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# How Transformational Leadership Weaves Its Influence on Individual Job Performance: The Role of Identification and Efficacy Beliefs

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# How Transformational Leadership Weaves Its Influence on Individual Job Performance: The Role of Identification and Efficacy Beliefs

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**Abstract**

This study examined how transformational leadership directly and indirectly relates to supervisory-rated performance collected over time including 437 participants employed by 6 U.S. banking organizations in the midwest. Results revealed that one's identification with his or her work unit, self-efficacy, and means efficacy were related to supervisor-rated performance. The effect of transformational leadership on rated performance was also mediated by the interaction of identification and means efficacy, as well as partially mediated by the interaction of self-efficacy and means efficacy. Implications for research, theory, and practice are discussed.

Over the last decade, considerable research effort has been invested into understanding the processes through which transformational leadership positively relates to follower attitudes, behavior, and performance. For example, a number of studies have examined the various intervening processes through which transformational leadership effects are ultimately realized in terms of performance outcomes (*e.g.*, Avolio, Zhu, Koh, & Puja, 2004; Bass, Avolio, Jung, & Berson, 2003; Bono & Judge, 2003; Kark,

Shamir, & Chen, 2003; Liao & Chuang, 2007; Piccolo & Colquitt, 2006; Schaubroeck, Lam, & Cha, 2007; Wang, Law, Hackett, Wang, & Chen, 2005). Collectively, this body of research has shown that the effects of transformational leadership are woven and mediated through processes such as efficacy, empowerment, trust, and identification.

In this study, we set out to examine what we considered several important intervening constructs that have been shown to be related to either leadership and/or individual performance but not examined in terms of their intervening effects on performance. These constructs include an individual's level of identification with his or her work unit, one's self-efficacy to complete work, and the level of means efficacy that the individual has regarding the confidence in the tools or resources he or she has to complete work. Specifically, prior research has shown that one's level of identification (see van Knippenberg, van Knippenberg, De Cremer, & Hogg, 2004 for a review), self-efficacy (*e.g.*, Chen, Casper, & Cortina, 2001; Stajkovic & Luthans, 1998), and means efficacy (Eden & Granat-Flomin, 2000; Eden & Sulimani, 2002) were each positively related to individual job performance. However, to our knowledge there has been no attempt to test the linkages among these respective constructs, transformational leadership, and performance. Moreover, we know of no prior research that has examined how these constructs in combination moderate or mediate the relationship of transformational leadership with performance.

We have focused here on the follower's level of identification with the work unit, self-efficacy, and means efficacy for several reasons. First, although there is literature on how leadership relates to one's level of identification (see van Knippenberg *et al.*, 2004), most prior research linking levels of work identification with leadership has examined how the individual identifies with the organization as a whole, as opposed to one's unit or leader (see Kark *et al.*, 2003 for an exception). As a result, we still know very little about how identification with one's immediate work unit or social group mediates the link between leadership and job performance (Kreiner, Hollensbe, & Sheep, 2006).

Relevant to examining the target of identification, Olkkonen and Lipponen (2006) argued, "we cannot assume that the factors found to influence organizational identification would similarly influence identification with other foci" (p. 203), such as either the work unit or the leader. The authors suggested that additional research is needed to shed more light on the strategies that organizations should use when fostering employee identification with work units (Olkkonen & Lipponen, 2006). We aim to fill this gap in the literature.

Second, although self-efficacy has been empirically linked to work performance (Chen *et al.*, 2001; Stajkovic & Luthans, 1998), research attempts

to directly link self-efficacy as a potential mediator in the relationship between transformational leadership and performance has been inconsistent. Kirkpatrick and Locke (1996) investigated the possible mediating role of self-efficacy in the relationship between visionary leadership and performance. Their results showed that leadership–performance relationship was not mediated by self-efficacy, even after a post hoc exploratory analysis. Shea and Howell (1999) examined the interactive effects of charismatic and noncharismatic leadership styles with follower self-efficacy. Although their results showed that self-efficacy mediated the charismatic leadership–task feedback interaction with task performance over time, results failed to support the mediation effect of self-efficacy in the relationship between charismatic leadership and task performance quality. The variation in findings suggests that the transformational leadership–self-efficacy–performance relationships need further examination including the addition of potential moderating variables. In this study, we will focus on means efficacy as a potential moderator of this mediated relationship, which has received scant attention in the literature.

Finally, Bandura (1986) described how individuals as personal agents have the capacity for self-reflection, and with this capacity they are not only agents of change but also capable of reviewing and reflecting on their self-efficacy to successfully address performance challenges. And because human functioning is socially situated, the means and/or resources available to human agents to perform tasks must be considered when examining the full motivation of individuals to perform. Ironically, there is very little literature examining how the confidence one has in the resources available to complete one's work affects one's self-efficacy to complete that work successfully. Thus, we focused on examining how *means efficacy* moderates the identification–performance and self-efficacy–performance linkages for the reasons indicated below.

First, the concept of means efficacy indicates that individuals not only self-regulate their behavior based on how they feel about themselves but also based on the adequacy of resources provided to them to accomplish work. Thus, the confidence to be successful is based not only on the individual's perception of his or her capabilities but also on the means to get the task done.

Second, Eden (2001) suggested that beyond the common elements associated with personal or internal efficacy, one can also examine external efficacy, which expands one's beliefs to the quality of resources available to get the job done, which he labeled means efficacy. Means efficacy arises from the nature of the work itself and how the individual perceives the resources they have to complete that work as contributing to or at the other extreme of impeding effective performance (Eden & Sulimani, 2002).
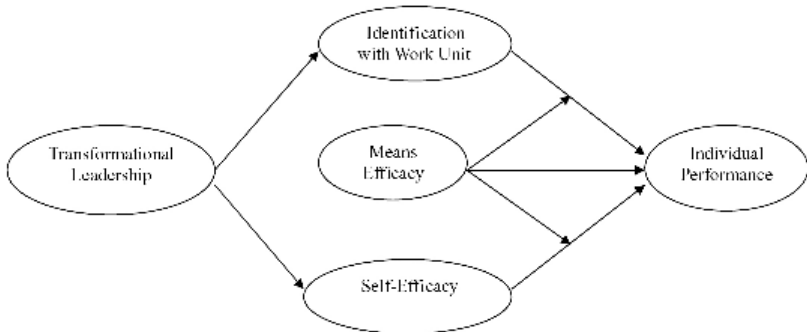
**Figure 1.** Hypothesized Moderated Mediation Model.

In sum, we set out to test the model shown in Figure 1, where means efficacy is depicted as moderating the path between transformational leadership and performance and does so *after* the mediating effects of identification with work unit and self-efficacy. This pattern of effects is referred to as moderated mediation (Edwards & Lambert, 2007), which "happens if the mediating process that is responsible for producing the effect of the treatment (*or independent variable*) on the outcome depends on the value of a moderator variable" (Muller, Judd, & Yzerbyt, 2005, p. 854). We depart from the more common strategy evidenced in past leadership research that has searched for potential mediators and moderators separately to respond to a call by Yukl (1998) for more leadership research that integrates *both* mediating and moderating variables to further explain the complex pathways through which transformational leadership weaves its impact on motivation and performance.

