these leaders cause followers to do more than they originally expected to do. As a result, the most important effect of transformational leadership is on extra-role performance or organizational citizenship behaviors (OCBs) rather than on in-role performance. OCB refers to “individual behavior that is discretionary, not directly or explicitly recognized by the formal reward system, and that in the aggregate promotes the effective functioning of the organization” (Organ, 1988, p. 4).

We focus on interpersonal helping behaviors, which occur when people voluntarily help others with, or prevent the occurrence of work-related problems (Podsakoff, MacKenzie, Paine, & Bachrach, 2000). Empirical research indicates that a number of subdimensions of transformational leadership and contingent reward are positively associated with helping behaviors.

Podsakoff et al. (2000), in a meta-analytic review of studies examining the antecedents of OCBs, found that leadership support, vision, intellectual stimulation, and contingent reward were strongly positively associated with two types of helping behavior, altruism and courtesy. Individualized support displayed the strongest relationship with altruism and courtesy.

Podsakoff et al. (1996) examined whether the subdimensions of transformational leadership or a number of substitutes for leadership were significantly associated with OCBs. The only leadership factor that was significantly positively associated with altruism was individualized support, although five substitutes for leadership displayed significant relationships with altruism.

Organ and Ryan (1995) conducted a meta-analysis of studies examining the antecedents of OCBs. One type of leadership behavior, leader consideration, was examined. Results suggested that of all the antecedents examined, leadership consideration displayed the strongest positive relationship with altruism, even after studies that used self-report measures of OCBs were excluded from the analysis.

In summary, research has provided evidence to suggest that supportive leadership will be strongly positively associated with interpersonal helping behaviors after taking account of the effects of the other leadership subdimensions. As a result of these findings it is proposed that:

H4. Supportive leadership has a unique positive relationship with interpersonal helping behaviors.

1.8.5. Turnover intentions

Researchers have concentrated on the influence of affective variables such as commitment and satisfaction on turnover intentions (Mathieu & Zajac, 1990; Williams & Hazer, 1986). However, Bycio et al. (1995) reported that all of the transformational leadership behaviors and contingent reward were significantly negatively associated with intentions to leave the job. Charisma displayed the strongest relationship with intention to leave the job and intention to leave the profession.

One difficulty with interpreting the findings of Bycio et al.’s (1995) study is that measures of charisma have incorporated items assessing both vision and inspirational leadership. As a result, it is difficult to determine whether both of these leadership factors influence turnover intentions, or whether one of these leadership factors is responsible for relationships with turnover intentions.
Some empirical evidence does suggest that vision has a strong influence on turnover intentions. In particular, authors have examined the effects of goal congruence between leaders and followers (e.g., Vancouver, Millsap, & Peters, 1994; Vancouver & Schmitt, 1991). Vancouver and Schmitt proposed that agreement among organizational members in schools regarding the goals of the school was related to the attitudes of its members. These authors focused on nonoperational goals, which do not define measurable outcomes, and as such reflect a leader’s vision.

Vancouver and Schmitt (1991) found that both between-constituency and within-constituency goal congruence were significantly associated with intentions to turnover. That is, when individuals in different hierarchical positions agreed on nonoperational goals, and when there was agreement between an individual and all the other individuals in a group on nonoperational goals, intentions to turnover decreased. These results suggest that articulation of a vision has a powerful influence on turnover intentions. On the basis of the above findings, it is proposed that:

**H5. Articulating a vision has a unique negative relationship with turnover intentions.**

### 2. Method

**2.1. Procedure and participants**

Three thousand three hundred and seven surveys were distributed across an Australian public sector organization, and 1398 employees responded (response rate 42.2%). This agency is responsible for developing and implementing the policies and programs related to government buildings, capital works initiatives, procurement development, and administrative services.

Sixty-nine percent of respondents were male and 28% were female. Approximately 17% of the sample reported that their age was 41–45 years, while the second largest group of respondents reported being 46–50 years of age. Approximately 20% of the sample (19.7%) had worked for their organization for 3–5 years, while the next largest group of respondents (15.7%) had worked for their organization for 1–2 years. Comparison of the demographic profile of survey respondents to that of the organization as a whole revealed that respondents were similar to the population of employees.

Throughout the analyses we assessed the influence of common method variance (CMV) using an approach adopted by Williams and Anderson (1994) and discussed by Richardson, Simmering, and Roman (2003). Williams and Anderson used a marker variable approach to adjust relationships for CMV among latent variables in a structural equation model. We used a three-item measure of bureaucracy as the marker variable in our analysis.

