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THE EFFECTS OF IMPLICIT THEORIES OF LEADERSHIP ABILITY AND SUPERLEADERSHIP ON FOLLOWER MOTIVATION AND PERFORMANCE ATTRIBUTIONS

by

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A dissertation submitted to the Graduate Faculty in Psychology in partial fulfillment of the requirements for the degree of Doctor of Philosophy,
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Abstract

THE EFFECTS OF IMPLICIT THEORIERS OF LEADERSHIP ABILITY AND SUPERLEADERSHIP ON FOLLOWER MOATIVATION AND PERFORMANCE ATTRIBUTIONS

by

Elisa H. Schwager

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A contemporary social-cognitive model of motivation and personality, the Implicit Theories Model, was examined for its generalizability to the leadership domain. In the model, individual differences in cognition-affect-behavior patterns stem from domain-specific assumptions about the malleability of attributes, referred to as entity (i.e., static views) and incremental (i.e., malleable views) implicit theories. These assumptions influence goal orientation, attributions about oneself and others, and behavior.

In the present study, implicit theories of leadership ability held by a sample of 200 cadets (175 male, 23 female, & 2 unidentified) attending the U.S. Military Academy were investigated along with self-efficacy and the qualities of "Superleadership" displayed by their superiors (n=15). Superleadership is a self-management approach that supplies

followers with cognitive and behavioral strategies to overcome obstacles. These variables were examined in relation to a learning versus performance goal orientation and attributions for leadership performance.

It was predicted that cadets' implicit theories would be aligned with particular goals, i.e., an entity theory with performance goals and an incremental theory with learning goals. However, proponents of both theoretical orientations were undifferentiated regarding the two types of goals. In addition, self-efficacy played an important role in goal orientation independently of theory. Additional research directions are proposed to study these contradictory findings. A lack of Superleadership was not found to result in a performance goal orientation. Also, contrary to expectations, some Superleadership scales showed a relationship, suggesting that leadership behavior may be subject to differing subordinate interpretations.

Hypotheses regarding attributions could not be tested as planned because the two hypothesized scales, i.e., dispositional and non-dispositional, were highly unreliable. Therefore, the exhibited patterns for successful and unsuccessful performance were explored. In general, the results were not consistent with prior attribution research.

Finally, implicit theories of superiors were examined in conjunction with their views of cadet leadership ability

as predictors of Superleadership. Although it was hypothesized that perceived ability would be positively related to Superleadership, it was expected to be a more important predictor for entity theorists than incrementalists. Contrariwise, entity theorists displayed more Superleadership behavior overall. This relationship, considering the small sample size, may be due to a belief by these entity leaders that all cadets have leadership ability. These results pose questions regarding the conditions under which an entity theory is associated with effective leadership behavior.

I would like to acknowledge everyone who provided their love and support to me during the completion of this dissertation. I share this accomplishment with all of you.

THE EFFECTS OF IMPLICIT THEORIES OF LEADERSHIP ABILITY AND SUPERLEADERSHIP ON FOLLOWER MOTIVATION AND PERFORMANCE ATTRIBUTIONS

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INTRODUCTION

The cognitive social learning reconceptualization of personality discounted trait views postulating attributes as highly stable and consistently influencing behavior across diverse situations (Mischel, 1973). In recent years, a number of social-cognitive models[1] have appeared in the literature (e.g., Bandura, 1986; Deci & Ryan, 1985; Dweck & Leggett, 1988; Higgins, 1990; Kuhl, 1981; Shoda, Mischel, & Wright, 1989). Although the focus of the models is unique, they each recognize individual differences in personality as reflections of particular cognitive representations that impact interpretations (e.g., goals, expectancies, values) and generation of behaviors in psychological situations (Shoda & Mischel, 1993). As opposed to trait-based views, these theories make predictions about intraindividual organization of behaviors based upon underlying person variables and features of the situation that activate them.

> Social-cognitive models shift the emphasis from "global traits inferred from behavior to cognitive activities and behavior patterns, studied in relation to the specific conditions that evoke, maintain, and modify

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[1] The social-cognitive model originated from social learning theory. The cognitive aspect was included to emphasize that behavior is not just a function of the environment (e.g., observational learning), but involves cognitive representations of the individual as well. In the motivation and personality literature, these two labels are used interchangeably.

them, and which they, in turn, change" (Mischel, 1968; cited in Mischel, 1973, p. 265).