**Theory and Hypotheses**

*Transformational Leadership and Identification with Work Unit*

We use the term *identification* to refer to that part of an individual's identity that derives from his or her association with a social group (*e.g.*, the self-definition of individuals in terms of his or her membership in a work unit in which he or she works; Kreiner *et al.*, 2006). There are several theoretical reasons to expect a positive relationship between transformational leadership and identification with one's unit based on social identity theory (Ashforth & Mael, 1989). Social identity constitutes the perception of oneness with, or belongingness to, a specific social category where individuals are intrinsically motivated to contribute to the collective good (Ashforth & Mael, 1989). Hogg's (2001, p. 188) social identity theory of

leadership suggests that "leadership is about how some individuals or cliques have disproportionate power or influence to set agenda, define identity, and mobilize people to achieve collective goals." Hogg suggests that because transformational leaders are proactive, change-oriented, innovative, and inspiring, such leaders would be expected to create greater identification with other work unit members and extract extra effort from its members.

Kark and Shamir (2002) argued that the influence of transformational leaders is based on their success in connecting followers' self-concept or identity to the mission of their unit or organization so they become self-expressive or what Bass (1988, p. 50) referred to as "an absolute emotional and cognitive identification." Such leaders influence followers by activating an identity-based organizing construct in their working self-concept that serves to shift followers' conceptions of their identity in line with the goals, mission, and vision of their unit.

Drawing on self-concept theory, Lord, Brown, and Freiberg (1999) suggested that leaders exert powerful and enduring effects on follower's work behavior by influencing the way followers view their identities, making their followers more likely to sacrifice for the success of the work unit. Bass (1998, p. 26) argued that identification of followers' self is enhanced by transformational leaders because "the leaders increase the sense of self-worth among followers for such commitment, internalize the favorable attitudes of the followers toward achieving the collective success." Transformational leaders emphasize the importance of each individual's contribution to the group or unit, getting followers to internalize and prioritize a larger collective cause over focusing just on self-interests (van Knippenberg *et al.*, 2004). Supporting these arguments, Dvir, Eden, Avolio, and Shamir (2002) reported that developing transformational leadership in platoon commanders increased their direct followers' unit identification and their indirect followers' performance. Based on past research on organizational identification and the theoretical grounding offered, we also expect transformational leadership to be positively related to individual identification with the work unit and will test the following hypothesis:

**Hypothesis 1:** Transformational leadership positively relates to individual identification with the work unit.

*Identification with Work Unit and Individual Job Performance*

Identification has been linked to performance in prior research. van Knippenberg (2000) argued that identification is associated with motivation to achieve goals because it induces individuals to take the target's perspective and to experience the target's goals and interests as their own. As

a result, the more individuals identify with their work unit or organization, the more they are likely to expend more effort on behalf of the work unit or organization (Dukerich, Golden, & Shortell, 2002). This can be explained by self-identification theory, especially the self-presentation and self-verification aspects of the theory (Schlenker, 1986).

*Self-presentation* involves behaving in a manner consistent with one's self-concept so as to establish one's identity with other people, whereas *self-verification* involves demonstrating the chosen identity to one self. Research suggests that as a result of both self-presentation and self-verification, individuals high in identification will seek to establish their self-concepts by becoming more expert in their jobs and greater contributors to their organization (van Knippenberg *et al.*, 2004). This is because a strong identification with the work unit or organization tends to promote positive responses toward one's employing organization, which then encourages effective work behavior such as higher job performance (Pratt, Rockmann, & Kaufmann, 2006).

Identification also provides an individual with a frame of reference in which to interpret and link the social situation to his or her own actions (Ashforth & Mael, 1989). In other words, employees tend to choose their actions, in large measure, based upon the type of attachment they have to the work unit or organization. Indeed, Dukerich *et al.* (2002) argued that perceived identification helps the individual maintain a consistent view of one's self that is distinct from others, while enhancing self-esteem. We expect that an enhanced level of self-esteem is likely to lead to greater effort on the part of the individual, which in turn will help him or her to focus more effectively on the tasks to be completed. Thus, based on past research and theory, we hypothesize:

> **Hypothesis 2:** Individual identification with the unit positively relates to individual performance.

*Transformational Leadership, Self-Efficacy, and Individual Performance*

Self-efficacy refers to an individual's belief in his or her capabilities to successfully accomplish a specific task or set of tasks (Bandura, 1997). Shamir, House, and Arthur (1993) were among the first to link self-efficacy to transformational leadership in their self-concept motivation theory of leadership. The authors suggested that self-efficacy is a possible mediating mechanism through which transformational leadership affects followers' performance. They further suggested that transformational leaders enhance followers' perception of self-efficacy by emphasizing positive visions, communicating high performance expectations, and expressing confidence in followers' abilities to contribute to the mission and goals of their organization.

Other authors (*e.g.*, Kirkpatrick & Locke, 1996) have also suggested that transformational leaders build followers' feelings of self-efficacy by providing regular and adequate feedback to their followers. In other words, by understanding how followers view themselves, such leaders are able to help "transform" their self-concepts to enable followers to believe they can be successful at more challenging tasks. Transformational leaders can also increase followers' self-efficacy through role modeling and verbal persuasion—two major determinants of self-efficacy. For example, Bass (1998) argued that transformational leaders influence followers' behaviors because such leaders represent an ideal point of reference for followers to engage in vicarious learning. This leads to the following hypothesis:

**Hypothesis 3:** Transformational leadership positively relates to self-efficacy.

Bandura (1997) argued that self-efficacy plays an important role in task-related performance because self-efficacy beliefs influence an individual's choice of goals and goal-directed activities, emotional reactions, and persistence in the face of challenge and obstacles. Self-efficacy determines people's selection of a challenge or activity that they believe they can successfully accomplish. Individuals high on self-efficacy will choose to enter into a situation in which their performance expectation is high and avoid a situation in which they anticipate the demand will exceed their ability (Bandura, 1997). They will also set higher goals and commit to those goals. In support of Bandura's arguments, research has demonstrated that self-efficacy is predictive of job performance (*e.g.*, Brown, Jones, & Leigh, 2005; Chen *et al.*, 2001). In their meta-analysis of 114 studies, Stajkovic and Luthans (1998) found that self-efficacy was positively correlated with work-related performance ($r = .38$). In view of the strong empirical evidence for the positive relationship between self-efficacy and performance and based on theory, we expect a positive relationship between self-efficacy and performance.

**Hypothesis 4:** Self-efficacy positively relates to individual performance.


## Moderating Effect of Means Efficacy

Of course, the contribution of this study lies not in just testing Hypotheses 1, 2, 3, and 4, but rather in exploring whether the interaction of identification and means efficacy and the interaction of self-efficacy and means efficacy provide potential mechanisms for explaining the complex rela-

tionship of transformational leadership with individual job performance. This complex effect would be demonstrated by showing that the interaction of identification and means efficacy and the interaction of self-efficacy and means efficacy mediate the interaction of transformational leadership and means efficacy.

*What Is Means Efficacy?*

Expanding on the construct of self-efficacy, Eden (2001) suggests that one's subjective efficacy involves an individual's assessment of all of the available resources that can be applied successfully to perform one's job. One's *internal* sources of efficacy include such things as knowledge, experience, skills, willpower, and endurance, which have been referred as self-efficacy (Bandura, 1986). However, these internal resources are only a part of what constitutes one's subjective efficacy. Eden (2001) suggests there is also a subjective *external* efficacy he labeled means efficacy. Just like a strong belief that one has the self-efficacy to perform a task, Eden argues that individuals also have a belief in the efficacy of the means available to be successful, including such things as one's confidence in one's equipment, people, processes, and procedures. These beliefs, Eden argues, exist independently of an individual's ability and represent important sources of work motivation that have been largely ignored by efficacy theory and research.