**2.2. Measures**

**2.2.1. Leadership**

Leadership items were adapted from measures produced by House (1998) and Podsakoff et al. (1990). Items were chosen on the basis of how well they assessed the theoretical construct under study. The
leadership items are displayed in Table 1. A 5-point Likert scale where 1 represented *strongly disagree* and 5 represented *strongly agree* was used for all the leadership items.

Employees were asked to respond to the leadership items keeping in mind the leader or manager of their work unit, which was defined as that group of people that individuals interact with on a day-to-day basis.

### 2.2.2. Articulating a vision
Three items developed by House (1998) were adapted to assess this construct. One item was reverse-scored. An example item was “has a clear understanding of where he/she wants our unit to be in 5 years.” This scale had a Cronbach’s alpha of .82.

### 2.2.3. Intellectual stimulation
Three items developed by Podsakoff et al. (1990) were adapted to assess this construct. An example of an item used to assess this construct was “challenges me to think about old problems in new ways.” This scale had a Cronbach’s alpha of .84.

### 2.2.4. Inspirational communication
Three items developed by House (1998) were adapted to assess inspirational communication. An example of an item was “says things that make employees proud to be part of this organization.” This scale had a Cronbach’s alpha of .88.

### 2.2.5. Supportive leadership
Three items developed by House (1998) were adapted to assess supportive leadership. An example of an item used in the current study was “sees that the interests of employees are given due consideration.” This scale had an alpha of .95.

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<td><strong>Items used to assess the leadership subdimensions</strong></td>
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| **Vision** | 1. Has a clear understanding of where we are going  
2. Has a clear sense of where he/she wants our unit to be in 5 years  
3. Has no idea where the organization is going (R)\(^a\) |
| **Inspirational communication** | 1. Says things that make employees proud to be a part of this organization  
2. Says positive things about the work unit  
3. Encourages people to see changing environments as situations full of opportunities |
| **Intellectual stimulation** | 1. Challenges me to think about old problems in new ways  
2. Has ideas that have forced me to rethink some things that I have never questioned before  
3. Has challenged me to rethink some of my basic assumptions about my work |
| **Supportive leadership** | 1. Considers my personal feelings before acting  
2. Behaves in a manner which is thoughtful of my personal needs  
3. Sees that the interests of employees are given due consideration |
| **Personal recognition** | 1. Commends me when I do a better than average job  
2. Acknowledges improvement in my quality of work  
3. Personally compliments me when I do outstanding work |

\(^a\) (R) indicates that the item was reverse-scored.
2.2.6. Personal recognition

Three items reported by Podsakoff et al. (1990) were adapted to assess this construct. An example of an item was “commends me when I do a better than average job.” This scale had an alpha of .96.

2.3. Outcome measures

Five outcome variables and one marker variable were assessed. A marker variable is the best estimate of CMV in a data set (Lindell & Whitney, 2001). A marker variable is selected on the basis that it is theoretically unrelated to the substantive constructs of interest and has a correlation with at least one of those variables that is close to zero (Lindell & Whitney, 2001; Richardson et al., 2003).

A 5-point Likert scale was used for all of the outcome measures and the marker variable, with the exception of RBSE. 1 referred to “strongly disagree” while 5 referred to “strongly agree.” A 7-point scale was used for RBSE, and 1 referred to “not at all confident” and 7 referred to “very confident.”

2.3.1. Affective commitment to the organization

Four items assessed this construct (Meyer, Allen, & Smith, 1993). An example of an item in this scale was “this organization has a great deal of personal meaning for me.” This scale had a Cronbach’s alpha of .80.

2.3.2. Continuance commitment to the organization

Three items assessed this construct (Meyer et al., 1993), and an example of an item was “it would be very hard for me to leave this organization even if I wanted to.” This scale had an alpha of .76.

2.3.3. Role breadth self-efficacy

Four items developed by Parker (1998) assessed this construct. An example of an item in this scale was “I feel confident representing my work area in meetings with senior management.” This scale had an alpha of .87.

2.3.4. Interpersonal helping behavior

Three items were adapted from Moorman and Blakely’s (1995) scale to assess interpersonal helping behaviors. Respondents were asked to report on the extent to which they had displayed interpersonal helping behaviors in the last 6 months. An example of an item was “I helped colleagues with problems.” This scale had an alpha of .76.