In addition, social-cognitive models raise questions about the assumptions made by attribution theorists who consider dispositional inference processes regarding oneself and others as relatively stable across individuals (e.g., Jones & Davis, 1965; Jones & Nisbett, 1972; Kelley, 1967). They suggest that differences in information processing are associated with inconsistencies in dispositional explanations for behavior employed by individuals. Social-cognitive approaches shift the focus of research from "understanding *when* people make dispositional inferences ... [to] *who* is most likely to make dispositional inferences, as well as *what* different people mean when they make a dispositional inference" (Dweck, Hong, & Chiu, 1993, p. 644).

A contemporary social-cognitive approach to motivation and personality, called the Implicit Theories model, has been advanced and tested in achievement, social, and moral domains. This research-based model has provided a mechanism for linking underlying psychological processes to behavior patterns and dispositional inferences (Diener & Dweck, 1978, 1980; Dweck, 1975; Dweck, Chiu, & Hong, 1995; Dweck, Hong, & Chiu, 1993; Dweck & Leggett, 1988; Dweck & Reppucci, 1973; Erdley & Dweck, 1993). According to this model, individual differences in cognition-affect-behavior patterns stem from implicit theories

about the malleability of attributes in a particular domain. Such beliefs influence encoding and organization of information. In turn, these processes affect behavioral expressions (e.g., expectancies and goals), dispositional judgments about oneself and others, and behavior in that domain.

Although the Implicit Theories model has been tested empirically, the research has focused on a limited number of domains. In addition, studies have been conducted primarily with children and adolescent subjects. The present study proposes to examine the applicability of this social-cognitive model for understanding leadership behavior. In particular, it will address the issue by examining how implicit theories of leadership ability held by subordinates affect their goals and attributions for leadership performance.

The research will also investigate the extent to which implicit theories of leadership ability held by their superiors influence their leadership style (as perceived by subordinates), and how it subsequently impacts subordinate responses. The Superleadership style of leadership will be examined because it is consistent with the types of behaviors that promote adaptive response patterns in the achievement domain where the social-cognitive model was developed. Superleaders have malleable views of leadership and provide followers with self-management strategies that encourage them

to embrace adaptive views about their abilities and allow them to overcome challenges and obstacles in the workplace (Manz & Sims, 1980; 1987).

A general background of the Implicit Theories model is provided to familiarize the reader with the development of the approach and the research supporting its validity. In addition, it will be compared to other conceptualizations of control to demonstrate how the relatively new constructs comprising the model are related to more established theories. Finally, the approach will be applied to examine leadership behavior in the organizational domain.

MASTERY-ORIENTED AND HELPLESS RESPONSE PATTERNS

The Implicit Theories model was developed by Dweck & colleagues from observing the responses of children to obstacles encountered on achievement tasks (Diener & Dweck, 1978; 1980). The researchers identified two divergent patterns among these children as they reacted to challenges. One pattern, labeled by the researchers as mastery-oriented, is an adaptive response characterized by the pursual of challenging tasks and effective striving under failure conditions. Conversely, the other pattern, referred to as a helpless response, is a maladaptive reaction typified by an avoidance of challenges and decrements in performance in the face of adversity.

In an attempt to understand the basis for these patterns, the researchers obtained information on the attributions given by children for failure. The findings indicated that mastery-oriented subjects attribute failure to giving insufficient effort for task accomplishment or utilizing a poor strategy. Those subjects who display the helpless response attribute unwanted outcomes to dispositional causes such as their lack of ability to perform the task successfully. The focus on ability by helpless children is not due to actual differences on this attribute. Even when ability level is controlled, different attributions for performance among mastery-oriented and helpless subjects are responsible for the motivational patterns displayed in the pursuit of task mastery. In addition, prior to encountering obstacles, performance exhibited by these groups is the same. It is not until perceived ability is questioned by the child (e.g., failure to overcome an obstacle), that maladaptive reactions are observed. These responses include negative affect and self-cognitions, task-irrelevant verbalizations, and performance deficits.

Many studies have shown the effects of attributional patterns on performance and reactions to failure (Abrahamson, Seligman, & Teasdale, 1978; Ames, 1984; Bempechat, London, & Dweck, 1991; Clark & Tollefson, 1991; Diener & Dweck, 1978; Dweck, 1975, 1986; Dweck & Reppucci, 1973, Weiner, 1985).

Research on the Implicit Theories model has consistently found that when attributions for failure are based on a perceived lack of ability, a deterioration in performance results. However, when attributions are made regarding lack of effort, declines do not occur, and in some cases the consequence is improvement in performance. These positive outcomes occur because mastery-oriented individuals change ineffective strategies, use self-monitoring and self-instructions, and take an optimistic stance toward achieving success in response to obstacles (Ames, 1984; Diener & Dweck, 1978; 1980).