In this study, and in line with Eden and his colleague's work, we view means efficacy as being an individual's subjective perceptions regarding the adequacy of their tools, processes, and procedures provided by their respective work units for performing work tasks (Eden & Sulimani, 2002). Thus, means efficacy is not necessarily about the objective quality of tools (*i.e.*, tool's actual utility), just like self-efficacy is not one's actual capacity. Rather, means efficacy is an individual belief in the efficacy of the means available to perform his or her job successfully, just as self-efficacy is about belief in one's capacity. For example, a work unit or organization might have very high-quality tools or means, but we argue that these might not translate into high performance if, for example, employees do not believe in their high-quality capacities. An individual has to see the value of the means as critically important for it to have an impact on performance, just as he or she has to perceive personal value in terms of talents, capabilities, skills, and knowledge.

*Means Efficacy and Individual Job Performance*

One way to explain how means efficacy may be related to individual performance is by employing social exchange theory (Blau, 1964). Accord-

ing to social exchange theory, individuals may form *economic exchange relationships* or *social exchange relationships.* Economic exchange relationships are transactional in nature whereas social exchanges involve implicit obligations that members of the social exchange feel compelled to reciprocate.

Although economic and social exchanges should be seen as independent constructs, and not as opposing points on a continuum (Cropanzano, Rupp, Mohler, & Schminke, 2001), the key feature of social exchange theory is that the type of relationship is the most proximal cause of behavior. For example, employees who perceive a higher level of organizational support in terms of the utility of tools used to perform their work would be more likely to feel an obligation to "give back" to the organization in terms of positive work-related behaviors. When there are such positive exchanges, individuals are expected to have higher job performance (Settoon, Bennett, & Liden, 1996). Therefore, we expect that when employees' believe they have the "right" tools to perform their jobs, they are more likely to reciprocate by working harder to help the unit reach its objectives through increased effort.

All other things being equal, if employees believe they do not have the best tools and/or resources to do their work, they are less likely to be motivated to increase their levels of job performance. On the other hand, if an individual works in a unit that is perceived to have state-of-the-art processes, resources, or tools, we expect that the higher confidence levels in those processes, resources, and tools would augment performance. In other words, the availability of resources (means) and belief about those resources can potentially impact how individuals perform. For example, in an investment bank, we observed employees discussing the equipment and procedures they were using for creating a new financial instrument as being " superior" to their competitors, which other employees did not necessarily confirm. Similarly, two surgeons described the latest intensive care unit as being the best in the world and that it would help them in reducing infection rates at their hospital. Taken together, we propose to test the following hypothesis:

**Hypothesis 5:** Means efficacy positively relates to individual performance.

*Interactive Effects of Identification and Means Efficacy*

Wells (1978) argued that although identification may be theoretically and empirically linked to performance outcomes (see also Pratt *et al.*, 2006; Riketta, 2005; Riketta & Van Dick, 2005; van Knippenberg, 2000), this linkage may be better understood through interpretive events such

as the meaning an individual derives about the nature of his or her job. In this study, we consider means efficacy as one important interpretive component that can be explored in determining how individuals derive meaning about their work challenges. Specifically, we argue that positive perceptions of means efficacy can make the relationship between one's identification with his or her work unit and performance stronger. When individuals identify with the work unit and their level of means efficacy is higher, we suggest that they will be more likely to be motivated to perform their tasks. Peters and O'Connor (1980) identified eight categories of constraints believed to hinder the influence of individual motivation on effective task performance—one of which was having, or in terms of means efficacy, viewing, one's tools and equipment as being inadequate. Therefore, we suggest that the relationship between identification with one's work unit and task performance will be stronger for individuals high versus low in terms of means efficacy. We propose to test the following hypothesis:

**Hypothesis 6**:  Individual identification with work unit will interact with means efficacy in such a way that the relationship of work unit identification with individual performance will be stronger when perception of means efficacy is high versus low.

*Interactive Effects of Self-Efficacy and Means Efficacy*

Bandura (1997) suggests that self-efficacy plays an important role in task-related performance. He explains that the reason self-efficacy is positively related to important organizational outcomes such as performance stems from the fact that self-efficacy beliefs influence an individual's choice of goals and goal-directed activities, emotional reactions, and persistence in the face of challenge and obstacles. Self-efficacy determines people's selection of a challenge or activity that they believe they can successfully accomplish. For example, individuals high on self-efficacy will choose to enter into a situation in which their performance expectation is high and avoid a situation in which they anticipate the demand will exceed their ability. These arguments have largely been confirmed by several empirical and meta-analytic studies (Brown *et al.*, 2005; Chen *et al.*, 2001; Stajkovic & Luthans, 1998; Vancouver, Thompson, & Williams, 2001).

It seems likely, however, from a social cognitive theory perspective (Bandura, 1977, 1986) that the positive relationship between self-efficacy and performance will be moderated by means efficacy. According to this theory, human behavior is determined by a reciprocal interaction among cognitive, behavioral, and environmental influences. Another major as-

pect of this theory is that humans are viewed as having purpose and direction, which are reflected in various types of cognitive mechanisms that influence their behavior. One such structure is the perception of work environments, which we believe means efficacy is an essential component.

According to Bandura's (1977) social cognitive perspective, self-efficacy is the belief that one can execute the behavior required to cope with potentially challenging situations. This perspective also emphasizes the human capacity to self-regulate, self-direct, and self-motivate. Therefore, to be successful, one not only needs a resilient self-belief in one's capabilities but also a strong belief in the means one has to exercise control over desired performance. Thus, it is possible that people with the same high levels of self-efficacy may perform either poorly or extraordinary depending on whether their belief in the means they have available enhances or inhibits their motivation and problem-solving efforts.

Building on the above argument, employees' beliefs in both their own ability (*i.e.*, high self-efficacy) and the utility of the tools and procedures available to them to perform their jobs (*i.e.*, high means efficacy) will enhance effective task performance. Recent experiments by Eden and associates (*e.g.*, Eden & Granat-Flomin, 2000; Eden & Sulimani, 2002) support these arguments, showing that the more employees believe in both their own ability and the usefulness of the means at their disposal, the better they will perform. Thus, to the extent that employees believe in their ability and that their work environment supports their personal aspirations to do their job, we expect they will be more likely to achieve higher levels of performance resulting in the following proposed hypothesis.

> **Hypothesis 7**: Self-efficacy will interact with means efficacy in such a way that the relationship of self-efficacy with individual performance will be stronger when perception of means efficacy is high versus low.

As noted above, prior research suggests that identification and self-efficacy mediates the effects of transformational leadership on outcomes (Kark & Shamir 2002; Kirkpatrick & Locke, 1996; Shea & Howell, 1999; van Knippenberg *et al.*, 2004). We also know that individuals who exhibit higher levels of identification have a more consistent view of themselves, which should result in greater effort on the part of that individual to achieve higher performance. Along these lines, Brown *et al.* (2005, p. 974) argued that "self-efficacy affects performance in large part by motivating individuals to set and pursue high performance standards, which help to stimulate, organize, and direct effort in goal pursuit." However, if means efficacy does moderate the effects of both identification and self-efficacy on individual performance, as we have noted in Hypotheses 6 and 7, then it is possible that those factors mediating trans-

formational leadership and individual performance will also be moderated. Thus, building on Hypotheses 6 and 7, we further suggest that the proposed mediating effects of both identification with one's work unit and self-efficacy in the relationship between transformational leadership and performance will also be moderated by means efficacy. If this proposed moderation is obtained, it would indicate a boundary condition on some of the central intervening processes through which transformational leadership weaves its influence on performance. This leads to the following two hypotheses:

   **Hypothesis 8**:  Means efficacy moderates the relationship between transformational leadership and individual job performance *after* the mediating effect of identification with work unit.