2.3.5. Turnover intentions

This construct assesses an individual’s intentions to leave his or her job, and was assessed by three items. An example of an item was “I seriously intend to seek a transfer to another job in the future.” This scale had an alpha of .75.

2.3.6. Bureaucracy

This construct acted as a marker variable in this study, and assesses the relative emphasis on rules and “red tape” within an organization. Three items assessed this construct (Hage & Aiken, 1967). This scale
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<td></td>
</tr>
<tr>
<td>3. Inspiration</td>
<td>2.94</td>
<td>1.06</td>
<td>.67***</td>
<td>(.88)</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>4. Support</td>
<td>2.90</td>
<td>1.20</td>
<td>.59***</td>
<td>(.95)</td>
<td></td>
<td></td>
<td></td>
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<td></td>
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<tr>
<td>5. Recognition</td>
<td>2.91</td>
<td>1.23</td>
<td>.59***</td>
<td>(.96)</td>
<td></td>
<td></td>
<td></td>
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<td></td>
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<tr>
<td>6. RBSE</td>
<td>3.67</td>
<td>0.95</td>
<td>.11***</td>
<td>(.87)</td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
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<tr>
<td>7. AC&lt;sup&gt;b&lt;/sup&gt;</td>
<td>2.80</td>
<td>1.02</td>
<td>.25***</td>
<td>(.80)</td>
<td></td>
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<tr>
<td>8. CC&lt;sup&gt;c&lt;/sup&gt;</td>
<td>2.91</td>
<td>0.29</td>
<td>-.33***</td>
<td>(.76)</td>
<td></td>
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<tr>
<td>9. TO&lt;sup&gt;d&lt;/sup&gt;</td>
<td>2.30</td>
<td>1.10</td>
<td>-.19***</td>
<td>(.76)</td>
<td></td>
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<tr>
<td>10. Helping</td>
<td>4.15</td>
<td>0.61</td>
<td>.07***</td>
<td>(.76)</td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
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<tr>
<td>11. Bureaucracy</td>
<td>3.76</td>
<td>0.91</td>
<td>-.08**</td>
<td>(.71)</td>
<td></td>
<td></td>
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</table>

Cronbach’s alphas are reported on the diagonal. N ranges from 1357 to 1398.

<sup>a</sup> IS = Intellectual stimulation.
<sup>b</sup> AC = Affective commitment.
<sup>c</sup> CC = Continuance commitment.
<sup>d</sup> TO = Turnover intentions.

* *<sup>p</sup> < .05.
** *<sup>p</sup> < .01.
*** *<sup>p</sup> < .001.
had a Cronbach’s alpha of .71. An example of an item in this scale was “decisions must go through many levels of management before they are finalized.”

3. Results

3.1. Overview of analyses

Hypotheses were assessed through three sets of analyses. First, we conducted a series of CFA models using LISREL 8.3 (Jöreskog & Sorbom, 1996) to establish the measurement properties of the 34 items assessed in this study. Next, we examined the discriminant validity of the five leadership factors by specifying correlational constraints between the leadership factors and outcomes. Finally, we estimated a structural model linking the leadership factors to the outcome measures.

3.2. Descriptive statistics

Table 2 displays the means, standard deviations, and zero-order correlations among the leadership factors, the outcome variables, and bureaucracy, the marker variable used in this study. Bureaucracy was selected as the best estimate of CMV in the data set as it displayed small to moderate relationships with the substantive variables, and had a relationship with two of the substantive variables that approached zero (r = −.02 with RBSE and r = −.03 with affective commitment).