Manz, Adsit, Campbell, & Mathison-Hance's (1988) study indicates that attributions based upon skill limitations are associated with poor performance in an organizational setting as well. The researchers compared the types of obstacles high and low performing managers perceived as hindering their performance. Although the amount of obstacles indicated by the groups did not differ, lower performing managers alluded to hindrances that were dispositional in nature (i.e., "not assertive enough" and "my own lack of people-managing and communication skills"), while higher performing managers mentioned obstacles that were due to external conditions (i.e., "non-performance-based evaluations" and "authoritarian management/closed climate/no risk taking") (p. 454).

The Manz et al. (1988) study suggests that dispositional attributions may reduce the likelihood of becoming a high performer. Overall, the low-performing group was more likely to blame a lack of possession of qualities and aspects of themselves that they viewed as unchangeable. This may have led to lower aspirations and performance levels. Conversely, the high-performing group did not view these skill limitations as obstacles because they did not perceive them to be uncontrollable. Dwelling on personal hindrances seems to adversely influence response tendencies and task effectiveness.

Learning and Performance Goals

Elliott and Dweck (1988) propose that two major goals are responsible for these response patterns. Learning goals are those which are sought to increase ability or master new tasks. Performance goals are those which are pursued to demonstrate ability and avoid negative judgments. Individuals with a mastery-orientation pursue learning goals, focusing their attention on developing ability and acquiring skills. Failure is not indicative of low ability, but signifies that new strategies need to be employed to achieve success. Individuals with a learning goal orientation view their effort on a task as an opportunity to gain knowledge, and hence the goal generates pride and satisfaction with performance. Conversely, those with performance goals will sacrifice

learning and choose easy tasks to avoid appearing incompetent. When failure is encountered, it provides information that one's ability is not adequate, and consequently a helpless response is exhibited. This attribution produces lack of satisfaction with the task and lowers intrinsic motivation, as attention is focused on goal attainment rather than interest or enjoyment. Decrements in performance are also displayed along with negative affect.

Furthermore, goals are reflected in a particular orientation for assessing behavior (Bempechat, London, & Dweck, 1991; Dweck & Leggett, 1988). The same event may have a very different interpretation for individuals depending upon whether they are pursuing a learning or performance goal. The questions, concerns, and information that are sought all stem from such goals. Individuals who have learning goals focus on the processes involved in learning. They are concerned with how to increase their mastery and look for ways to produce the desired outcome. When failure occurs, these individuals turn their attention toward modifying their behavior to achieve success. Therefore, the attributions for success and failure of those with learning goals are action-oriented (e.g., I did well on the test because I did all my homework; I did poorly on the test because I did not study enough). Individuals with performance goals are not interested in the learning process. They are focused on whether or not their ability will allow

them to demonstrate success. Therefore, attributions for performance are based upon outcomes (e.g., I succeeded on the test because I got an A; I failed the test because I got an F). Kuhl's (1981, 1982, 1984) conceptualization of action versus state orientation represents a similar view. During failure, state-oriented individuals focus on the aversive nature of the outcome, whereas action-oriented individuals focus on the problem solving process, and how to overcome the present negative state.

Situational Influences on Goals and Response Patterns

The type of goal that is pursued and subsequent reactions to setbacks are influenced by features of the environment. For example, in a lab experiment Elliott and Dweck (1988) manipulated perceived ability and goal orientation to examine their effects on task choice, achievement level attained, and verbalizations made when encountering obstacles. The study consisted of students who were randomly assigned to low and high ability conditions. The researchers manipulated perceived ability by administering bogus feedback on a pattern recognition task. Following the feedback subjects were presented with two task boxes. The performance box was described as comprising moderately easy, moderate, and moderately difficult tasks (actually it contained only a moderate task) that children could execute to demonstrate proficiency. Subjects were told that the learning

box consisted of challenging tasks that would provide opportunities for increasing competence and skills.

Goal orientation was manipulated by the degree to which evaluation concerns were made salient. In the performance goal condition, subjects were told that their performance was being filmed and evaluated by experts. Conversely, under the learning condition there was no mention of a film, and the children were told the positive consequences resulting from the learning task. Following the description, children were given the opportunity to choose the task box they wished to work from and the level of difficulty (if they had chosen the performance box). As they performed the task, feedback was given about the correctness of responses, and subjects were asked to verbalize their thoughts.

The results revealed that highlighting a particular goal significantly influenced choice of task box. Within the learning goal condition, neither the low or high ability group expressed lack of ability to perform the task nor gave negative statements while engaging in the exercises. In addition, the attributions for failure and performance on the task were the same for both groups. Despite perceptions of ability, each group responded in a mastery-oriented pattern by using new and improved strategies to solve problems.