   **Hypothesis 9**:  Means efficacy moderates the relationship between transformational leadership and individual job performance *after* the mediating effect of self-efficacy.

## Method

*Sample and Procedures*

This study was conducted over a period of approximately 1 year in six separate banks located in two bordering states in the U.S. midwest. The six banks were distributed equally in each state (three in each state) and were all located in each of the main urban cities of those two states: Bank 1 ($n = 65$), Bank 2 ($n = 71$), Bank 3 ($n = 77$), Bank 4 ($n = 72$), Bank 5 ($n = 72$), and Bank 6 ($n = 80$). The banks were similar in terms of employee numbers, organizational structure, processes, and the type of customers they each competed for in their regions. Respondents performed almost identical tasks across the six banks, using similar technologies with a majority of respondents performing administrative/professional and clerical duties in these respective organizations (*e.g.*, tellers, loans, banking, etc.). These observations are based on interviews with the employees, supported by personal accounts of senior management and additional information collected from the HR department. The average age of participants was 32.98 (SD = 7.40), 65% were women, and 92% had completed some college or university degree. The average organizational tenure was 8.52 years (SD = 7.95).

   Data were collected by survey distributed via the bank's internal e-mail system. An e-mail was sent to each bank's employee with the help of

the HR department, who asked them to participate in the study by completing the survey. The first e-mail that went to all employees included the details about the research project, information that will be required, and how data will be collected. All participants were asked to submit via e-mail their responses directly to the first author. In addition, each respondent was asked to provide their name so that we could match data collected at later times. However, respondents were assured their names would be used for research purposes only and that all identifying information would be removed after data were coded, which was part of the informed consent form used for this research project.

At Time 1, employees were asked to participate in the study by rating their unit supervisors' transformational leadership style and providing their personal information, including age, gender, and organizational tenure. Approximately 6 to 9 months later (Time 2), the same individuals were asked to participate in the second phase of the study. Respondents completed a measure of identification with their work unit, means, and self-efficacy.

Data were collected at two different points in time to reduce the possibility of self-report bias. Podsakoff, MacKenzie, Lee, and Podsakoff (2003) have argued temporal separation reduces common source/method variance by allowing previously recalled information to leave short-term memory, in essence diminishing the respondent's ability and motivation to use his or her prior responses to answer subsequent questions.

After all data were collected from employees, supervisors were then asked to rate their respective employees on the same performance dimensions 2 weeks after Time 2 data were collected. The followers' supervisors were identified through each bank's HR department. All 83 supervisors identified completed their ratings of their direct reports (100% response rate). We should clarify here that our focus in this study is on task performance because task performance is what constituted the follower's job requirements. The individual's work unit would be expected to provide the means or tools to ensure the task/job is performed successfully and thus is contingent upon how the resources provided by the work unit or organization are perceived by followers (van Knippenberg, 2000).

Across the banks, the average response rate was about 62% with an average of six employees rating each supervisor's leadership. After matching participant's responses at Time 1 and Time 2, and their supervisors' performance ratings, we ended up with a final sample of 83 supervisors with 437 individual employees who reported directly to them. The demographic characteristics of the final sample used in the study were compared to those that responded at Time 1 but failed to respond at Time 2. There were no significant differences in terms of age, education, and gender.

*Measures*

**Transformational leadership.** Transformational leadership was measured using 20 items from Bass and Avolio's (2000) Multifactor Leadership Questionnaire Form 5x-Short. This survey included behavioral items measuring idealized influence, individualized consideration, inspirational motivation, and intellectual stimulation. However, in this study, we combined the four components into a composite measure of transformational leadership ($\alpha$ = .91) because we felt we had more conceptual justification for examining the impact of transformational leadership on the dependent measures than each of its separate components. The average correlation coefficient (r) among the four dimensions was .74. Sample item: "Seeks differing perspectives when solving problems." Respondents were asked to mark the frequency with which the leader engages in each of the behaviors on a 5-point scale ranging from 0 = *not at all* to 4 = *frequently if not always.*

To provide further justification for combining the four factors of transformational leadership, we conducted two separate confirmatory factor analyses (CFA) using AMOS maximum likelihood estimation procedure (Arbuckle & Wothke, 1999). The first analysis was a second-order CFA using AMOS with subdimensions serving as first-order reflective indicators to test a higher order factor of transformational leadership ($\chi^2/df$ = 2.05; CFI = .95; TLI = .93; RMSEA = .06). In the second analysis, we loaded all 20 individual items directly onto transformational leadership to form a single factor and results revealed a good fit as well ($\chi^2/df$ = 1.94; CFI = 98; TLI = .96; RMSEA = .04), with factor loadings ranging from .62 to .95. These results provided further support for using the overall construct of transformational leadership in this study and was in line with prior research that has also examined transformational leadership as a higher order construct (see also Bono & Judge, 2003; Judge & Piccolo, 2004; Liao & Chuang, 2007; Piccolo & Colquitt, 2006; Schaubroeck *et al.*, 2007).

Finally, transformational leadership has been treated as both an individual- and group-level variable in past research. Moreover, because multiple followers rated each leader, we also tested whether there was any statistical justification to treat transformational leadership as a leader or group-level variable. We calculated the intraclass correlations (ICCs; Bliese, 2000) and the within-group agreement ($r_{wg}$; James, Demaree, & Wolf, 1984). The average $r_{wg}$ was .64, ranging from .45 to .71, whereas the ICCs were as follows: ICC(1) was .10 and ICC(2) was .60. The group effect (*i.e.*, the F value for the ANOVA) was significant at *p* = .05. Although these statistics suggest some group-level effects, we decided to treat transformational leadership at the individual follower level. Our decision was based in part on the $r_{wg}$ value falling below the traditional cutoff recommended for forming groups of .70, the ICC (1) value being relatively

low, as well as based on the individual level of analysis used for our intervening and performance outcomes (Rousseau, 1985). Finally, we were specifically interested in how an individual follower's leader affected his or her self-efficacy, identification, and means efficacy, and did not feel that a shared or group-level analysis of leadership was pertinent to the hypotheses being tested in this study.

**Identification with work unit.** Identification with one's work unit (α = .87) was measured using 10 items also used by Kark *et al.* (2003). These items were used to measure the extent to which individual followers identified with their work unit. Sample item: "I am proud to tell others I belong to this unit." Responses were made on a 5-point scale ranging from 1 = *strongly disagree* to 5 = *strongly agree.*

**Self-efficacy.** To measure perceived self-efficacy (α= .81), we used 10 items from Riggs, Warka, Babasa, Betancourt, and Hooker (1994). This scale was anchored on a 6-point response scale ranging from 1 = *very inaccurate* to 6 = *very accurate.* Sample item: "I have confidence in my ability to do my job."