Table 3
Model comparisons for the measurement and structural models

<table>
<thead>
<tr>
<th>Models</th>
<th>$\chi^2$</th>
<th>df</th>
<th>NNFI</th>
<th>RMSEA</th>
<th>CFI</th>
<th>GFI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model 1&lt;sup&gt;a&lt;/sup&gt;</td>
<td>1345.87</td>
<td>451</td>
<td>.96</td>
<td>.04</td>
<td>.97</td>
<td>.95</td>
</tr>
<tr>
<td>Model 2&lt;sup&gt;b&lt;/sup&gt;</td>
<td>1579.75</td>
<td>482</td>
<td>.96</td>
<td>.04</td>
<td>.97</td>
<td>.94</td>
</tr>
<tr>
<td>Model 3&lt;sup&gt;c&lt;/sup&gt;</td>
<td>1574.74</td>
<td>481</td>
<td>.96</td>
<td>.04</td>
<td>.97</td>
<td>.94</td>
</tr>
<tr>
<td>Model 4&lt;sup&gt;d&lt;/sup&gt;</td>
<td>1345.87</td>
<td>451</td>
<td>.96</td>
<td>.04</td>
<td>.97</td>
<td>.95</td>
</tr>
<tr>
<td>Model 5&lt;sup&gt;e&lt;/sup&gt;</td>
<td>1579.75</td>
<td>482</td>
<td>.96</td>
<td>.04</td>
<td>.97</td>
<td>.94</td>
</tr>
<tr>
<td>Model 6&lt;sup&gt;f&lt;/sup&gt;</td>
<td>1348.87</td>
<td>476</td>
<td>.97</td>
<td>.04</td>
<td>.97</td>
<td>.95</td>
</tr>
<tr>
<td>Model 7&lt;sup&gt;g&lt;/sup&gt;</td>
<td>1698.72</td>
<td>476</td>
<td>.96</td>
<td>.04</td>
<td>.96</td>
<td>.93</td>
</tr>
</tbody>
</table>

N = 1236.

<sup>a</sup> Model 1: Measurement model with unequal loadings from method factor.
<sup>b</sup> Model 2: Measurement model with no loadings from the method factor.
<sup>c</sup> Model 3: Measurement model with loadings from the method factor to substantive indicators constrained to be equal.
<sup>d</sup> Model 4: Saturated structural model with unequal loadings from the method factor to substantive indicators.
<sup>e</sup> Model 5: Saturated structural model with loadings from the method factor to substantive indicators constrained to be zero.
<sup>f</sup> Model 6: Model 4 with relationships between the leadership factors and outcomes set to the unstandardized values obtained from Model 5.
<sup>g</sup> Model 7: Model 6 with no relationships between the leadership factors and outcomes.
3.3. Measurement model

To assess the factor structure of the measures in the study, we tested a series of CFA models (see Table 3). Analysis was conducted on the responses of the 1236 individuals who provided complete responses to the survey. Each model included all 34 items from the 11 variables assessed in this study. The method factor was indicated by the three bureaucracy items. Method effects were represented by factor loadings from bureaucracy (the marker variable) to the indicators of the substantive constructs.

In Model 1, the loadings from the method factor to the 31 items assessing the substantive variables were free to vary. Table 3 shows that Model 1, the measurement model including method effects, provided a good fit to the data $\chi^2(451) = 1345.87, p < .001; \text{GFI} = .95, \text{CFI} = .97, \text{NNFI} = .96, \text{RMSEA} = .04$.

In Model 2, we constrained to zero the 31 paths from the method factor to the indicators of the substantive constructs. Therefore, comparison of Models 1 and 2 tested whether there were significant method effects in the data set. Model 1 was a significantly better fit to the data than Model 2 $[\Delta \chi^2(31) = 233.88, p < .001]$, indicating that significant method effects were present.

Next, Model 3 tested whether the method factor had an equally strong influence on each indicator of the substantive constructs by constraining these loadings to be equal. Model 1 was a significantly better fit than Model 3 $[\Delta \chi^2(30) = 228.87, p < .001]$. This result indicates that method effects were not equal for indicators within substantive constructs.

On the basis of the above model comparisons, the measurement model examined in this study included a common method factor that loaded on all items in the study, with these loadings free to vary. This measurement model, Model 1, became the basis for all subsequent comparisons.

3.4. Discriminant validity

We next tested the discriminant validity of the five leadership factors with each other. The unconstrained measurement model (Model 1) was compared to a series of models in which the relationship between each pair of the leadership factors was set to 1.00. A chi-square difference test was performed on the values obtained for the unconstrained and the 10 constrained measurement models.

A significantly lower $\chi^2$ value for the unconstrained model indicates that the leadership factors that have been constrained to be equal are not perfectly correlated, and that discriminant validity exists (Anderson & Gerbing, 1988). Analysis suggested that for all 10 comparisons the chi-square difference test was significant at the .001 probability level. This result indicates that the leadership factors were distinct from each other (these model comparisons are available from the first author).

Next, we tested the discriminant validity of the five leadership factors with the outcomes. For these analyses, we constrained the correlation between each of the leadership factors and each outcome variable to be equal to 1.00. Again, in each case the constrained model was a significantly poorer fit to the data at the .001 probability level when compared with the unconstrained model. These results indicate that the leadership factors were differentially related to the outcome measures (these model comparisons are available from the first author).