However, in the performance condition significant differences were revealed. Compared to the high ability

group, the low ability group gave more ability attributions for failure, were more likely to make negative verbalizations after giving incorrect responses, and gave up on finding new strategies to overcome mistakes. Furthermore, none of the students in the low ability feedback condition chose the moderately difficult task in the performance box, compared to the high ability group of which 14% chose this task. Overall, the findings indicate that the valence of a particular goal is a critical determinant of whether perceived ability will be viewed as an obstacle to task performance. Furthermore, goal orientation influences cognitive, affective, and behavioral reactions to failure on achievement tasks.

Another situational element that has been found to contribute to the likelihood of an individual adopting an adaptive or maladaptive pattern in the face of failure is the reward structure. Specifically, competitive versus individualistic reward structures have been found to influence attributions for, and affective responses to, success and failure on achievement tasks (Ames, 1984; Ames, Ames, & Felker, 1987). Competitive structures are associated with an increased concern with one's ability to achieve success and not how to do the task. According to cognitive evaluation theory, reward structures that focus on the outcome of the task increase the salience of the controlling aspect of the event (Deci, 1975; Deci & Ryan, 1980). Events that are

perceived as controlling result in undermining a mastery-orientation, promoting social comparisons, and thwarting intrinsic interest on the task. Furthermore, failure is associated with negative affect and continued failure on similar tasks.

Conversely, individualistic structures emphasize self-challenge and effort attributions, and allow for self-monitoring and self-instructions that characterize the mastery-oriented approach to challenges. Individualistic rewards are associated with increasing the informational aspect of the task (i.e., providing information about one's competence), and thus serve to enhance intrinsic motivation.

Anderson and Jennings (1980) demonstrated how remarks made by other people can influence goal orientation and subsequently affect attributions for task performance. While waiting for the experimenter, subjects were exposed to a confederate who commented that success of an upcoming task was either due to strategy or ability. These comments served to direct the attention of subjects toward different concerns and to manipulate attributions for success on the task. Subjects then performed a task on which they failed. Those who were given a strategy attribution had higher expectancies of future performance than ability subjects after the experience of failure. It appears that the strategy attribution led to a learning goal focus and a desire to persevere. Such remarks

can also include the type of feedback that is given regarding performance. Baron (1988) found that undergraduates receiving destructive criticism of their work on an initial task set lower goals and reported lower self-efficacy on two additional tasks than did subjects who received constructive feedback or no feedback. Feedback that does not attribute failure to personal limitations, but focuses on behaviors that can be changed, will result in a desire among individuals to work hard and improve themselves.

Overall, it appears that achievement settings can be structured to promote a learning goal orientation and to create a desire and curiosity among individuals for challenge. Furthermore, "it is widely believed that intrinsically, motivated, self-directed learning is the ideal model for education" (Deci, Schwartz, Sheinman, & Ryan, 1981, p. 642). The principles that apply to fostering effective cognitions and behavior in an educational environment operate in an organizational setting as well. In fact, evidence presented later in this paper shows how leadership behavior that provides followers with self-management practices can result in benefits for followers similar to those found among children in an achievement context.

To summarize the implicit theories model so far, an adaptive and maladaptive pattern have been described as responses to failure; the mastery-oriented and helpless

patterns. Additionally, the research presented indicates that these patterns result from attributions individuals make for performance (i.e., ability versus effort), and that these attributions are associated with particular goals. Furthermore, the goals that individuals pursue are influenced by aspects of the situation. The next section will demonstrate how individuals possess dispositional tendencies that increase the likelihood of them favoring one goal over another despite such environmental contingencies. In particular, implicit theories are responsible for predisposing an individual to a particular goal orientation, and provide the initial link in the chain of processes described above.

IMPLICIT THEORIES, GOALS, AND ATTRIBUTIONS

Implicit theories are beliefs about the self that set up frameworks for assessing and interpreting behavior, and are associated with particular motivational patterns and inference processes (Dweck, Chiu, & Hong, 1995). In particular, implicit theories consist of two different assumptions individuals hold about the malleability of attributes called incremental and entity theories. Incremental theorists (those with an incremental theory) believe that attributes are controllable and malleable qualities that can be developed over time with enough effort. Conversely, entity theorists view attributes as fixed and unchangeable traits.

To illustrate, Clark and Tollefson's (1991) findings indicated that implicit theories are related to adaptive and maladaptive patterns of behavior among gifted middle/junior high school students. Subjects who were classified as either mastery-oriented or helpless by their teachers through observation were given various measures to determine their attitudes toward writing ability. The results revealed that the mastery-oriented students differed significantly from the helpless students regarding their beliefs that they could improve their writing ability and overall confidence in their writing. Thus, it appears that despite the intelligence level of gifted students, beliefs about the malleability of writing ability are associated with differences in response patterns.