**Means efficacy.** We assessed means efficacy using a 10-item scale adapted from Eden and colleagues (*e.g.,* Eden & Granat-Flomin, 2000; Eden & Sulimani, 2002) for the banking context. Because means efficacy is a means specific construct, a researcher must first decide what means are and devise the measure for that particular means or situation. To do this, we explained to respondents what we meant by the term "work tools" (*e.g.,* computers, calculators, or processes that made their jobs more efficient, reduced errors, improved services to customers, reduced customer waiting time, etc). Respondents indicated their agreement with individual statements such as the following using a 5-point scale (1 = *strongly disagree* to 5 = *strongly agree*). Items were: The work tools I have "shorten [my] work time," "work very well," "facilitates fast service to the customers," "are easy to use," "are easy to operate," "user friendly," "operates without problems," "save me time," "are reliable," and "are the best of their kind."

Given that Eden and colleague's measure is relatively new, we carried out a principal-components exploratory factor analysis to determine whether the "10 items means efficacy measure" comprised a unitary dimension or multiple dimensions. Results suggested that a single factor emerged with an eigenvalue greater than 1.00, accounting for 69.3% of the total variance. The loadings for the items ranged from .61 to .88. The resultant single-factor scale had an acceptable internal consistency (Crobach's α of .79).

**Supervisory-rated task performance.** The immediate supervisor of each follower was asked to provide a performance rating on a 4-item measure, using a 5-point response format. The first two items were developed by Heilman, Block, and Lucas (1992) and the last two items were developed specifically for this study. These items were "all in all, how competently does this individual perform the job?," "in your estimation, how effectively does this individual get the work done?," "how would you judge the overall quality of this individual's work?," and " an overall summary of this individual's competence" using the following 5 anchors: 1 = *consistently performs way below expectations*, 2 = *consistently performs below expectations*, 3 = *consistently performs at expectations*, 4 = *consistently performs above expectations*, and 5 = *consistently performs way beyond expectations.*

Because we drew items from two different sources to measure individual follower performance, we conducted an exploratory factor analysis on the four items. Results showed that a single factor explained 81% of the total variance in the items with an eigenvalue greater than 1.00, suggesting that these items form a reliable scale (combined internal consistency, Cronbach's α of .86). Further, because each supervisor rated, on average, six followers, there is a potential possibility that our task performance data may not be totally independent. To assess the independence of our data, we calculated ICC(1) that decomposes the variance in supervisor ratings into within- and between-supervisor variance (LaHuis & Avis, 2007). Although there is no agreed upon cutoff, high levels of ICC(1) as indicated by an appreciable ICC(1) value (.20 or higher) would suggest that the data were not independent and that there are some rater (*e.g.*, supervisor) effects. The ICC(1) was .06 and ICC(2) was .57, suggesting some degree of independence for our task performance data. The group effect (*i.e.*, the *F* value for the ANOVA) was significant at $p$ = .05.

**Control variables.** We controlled for bank context (dummy-coded, n−1), organizational tenure, and job type (*e.g.*, whether the job entailed administrative/professional or clerical duties such as tellers, loans, banking, etc.) based on past research (*e.g.*, Eden & Granat-Flomin, 2000; Eden & Sulimani, 2002; Kreiner *et al.*, 2006) in all the analyses described below. Controlling for job type was particularly important because the nature of job might explain the degree of task interdependence or the extent to which these participants worked together (administrative and professional coded as 0 and clerical duties coded as 1).

## Results

Table 1 provides descriptive statistics among all variables included in this study.

**Table 1.** Correlations among the Variables

| Variable | Mean | SD | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|---|---|
| 1. Transformational leadership | 2.21 | .77 | .91 | | | | |
| 2. Identification with work unit | 3.55 | .60 | .21** | .87 | | | |
| 3. Self-efficacy | 4.88 | .73 | .23** | .18** | .81 | | |
| 4. Means efficacy | 3.39 | .47 | .25** | .26** | .52** | .79 | |
| 5. Supervisor-rated performance | 3.51 | .91 | .34** | .41** | .24** | .24** | .86 |

Note. $n$ = 437. Reliability coefficients are reported in diagonal.
*$p$ < .05 (2-tailed), **$p$ < .01 (2-tailed).

*Hypothesis Testing*

We tested our hypotheses using a strategy suggested by Langfred (2004) because we deemed it to be the most appropriate strategy for testing the "Type 2" moderated mediation (where means efficacy is hypothesized to only moderate the identification–performance and self-efficacy–performance relationships but not transformational leadership–identification or transformational leadership–self-efficacy relationships) proposed in this study. The regression analysis takes the following form:

**Stage 1:** Establish the relationship of the interaction of transformational leadership and means efficacy with individual performance ($y$): $y$ = $f$ (*organizational tenure, dummy-coded bank context, job type, transformational leadership, means efficacy, transformational leadership × means efficacy*).

**Stage 2:** Establish the relationship of transformational leadership with identification with work unit and transformational leadership with self-efficacy: identification (self-efficacy) = $f$ (*organizational tenure, dummy-coded bank context, job type, transformational leadership*).

**Stage 3:** Establish the relationships of identification, self-efficacy, and means efficacy with individual performance, and the interactive effects of identification and means efficacy, and self-efficacy with means efficacy with individual performance: $y$ = (*organizational tenure, dummy-coded bank context, job type, transformational leadership, means efficacy, identification, self-efficacy, identification × means efficacy, self-efficacy × means efficacy*).

**Stage 4:** Establish whether the effect of the interaction of transformational leadership and means efficacy with individual performance (Stage 1) is eliminated (full mediation) or reduced (partial me-

diation) when identification with work unit or self-efficacy is included in the same equation. This is accomplished with a different equation, namely the equation with both interactive terms: $y$ = (*organizational tenure, dummy-coded bank context, job type, transformational leadership, means efficacy, identification, self-efficacy, transformational leadership × means efficacy, and identification × means efficacy, self-efficacy × means efficacy*).

Langfred (2004) recommends using hierarchical regression to test for moderated mediation similar to Baron Kenny's approach for testing moderation and mediation; however, he departs from Baron and Kenny's (1986) approach by analyzing Stages 3 and 4 in separate regression equations. In the fourth stage described above, the extent that the identification × means efficacy or self-efficacy × means efficacy relationship with task performance reduces or eliminates the original effect of transformational leadership × means efficacy with task performance then moderated mediation is inferred. Hence, in Stage 4, both interactions of transformational leadership by means efficacy and identification by means efficacy are included, but the interest is in the change in significance (if any) between transformational leadership and means efficacy in Stage 1 and in Stage 4, to determine whether or not the mediation is partial or full.

Before analyzing our data, any variable used as a component of an interaction term was mean-centered to reduce multicollinearity and to increase the interpretability of various parameters (Aiken & West, 1991). We also examined the variance inflation factor (VIF) for each variable as a further check for multicollinearity. All the VIF scores fell below 2.00, suggesting that multicollinearity was not a serious problem in this analysis. Table 2 provides a summary of the moderated mediation results with all the variables measured and analyzed at the individual level of analysis consistent with level (individual follower) of theory described in our introduction (Klein, Dansereau, & Hall, 1994). For simplicity purposes, we present the direct effect of transformational leadership with identification and self-efficacy first.