In summary, Model 1 provided a good fit to the data. This model included significant method effects indicating that it was important to consider the role of CMV in the study. Comparison of models indicated that the leadership factors were distinct from each other and displayed different patterns of correlation with the outcome variables.
Table 4 displays the standardized parameter estimates for the measurement model that is used in this study (Model 1). All of the model parameters loaded significantly on their hypothesized factor at $p < .001$, and the latent factors explained substantial amounts of item variance ($R^2$ ranged from .22 to .91).
In addition, Table 4 displays the factor loadings of the substantive variables on the method factor. With the exception of the four RBSE items and two of the affective commitment items, all of the study items loaded significantly on the method factor ($p < .05$).

Factor intercorrelations for Model 1 are presented in Table 5. While the above analyses provide clear support for distinctions among the leadership factors, the leadership subdimensions are strongly positively correlated with each other ($r > .60$ in all cases). Inspirational communication and supportive leadership were strongly related ($r = .81$, $p < .001$), as were inspirational communication and personal recognition ($r = .80$, $p < .001$), and personal recognition and supportive leadership ($r = .80$, $p < .001$). The average correlation among the latent transformational factors was .70, and the average correlation among the latent transformational factors and personal recognition was .71.

3.5. Structural model

The next set of analyses examined the structural paths between the leadership factors and the outcome factors. The leadership factors were free to intercorrelate as were the outcome measures in all of the structural models estimated. Estimating the structural model allowed us to test the significance of the specific paths between the leadership factors and the outcome factors, to examine the influence of CMV on these paths, and to evaluate alternative models.

First, we tested a saturated structural model in which all the leadership factors were related to all the outcome measures (Model 4; see Table 3). Loadings from the method factor to the indicators of the substantive constructs were free to vary. Because this model was saturated, the fit was exactly the same as the measurement model (Model 1), which was a good fit to the data. This model allowed us to estimate the value of structural paths between leadership and outcomes when methods effects were included.

Table 5
Factor intercorrelations in Model 1

<table>
<thead>
<tr>
<th>Scale</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Vision</td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>2. IS&lt;sup&gt;a&lt;/sup&gt;</td>
<td>.67***</td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>3. Inspiration</td>
<td>.75***</td>
<td>.73***</td>
<td></td>
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<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Support</td>
<td>.63***</td>
<td>.61***</td>
<td>.81***</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. RE&lt;sup&gt;b&lt;/sup&gt;</td>
<td>.63***</td>
<td>.64***</td>
<td>.80***</td>
<td>.80***</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>6. TO&lt;sup&gt;c&lt;/sup&gt;</td>
<td>-.22***</td>
<td>-.21***</td>
<td>-.24***</td>
<td>-.20***</td>
<td>-.18***</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. RBSE</td>
<td>.12***</td>
<td>.15***</td>
<td>.22***</td>
<td>.17***</td>
<td>.19***</td>
<td>.05</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>8. Helping</td>
<td>.14***</td>
<td>.14***</td>
<td>.18***</td>
<td>.13***</td>
<td>.11***</td>
<td>-.03</td>
<td>.37***</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. AC&lt;sup&gt;d&lt;/sup&gt;</td>
<td>.29***</td>
<td>.36***</td>
<td>.40***</td>
<td>.32***</td>
<td>.32**</td>
<td>-.40***</td>
<td>.15***</td>
<td>.19***</td>
<td></td>
</tr>
<tr>
<td>10. CC&lt;sup&gt;e&lt;/sup&gt;</td>
<td>-.09**</td>
<td>-.05</td>
<td>-.01</td>
<td>-.01</td>
<td>-.06*</td>
<td>-.31***</td>
<td>-.18***</td>
<td>-.03</td>
<td>.29***</td>
</tr>
</tbody>
</table>

$N = 1236$.

<sup>a</sup> IS = Intellectual stimulation.

<sup>b</sup> RE = Personal recognition.

<sup>c</sup> TO = Turnover intentions.

<sup>d</sup> AC = Affective commitment.

<sup>e</sup> CC = Continuance commitment.

* $p < .05$.

** $p < .01$.

*** $p < .001$.
Next, we estimated a model in which the loadings from the method factor to the indicators of the substantive constructs were set to zero (Model 5; see Table 3). This model allowed us to estimate the value of structural paths between leadership and outcomes when CMV was not included.

To test whether the method factor was having a significant effect on the structural paths, we estimated a sixth model (Model 6). In this model, the method factor was included, but the structural paths were constrained to be equal to the estimates from Model 5, in which no method factor was included. A significant difference in fit between Model 4 and Model 6 would indicate that the structural paths were influenced by CMV.

Model 6 was not significantly different to Model 4 $[\Delta \chi^2(25) = 3.00, p > .05]$. From this result, it can be concluded that method effects did not significantly change the estimated values of the structural paths. Therefore, Model 4 was used as the final structural model with which to test the hypotheses.

Finally, to test the contribution of the structural parameters to the overall fit of the model, we estimated a null model that included common method effects (Model 7; see Table 3). In this model, relationships between the leadership factors and the outcome variables were set to zero. Comparison of this null model with Model 4 provides a test whether relationships between the leadership factors and outcomes are equal to zero. Model 4 was a significantly better fit to the data than Model 7, indicating that the structural paths were necessary for the overall fit of the model.

In summary, Model 4 which controlled for method effects was a good fit to the data and was a significantly better fit than a range of other nested models. Therefore, this model was used to test the specific hypotheses.

Hypothesis 1 stated that vision and inspirational communication are uniquely positively related to affective commitment. This hypothesis was partially supported, as inspirational communication ($\beta = .34, p < .001$) had a unique positive relationship with affective commitment (see Table 6).

In addition, intellectual stimulation ($\beta = .17, p < .001$) was significantly positively associated with affective commitment (see Table 6). Contrary to expectations, however, vision did not display a significant unique positive relationship with affective commitment ($\beta = -.07, p > .05$).

Hypothesis 2 stated that personal recognition has a unique positive relationship with continuance commitment. This hypothesis was not supported as personal recognition ($\beta = -.19, p < .01$) displayed a significant negative relationship with continuance commitment. In addition, vision ($\beta = -.23, p < .001$) was also significantly negatively associated with continuance commitment. Intellectual stimulation was
also significantly positively associated with continuance commitment ($\beta=.20, p<.001$), although this relationship was not hypothesized.

Hypothesis 3 stated that inspirational communication has a unique positive relationship with RBSE. This hypothesis was supported ($\beta=.27, p<.01$). However, vision also displayed a significant negative relationship with RBSE ($\beta=-.11, p<.05$), although this relationship should be interpreted with caution as the zero-order correlation between vision and RBSE was positive ($r=.11, p<.001$).

Hypothesis 4 stated that supportive leadership has a unique positive relationship with interpersonal helping. This hypothesis was not supported ($\beta=.00, p>.05$). However, inspirational communication was significantly positively associated with interpersonal helping behaviors ($\beta=.23, p<.05$).

Hypothesis 5 stated that vision has a unique negative relationship with turnover intentions. This hypothesis was not supported. Vision was not significantly associated with turnover intentions ($\beta=-.08, p>.05$).

4. Discussion

Our study provided support for the five-factor leadership model that distinguishes between vision, inspirational communication, intellectual stimulation, supportive leadership, and personal recognition. Although these constructs were correlated with each other, they were distinct in some important ways, even after accounting for the effects of CMV. These findings suggest that it is appropriate to examine the individual leadership subdimensions as opposed to a higher-order transformational leadership factor. Below, we examine the results for each of the five leadership factors examined in this study.

4.1. Vision

One of the most interesting set of findings obtained in this study involves the relationships among articulation of a vision and outcomes. First, vision displayed a unique negative association with continuance commitment. This relationship was evident in both the zero-order relationships and in the structural model. This finding was not hypothesized, and conflicts with the general wisdom in the leadership field. However, a number of alternate expectations regarding the relationship between vision and continuance commitment could be conceived.

On the one hand, it could be hypothesized that vision is likely to be positively associated with continuance commitment as articulating an idealized picture of the future increases people’s investment in the future of an organization. On the other hand, it could be argued that articulating a vision will expand people’s awareness of the possibilities inherent in their environment. If this is the case, then vision may be associated with a decrease in continuance commitment by empowering people and positively influencing their perceptions of the opportunities available to them.

At present, we are unable to select between the alternatives proposed above. There is a clear need for more attention to be devoted to understanding the theoretical nature of the relationship between vision and continuance commitment. In addition, it is also important to replicate the relationship reported in this study as very few authors have examined the construct of continuance commitment in relation to transformational leadership.