Hypotheses 1 and 3 predicted that transformational leadership would be positively related to individual identification with the work unit and self-efficacy. Results of Stage 2 (Step 2) show significant relationships between transformational leadership and identification ($\beta$ = .23, $p$ < .01) and transformational leadership and self-efficacy ($\beta$ = .24, $p$ < .01), providing support for Hypotheses 1 and 3. Results of Stage 3 (Step 2) show that identification with work unit ($\beta$ = .36, $p$ < .01), self-efficacy ($\beta$ = .21, $p$ < .01), and means efficacy ($\beta$ = .19, $p$ < .01) were significantly related to individual performance when all the main variables are included in the

**Table 2.** Moderated Mediation Results [a]

| Predictor | Performance Stage 1 | Identification Stage 2 | Self-efficacy Stage 2 | Performance Stage 3 | Performance Stage 4 |
|---|---|---|---|---|---|
| Step 1 | | | | | |
| Bank 1 | -.13* | -.13* | -.14* | -.13* | -.13* |
| Bank 2 | .06 | -.14* | .08 | .06 | .06 |
| Bank 3 | .04 | -.14* | .05 | .04 | .04 |
| Bank 4 | .00 | -.15* | .00 | .00 | .00 |
| Bank 5 | .07 | -.10 | .06 | .07 | .07 |
| Job type | -.10 | .07 | -.09 | -.10 | -.10 |
| Organizational tenure | .09 | .10 | .08 | .09 | .09 |
| $R^2$ | .05 | .09 | .05 | .05 | .05 |
| Step 2 | | | | | |
| Transformational leadership (TFL) | .28** | .23** | .24** | .23** | .23** |
| Identification with work unit (IWU) | | | | .36** | .36** |
| Self-efficacy (SE) | | | | .21** | .21** |
| Means efficacy (ME) | .23** | | | .19** | .19** |
| $R^2$ | .22 | .15 | .17 | .36 | .40 |
| $\Delta R^2$ | .17** | .06** | .12** | .31** | .35** |
| Step 3 | | | | | |
| TFL × ME | .20** | | | | .08 (.15*) |
| IWU × ME | | | | | .21** |
| SE × ME | | | | | .17** |
| $R^2$ | .27 | | | | .45 (.48) |
| $\Delta R^2$ | .05** | | | | .05**(.08**) |

[a] Standardized coefficients reported. The coefficient in parentheses in Stage 4 represents TFL × ME when SE × ME is introduced in the model. Job type was coded as 0 =*administrative and professional duties;* 1 =*clerical duties.*
*$p < .05$,  **$p < .01$.

same equation. Thus, Hypotheses 2, 4, and 5 are supported by our data. Results of Stage 3 (Step 3) also show significant identification × means efficacy interaction ($\beta$ = .22, $p$ < .01) and self-efficacy × means efficacy interaction ($\beta$ = .18, $p$ < .01) as predicted in Hypotheses 6 and 7.

To examine the nature and form of the interactions, we plotted these interactions by developing separate equations using one standard deviation above and below the mean to represent high versus low on each respective variable (Aiken & West, 1991). Figure 2 depicts the interactions graphically for both the interaction of identification and means efficacy (Figure 2a) and the interaction of self-efficacy and means efficacy (Figure 2b). In addition to plotting the interactions, we also performed a simple slope analysis following the process described by Preacher, Curran, and Bauer (2006). Rather than assessing whether the simple slopes at arbitrary values of the moderator variable (*e.g.*, –1 and +1 standard deviation) are statistically significant, this approach identifies the critical values above and below the moderator (–10 and +10 is the default; however, these values can be changed to match the range of the observed data) at which simple slopes are statistically significant. The simple slope analyses of the regression involving job performance onto identification and self-efficacy within high means efficacy were significant as follows: identification (simple slope = .61 (.20), $t(428)$ = 3.05, $p$ < .01) and self-efficacy (simple slope = .57 (.24), $t(428)$ = 2.50, $p$ < .05).

Within low means efficacy, the relationships between identification with work unit and job performance and self-efficacy and job performance were as follows: identification (simple slope =–.83(.45), $t(428)$ =–1.80, *ns*) and self-efficacy (simple slope =–.66(.35), $t(428)$ =–1.89, *ns*). These results suggest that the relationships between identification and performance and self-efficacy and performance were positive and stronger for individuals higher in means efficacy as predicted. Conversely, these relationships were much weaker and nonsignificant for those individuals lower in means efficacy. Hypotheses 6 and 7 are supported by our data.

Hypotheses 8 and 9 predicted that means efficacy would moderate the relationship between transformational leadership and individual job performance, and does so *after* the mediating effect of identification with work unit and self-efficacy. Results of Stage 4 show that when the interaction of identification and means efficacy is included in the same equation, a previously significant interaction of transformational leadership and means efficacy from Stage 1 (Step 3) is no longer significant ($\beta$ = .08, *ns*). That is, when the interaction of transformational leadership and means efficacy is explored without identification in the equation, it is significant. However, this significant effect is eliminated when the interac-
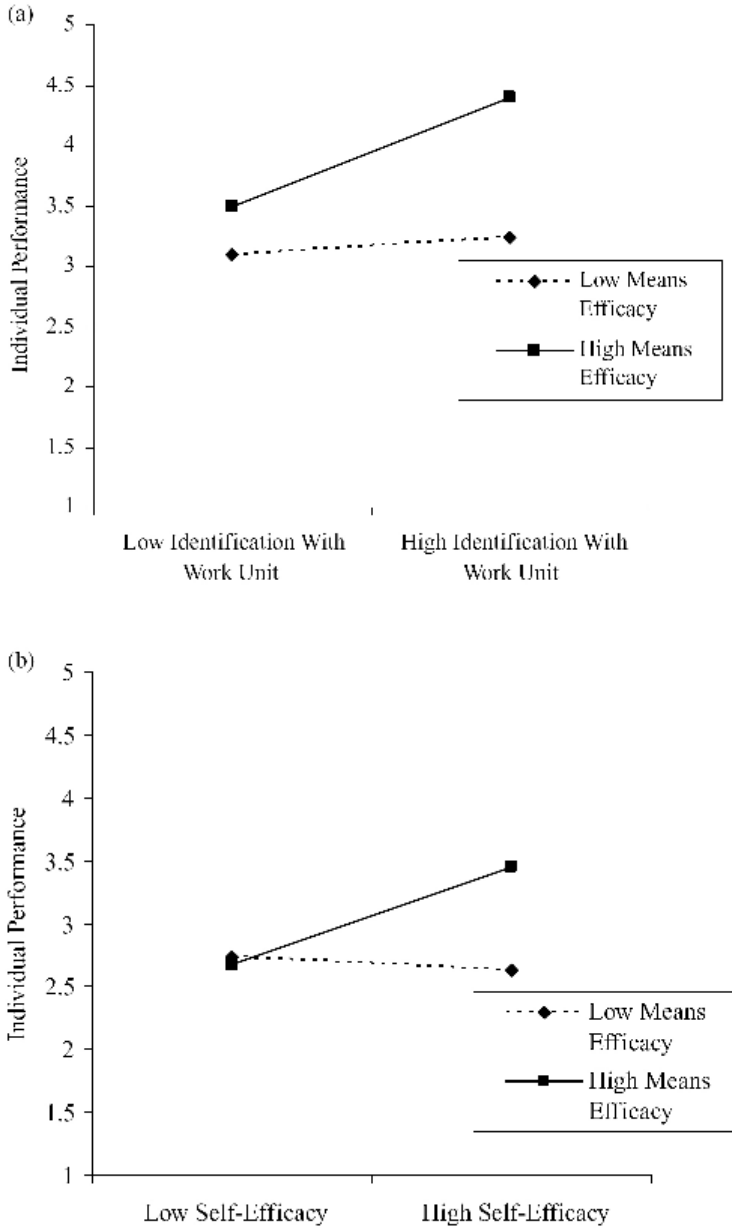
**Figure 2.** (a) The Interactive Effects of Identification with Work Unit and Means Efficacy. (b) The Interactive Effects of Self-Efficacy and Means Efficacy.

tion of identification and means efficacy is added in the same equation. Hypothesis 8 is supported by our data.

Regarding Hypothesis 9, we found the interaction of self-efficacy and means efficacy partially mediated the relationship between transformational leadership and individual performance. In other words, although reduced, the interaction of transformational leadership and means efficacy still remained significant ($\beta$ = .15, $p$ < .05), even after including the interaction of self-efficacy and means efficacy in the same equation. Thus, Hypothesis 9 received partial support.

*Alternative Model*

Although we proposed that the indirect relationship of transformational leadership with individual performance is carried through unit identification and its interaction with means efficacy, one could envision alternate structures for Figure 1 that could also have merit. For example, it may be that unit identification or self-efficacy mediates the interactive effects of transformational leadership and means efficacy with individual performance. Indeed, Sosik, Avolio, and Kahai (1997) examined the effects of transformational versus transactional leadership in a situation where all of the interactions were through advanced information technology. Sosik *et al.* (1997) reported that transformational leadership was associated with higher levels of potency and effectiveness compared to transactional leadership, suggesting there may be some interaction between leadership and how the technology or tools were either perceived or utilized.

We therefore tested an alternative mediated moderation model where identification with work and self-efficacy mediated the relationship between the interaction of transformational leadership and means efficacy and individual performance to provide comparative support for the hypothesized relationships tested in Figure 1. Our analysis failed to provide support for this alternative model. The moderating effect of means efficacy with regard to the relationship between transformational leadership and follower identification with work unit failed to achieve significant levels ($\beta$ = .07, *ns*). Results also failed to support the mediation effect of self-efficacy regarding the relationship between the interaction of transformational leadership and means efficacy and individual job performance. Results showed that the significant interaction effect of transformational leadership and means efficacy with individual job performance did not change with the introduction of self-efficacy in the equation. Thus, we concluded that our data provided stronger support for the hypothesized moderated mediation model presented in Figure 1.

## Discussion

In exploring the mechanisms and conditions under which transformational leadership weaves its effects on performance, our results showed that transformational leadership relates to follower identification with work unit and self-efficacy, which interacts with means efficacy to predict individual performance, thus representing a moderated mediation effect. To our knowledge, no prior study has examined these potential interactive effects to explain the process by which transformational leadership relates to individual performance.

### Theoretical Implications

There are several potential interesting theoretical contributions of this study for future research to consider. First, we introduce a theoretical construct that has not previously been considered by leadership researchers: means efficacy. Although researchers have examined the role of identification and self-efficacy in explaining the relationship of transformational leadership with work-related outcomes (see Kark *et al.*, 2003), this is the first study we are aware of that has simultaneously examined transformational leadership, identification with work unit, self-efficacy, and external or means efficacy when predicting individual performance. Therefore, this study underscores the importance of examining the joint relationship and the interactive effects of transformational leadership, identification, self-efficacy, and at least one external efficacy factor that focuses on whether followers feel confident they have the right resources or tools to do their tasks effectively. Specifically, we found that supervisor-rated task performance was higher when individuals identify with their work unit, when employees confidence about their ability was higher, when employees perceptions of resources or tools provided to them to do their work are higher, and when leaders demonstrate transformational leadership behaviors more frequently as evaluated by their respective followers.

In terms of contributing to advancing transformational leadership theory, we suggest that introducing constructs that encompass follower beliefs about the context in which they work will help further explain the mechanisms through which such leadership relates to and impacts positively on performance. For example, in Bass' (1985) original thesis on transformational leadership theory, he dedicates an entire chapter to situational and organizational contextual factors that may augment or constrain transformational leaders. Bass (1985) suggested that organizational environments that were more organic, challenging, or require rapid change may facilitate transformational leadership and its emergence. He also indicated that such things as the task itself may impact transfor-

mational leadership effectiveness. Specifically, Bass (1985, p. 166) stated, "The task itself, the work to be done, may stimulate transformational leadership efforts." He further suggested that policies might "substitute" for transformational leadership.

Since Bass (1985) published his theory of transformational and transactional leadership, much of the effort in the transformational leadership literature has emphasized the conditions in which transformational leadership is more or less likely to emerge. We believe that by focusing on the perceptions of one's work conditions, in this study defined as means efficacy, we are better able to understand how transformational leadership actually works in addition to perhaps how it might emerge over time. Focusing on these intervening mechanisms, as well as external contingencies, we hope to expand the work that has been done on transformational leadership theory to examine how such leadership emerges and has its impact on performance.

We believe that it is also instructive to point out that previous research attempts to directly link self-efficacy as a potential mediator in explaining the effects of transformational leadership on performance were largely unsuccessful (see Kirkpatrick & Locke, 1996; Shea & Howell, 1999). This study explored one potentially important boundary condition — means efficacy — that may be, in part, responsible for explaining this mediating effect. Thus, this study diverges from and extends prior research by identifying the moderating influence of means efficacy in the mediated relationship between transformational leadership and self-efficacy when predicting individual performance.

Another important contribution emerging from this study concerns the interaction of identification with work unit and means efficacy. As predicted, means efficacy moderated the relationship between identification with work unit and individual performance. Respondents who reported higher levels of means efficacy reacted more positively to identification with their work unit than respondents who reported lower levels of means efficacy. These results suggest that identification with one's work unit could be enriched by considering the influence of a broader range of employees' perceptions of their work environment, including how they perceive the utility of the tools, procedures, and methods provided to them to perform their tasks. These findings further suggest that if employees identify with the work and perceive high levels of means efficacy, they are likely to be more motivated to perform their tasks and perform more effectively.

*Practical Implications*

It is not uncommon to hear employees complain about the means they have available to perform their work, even when they may be sufficient.

More important, as the "tools" for completing one's work (*e.g.*, working in a virtual team context) become less tangible and more abstract, we suspect the impact of means efficacy may be even greater. As we know from path-goal theory (House, 1995), it is not only important for managers to identify the outcomes to be achieved but also the means through which those outcomes are achieved. This is particularly true when organizations are introducing new procedures and/or technology into the mix that employees may not fully embrace. To the degree that different styles of leadership are related to how followers perceive the quality of their means to get work done, the success of followers and their units may in part be tied to how effective the leadership is in enhancing followers' level of "means efficacy." We suggest that because means efficacy depends more on an individual's subjective perceptions and the fact that means efficacy is influenced by what others say about what they believe can or cannot be accomplished based on the work challenges (Eden & Sulimani, 2002), managers may boost means efficacy by affecting the way followers perceive the risks and challenges associated with their work setting. For example, in a task context where there is a great deal of risk to safety, the way followers perceive the means to accomplishing their work may be much more affected by the quality of leadership they experience as opposed to operating in a low-risk task environment. In such situations, a manager may attempt to manage the meaning of different performance challenges, including helping individual members to view resources as being sufficient to excel and succeed in pursuing their goals and performance objectives. Of course, a potent factor in what we are proposing is that the tools are indeed sufficient to at least be minimally successful.

Within the current bank context, we found that there was considerable variation in how followers perceived the means efficacy level of their tools and procedures. Upon reflection, we found this pattern to be somewhat intriguing, in that the bank's physical plant, tools, and procedures were nearly identical across different locations.