Vision also displayed a significant negative relationship with RBSE. Post hoc exploration of this result suggested that the relationship between vision and RBSE was negative only after controlling for
the relationship between inspirational communication and RBSE. This suggests that in the absence of inspirational communication, expression of a vision is associated with a reduction in followers’ confidence. However, this result needs to be interpreted cautiously as there was a positive zero-order correlation between vision and RBSE.

The findings of this study raise the possibility that articulating a vision does not always have a positive influence on followers. Some previous work conducted by Shamir, Zakay, Breinin, and Popper (1998) in the Israeli Defense Forces provides support for this idea. In particular, Shamir et al. reported that leader behaviors designed to link employees’ self-concepts with the organizational mission such as adopting an ideological approach or setting a personal example, were either unrelated or negatively related to followers’ perceptions of and attitudes toward the leader and the unit. There is a need for researchers to explore the conditions under which articulation of a vision positively impacts on followers and those conditions under which vision has a negative impact on followers.

**4.2. Inspirational communication**

Our study also revealed that inspirational communication was significantly positively associated with RBSE, affective commitment, and interpersonal helping. Expressing positive and encouraging messages about the organization was positively associated with emotional attachment to a firm, individuals’ confidence in their capacity to carry out a range of proactive and integrative tasks, and the extent to which people voluntarily helped others with or prevented the occurrence of work-related problems.

It is interesting to contrast the relationships between vision and inspirational communication and follower outcomes. Inspirational communication was strongly positively associated with three of the five outcomes examined, while vision was negatively associated with two of the five outcomes studied. These results support the importance of distinguishing between vision and inspirational leadership, and highlight the need for future research to further address the distinction between these constructs.

**4.3. Intellectual stimulation**

Intellectual stimulation displayed a unique positive relationship with affective commitment to the organization and with continuance commitment to the organization. The positive relationship between affective commitment and intellectual stimulation contrasts with past research findings that have reported that intellectual stimulation has a negative impact on employees (e.g. Podsakoff et al., 1990).

Podsakoff et al. (1990) reported that intellectual stimulation was negatively associated with a number of employee attitudes including trust in the leader and satisfaction. These authors explained their findings by suggesting that intellectual stimulation is associated with higher levels of role ambiguity, conflict, and stress in the workplace. We suggest that while intellectual stimulation may enhance ambiguity and conflict in the workplace, employees may also feel valued when they are encouraged to actively engage in a firm.

Eisenberger, Huntington, Hutchinson, and Sowa (1986) discuss perceived organizational support, which refers to employees’ global beliefs concerning the extent to which an organization values their contributions and cares about their well-being. These authors suggested that to the extent that perceived support meets needs for approval and praise, individuals incorporate organizational membership into
their self-identity and thus, develop a positive emotional bond to the organization. Intellectual stimulation may be one way in which leaders indicate to employees that their firm values their contribution, which increases affective commitment to the organization.

Intellectual stimulation was also significantly positively associated with continuance commitment. One explanation for this result is that when leaders encourage followers to consider problems in new ways and to actively engage in the workplace, employees experience an increased sense of investment in an organization based on the increased effort they are exerting. This increased sense of investment increases continuance commitment.

4.4. Personal recognition

We proposed that when people received recognition for their work then they would feel an increased sense of investment in an organization. Contrary to expectations, personal recognition was significantly negatively associated with continuance commitment. This unexpected result might be explained by considering the additional aspect of continuance commitment assessed in measures of this construct. That is, authors have suggested that the continuance commitment scale assesses investments and perceptions of alternative employment options (McGee & Ford, 1987).

To the extent that personal recognition provides information about individuals’ worth, they might perceive a greater ability to move to new opportunities. Alternatively, when the only rewards that are available for use by leaders are verbal encouragement or rewards of a personal nature, this may result in follower frustration as people do not feel that they are being adequately rewarded for performance. Increased frustration may lead individuals to evaluate alternative opportunities more positively, reducing continuance commitment to the organization.

4.5. Supportive leadership

Finally, supportive leadership did not display any significant unique relationships with the outcome variables after statistically controlling for the influence of the other leadership factors and CMV. Analyses supported the distinction between supportive leadership and the other leadership constructs. However, the lack of a unique relationship between supportive leadership and the outcome measures raises some questions about the meaning of this distinction.

Results of this study suggest that further attention should be directed towards examining whether supportive leadership is truly “transformational” as determined by its relationships with followers’ motivation, needs, and values (Shamir et al., 1993). Research on the path–goal theory (e.g., House, 1996) has suggested that supportive leadership is primarily associated with satisfaction and not motivational outcomes or attachment to the organization. If this is the case, there may be a need to reconsider existing definitions of the construct of individualized consideration, which currently encompass supportive leadership.

4.6. Practical implications

There are a number of important practical implications that arise from the findings of this study. Most importantly, results suggest that it will be useful to evaluate the different components of leadership identified in this study for purposes such as performance appraisal, training and development, and
succession planning. The constructs represent distinct attributes that should be considered when organizations seek to select and train leaders.

In addition, our analysis indicates managers can have a powerful positive effect on employees by expressing positive and encouraging messages to staff. Inspirational communication seems to be particularly important when expressing a vision for the future. In the absence of encouragement and confidence building efforts, articulating a vision may have a neutral or even negative influence on employees.

Another practical implication concerns intellectual stimulation. This leadership factor displayed a range of different relationships with outcomes. Specifically, intellectual stimulation was positively associated with affective attachment to an organization and attachment based on a recognition of the costs associated with leaving an organization. Leaders who engage in intellectual stimulation may need to consider that while they are increasing emotional attachment to a firm, they are also enhancing followers’ sense that they are “tied” to the organization. Research suggests that individuals that have strong continuance commitment to an organization are less likely to make positive contributions to a firm (Meyer & Allen, 1997).

4.7. Future research

A number of areas for future research are highlighted by the findings of the current study. One area that clearly requires additional research is the influence of vision on employees. Past studies have reported that articulating a vision has a strong positive impact on employees. This finding was not replicated in this study when the influence of the other leadership constructs was taken into account.

One explanation for this result is that the vision items used in this study may have influenced results. Berson, Shamir, Avolio, and Popper (2001) distinguished between “strong” and “weak” visions. A strong vision is optimistic, motivating, and energizing. Berson et al. reported that the degree of optimism and confidence expressed in a vision is particularly important in determining whether a vision is strong in terms of its appeal to followers.

Examination of the items used to assess vision in the current study suggests that optimism and confidence were not addressed. Rather, the items were concerned with the existence of a vision, and the degree of importance that leaders are able to attach to the vision. As such, the operationalization of vision used in the current study is “weak,” and the positive effect of vision may be underestimated in this study. It is important that researchers continue to examine the impact of “strong” and “weak” visions on employee attitudes in order to determine when this distinction is important for employees.

A related explanation for the surprising results regarding the relationship between vision and outcomes concerns the failure to examine the content of leadership vision in this study. Recent research has emphasized the importance of considering the type of vision that leaders articulate (e.g., Awamleh & Gardner, 1999; Kirkpatrick & Locke, 1996).

Kirkpatrick and Locke (1996) found that vision statements that emphasized product quality were related to increased trust, leader–follower goal congruence, and inspiration. In contrast, vision statements that provided task cues increased understanding and were also intellectually stimulating. Future research should further explore the influence of vision content on employee attitudes in order to increase our understanding of the influence of vision on followers.

Another interesting area for future research concerns Bass’ (1985) subdimension of individualized consideration. In this study we only examined supportive leadership, and did not examine the developmental component of individualized consideration. Future research should continue the work
of Dvir et al. (2002) and Dvir and Shamir (2003), who have begun to examine the impact of transformational leaders on follower development.

4.8. Limitations

One of the key limitations of the current study was that the design involved a single survey at a single point in time. Podsakoff and Organ (1986) stated that when measures are collected from a single source, any defect in that source will contaminate both measures, presumably in the same fashion and in the same direction. We statistically controlled for the effects of CMV using an approach developed by Williams and Anderson (1994). Analysis indicated that CMV was present in the data, but that method variance did not significantly change the estimated values of the structural paths linking the leadership factors to outcomes.

The design also does not rule out the possibility that the path of causation is the reverse of that hypothesized. That is, we operated under the assumption that leaders influence employees’ attitudes. However, it is possible that followers’ attitudes influenced their ratings of their work group leaders. In order to address this concern, there is a need to conduct longitudinal or experimental research where leadership ratings are collected prior to attitude measures.

In conclusion, ambiguity has surrounded the theoretical conceptualization of the subdimensions of transformational leadership and this has been reflected in conflicting empirical results. Our study focused attention on the theoretical basis of transformational leadership, and differentiated more specific leadership dimensions. Analysis suggested that these dimensions have practical value for organizations and encourages further research into the nature and impact of transformational leadership.

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