In the banking business where competition is fierce and growing more so each day, leveraging how employees perceive the utility of their tools and procedures seems to us to be a worthwhile investment for managers to make in their employees. Indeed, we wonder to what extent most managers actually believe that they can change employee perceptions regarding the quality of the tools and procedures they use to get their work done. We suggest that these results might challenge the assumption that at least some percentage of managers may overemphasize how to motivate employees, focusing on "internal factors" while potentially neglecting to motivate them by genuinely uplifting their beliefs with respect to external resources they have available to perform their jobs.

Our findings also suggest that increasing levels of employees' identification and self-efficacy without paying close attention to their perceptions about the tools and procedures given to them to perform their work may be counterproductive. Managers themselves may become demotivated because they believe they have focused on developing their followers' level of identification and self-efficacy but to no avail in terms of their performance. Our findings point to the possibility that by also focusing on the means by which work gets done, managers in situations like the banks included in this study could further motivate their employees to believe in the usefulness of the tools and other resources they have at their disposal. In our experience, managers are taught to motivate their followers, but we have rarely heard any trainer discuss motivation in terms of how we have defined means efficacy in this study.

We also think our findings have some bearing on the typical resistance organizations like banks experience when introducing new technology or tools to replace earlier means for getting the work done. Extrapolating from our findings, we suggest that it may be worthwhile for managers to spend time convincing employees of the enhanced efficacy of the new means to get the work done while also focusing on developing their self-efficacy and identification with their unit. This was reflected in one of the senior manager's comments from the bank in which we conducted this study, while doing a presentation at the second author's university. She told the students, "I consistently refer to my tellers as the CEOs of their work stations." She said what she wanted them to know was that it was their work station, and they must decide at the point of contact with their customers "the best means" through which to get their work done. She reinforced that in her role she would work tirelessly to achieve the best means available to support the highest levels of customer engagement. However, she also wanted them to be open to explore new ways of improving customer engagements either in terms of technology, procedures, or how they worked together.

Finally, the finding that follower ratings of transformational leadership were positively associated with follower identification with work unit and self-efficacy over nearly a year and rated performance suggests that training managers to be more transformational may provide important and useful returns on investment in training. More important, such training initiatives have already been shown to be related to increased levels of motivation, satisfaction, and performance among followers (Barling, Weber, & Kelloway, 1996; Dvir *et al.*, 2002; Towler, 2003).

*Strengths and Limitations of the Research*

This study has three notable strengths. First, our sample came from six different banking organizations, representing a diverse sample of follow-

ers and leaders. Second, although common source bias is rarely strong enough evidence to invalidate research findings (*e.g.*, Spector, 2006), we attempted to avoid alternative explanations due to self-reported biases by collecting data at two different points in time separated by approximately 9 months, while obtaining follower performance data from independent sources. Third, we attempted to respond to concerns raised by Edwards and Lambert (2007) for examining mediators and moderators simultaneously. Edwards and Lambert (2007) suggested that the traditional methods of treating moderation and mediation separately may suffer from various methodological problems, seriously undermining their accuracy and utility. Finally, we also controlled for several contextual variables such as bank context, organizational tenure, and job type that may have led to specification errors in models tested in this study. These design features add some degree of confidence to our conclusions.

This study also has some important limitations worth noting. One potential limitation is the fact that there was some level of dependency in the data both in terms of employee judgments of transformational leadership and in supervisory performance ratings. Second, although our data were collected at two different points in time with measures of performance collected separately from supervisors, our results are not entirely free from the potential inflating effects of common source bias because evaluations of transformational leadership, identification with work unit, and means efficacy all came from the same rater source (*i.e.*, followers). However, given our focus on moderated mediation analyses, it seems unlikely that common method bias could account completely for the pattern of results reported in this study (Aiken & West, 1991). Nevertheless, future research might want to collect ratings of leadership, identification with work unit, self-efficacy, and means efficacy separated by time for each measurement period to determine whether the same pattern of results is observed.

The third limitation concerns the issue of generalizability. We studied a sample of bank employees and their immediate managers. Moreover, we restricted our focus on performance to a few subjective follower task performance measures. We chose this strategy because we wanted to be able to compare performance ratings across organizations, as opposed to using idiosyncratic measures that may have been unique to each bank setting. We were also informed in our interviews that estimating individual performance in the bank setting is difficult to do and is generally done using a managerial performance rating. This is another reason for choosing the strategy we adopted in this study.

*Suggestions for Future Research*

At the outset, we suggested that previous research has established the main effects of transformational leadership, identification, and self-effi-

cacy on individual performance. This study took a different approach to explain the complex effects of transformational leadership and how they are woven through important intermediating constructs in terms of its relationship to performance. Future research may explore other conditions for transformational leadership relationships with other mediators and moderators not included in this study, including other outcome variables such as organizational citizenship behaviors or task engagement. If such results replicate the moderation mediation effects found in this study, then a potentially powerful boundary condition will have been identified.

Future research should also focus on determining what other key conditions are likely to moderate the relationship between identification with the group or organization. Indeed, Meyer, Becker, and Vandenberghe (2004) argued that multiple factors such as goal commitment, human resource management practices, and organizational culture may influence identification. Future research needs to focus on these factors to reveal a better understanding of the process and conditions under which identification relates to individual and organizational outcomes. Such research may shed more light on when identification with one's leader, work unit, and/or organization can and cannot be expected to have the most significant effects on follower task performance.

Future research also needs to explore the relationships between different types of leadership, means efficacy, and a variety of work-related outcomes across a broader range of organizational settings. Researchers may also need to look at the role tasks play as a potential moderator of means efficacy. For example, Eden and Sulimani (2002) suggested that some tasks, such as auto repair, nursing, and air traffic control, require continual use of tools, procedures, methods, and/or information, whereas other tasks, such as proofreading and most kinds of retail sales require little or none, even though all jobs require the use of some form of processes and methods that can be viewed as more or less efficacious. In addition, future studies could examine the mediating role of means efficacy with studies that manipulate or measure a broad range, rather than a narrow range, of means efficacy suggested by the instructions and items comprising the measure used in this study.

To provide evidence of generalizability, future research is needed to explore whether the relationships observed in this study are due to unique aspects of the organization, industry, or occupational setting. It may also be beneficial for future studies to include more objective work performance measures and measures that tap more directly into the notion of performance beyond expectations, which depicts atypical versus typical performance outcomes (Lim & Ployart, 2004).

Future research may also consider using experimental designs where both qualitative and quantitative predictors as well as mediating and cri-

terion data are collected over repeated observations to provide stronger evidence of causality, which could not be ascertained in this study. Such work could also bring a finer grained approach by identifying which aspects of transformational leadership account most for the variance explained in this study. For example, does individualized consideration have a stronger or weaker impact on means efficacy or the interactive effects of identification with work unit and means efficacy than say intellectual stimulation, inspirational motivation, or idealized influence? Moreover, future research should also broaden the identification and means efficacy concepts connected to transformational leadership. For example, this could involve expanding the measure of means efficacy with items tapping into a broader range of what would be considered the "means" for getting work done, such as the talent of one's work group.

Finally, in this study, we were interested in how individuals defined themselves in terms of their membership and actions on behalf of their work unit. Given the purpose of this study, aggregation to other levels was not deemed necessary. Yet, future research might want to focus on examining identification with the group or organization at both the individual and the group level while exploring their respective relationships with other group-level variables such as work unit performance. In pursuing this line of work, future research can test whether identification is a construct that travels easily across levels of analysis (*e.g.*, individual, group, or organization; Albert, Ashforth, & Dutton, 2000).

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