Implicit Theories and Goals

Several studies have examined the relationship between implicit theories and goal orientation (Bandura & Dweck 1985; Benenson, 1987; Dweck & Bempechat, 1985; Dweck Tenney, & Dinces, 1982; Leggett, 1985; Erdley & Dweck, 1987[2]). Evidence indicates that incremental theories are associated with a learning goal orientation, whereas entity theories are related to a performance goal orientation.

An incremental theory is associated with a learning goal orientation in achievement settings because the belief that ability is malleable leads to a focus on developing that

[2] These studies are cited in Dweck & Leggett (1988).

ability and acquiring new skills. Furthermore, since intelligence is viewed as changeable, failure is not debilitating to performance. For incremental theorists, performance difficulties indicate that new strategies need to be employed to achieve success. Therefore, this theory results in a mastery-orientation to obstacles, such that perceived ability level neither influences the choice to engage in difficult tasks nor persistence after failure is encountered.

Entity theorists are likely to choose performance goals to either avoid appearing incompetent or to demonstrate to others their adeptness at task. In situations where entity theorists view their ability as deficient, they will choose not to engage in a challenging task and sacrifice learning. In contrast, when perceived ability is adequate for the task, entity theorists cannot be distinguished from incremental theorists. Both groups of theorists will display mastery-oriented patterns of behavior that involve seeking challenges and high persistence. However, when faced with obstacles to achievement, entity theorists are more likely than incremental theorists to exhibit helpless responses. This reaction occurs because failure to overcome challenges provides information that ability is not adequate. Additionally, since entity theorists are generally not intrinsically motivated, an inability to attain goals produces a lack of satisfaction with

the task. In these instances, entity theorists become disinterested in performing the task and display ineffective response patterns.

A characteristic that may allow entity theorists to persist despite failure is reactance. Wortman and Brehm (1975) found that failure will lead to reactance when individuals expect that they can control the outcome, when the task is important, and when the failure has not been experienced repeatedly. Furthermore, ego-involvement on a task also results in seemingly adaptive responses to failure. Ego-involved individuals are motivated to perform tasks successfully to document their ability. A desire to succeed leads them to behave in a pressured and reactive manner. Following success, motivation to continue with the task is diminished, as the goal of demonstrating ability has been achieved. When failure occurs, though, ego-involved subjects persist so they can maintain their self-esteem and not admit failure. Ryan et al. (1991) refer to such individuals as control-oriented. They have high self-efficacy and regulate their behavior according to extrinsic cues. Control-oriented individuals share many of the same characteristics as entity theorists who perceive themselves as having high ability. In fact, Koestner & Zuckerman (1994) found that control-oriented individuals have a performance goal orientation, as operationalized by Dweck and Leggett (1988).

Overall, the performance goal orientation of entity theorists may be helpful for individuals to become aware of their ability and to show competence. However, it can result in a lack of intrinsic motivation and a failure to take advantage of opportunities for learning. Moreover, despite the constructive responses to challenges that are characteristic of some entity theorists, helpless behavior is likely to result when performance goal oriented individuals are exposed to repeated failure. Responses of individuals with learning goals are less affected by vacillations in confidence (Dweck & Leggett, 1988).

Implicit Theories and Attributions

More recent work, using both direct and indirect measurements, has shown the linkage between implicit theories and self-judgments of intelligence. Measures of direct assessments of ability inferences have involved examining the relationship between implicit theories[3] and academic failure feedback (Hong & Dweck, 1993; Zhao & Dweck, 1992; cited in Dweck et al., 1993). In one experiment, subjects were administered an ability test and given bogus feedback. In the other, subjects reacted to hypothetical scenarios of an

[3] Implicit theories were measured by asking subjects to agree or disagree with items describing an entity theory in the assessed domain. For example, in the intelligence domain, an item used was "you have a certain amount of intelligence and you really can't do much to change it." Evidence for the reliability and validity of the measures is presented in Dweck, Chiu, & Hong (1995).

academic setback. In both cases, incremental theorists gave significantly more effort and strategy attributions for failure, whereas entity theorists referred to dispositional inferences. Furthermore, entity theorists made global dispositional judgments that were not pertinent to assessed domain.

Indirect assessments of ability inferences were obtained as part of the same studies as the direct assessments. Subjects who had been given failure feedback on the ability test mentioned above were measured on their reaction times to ability- (e.g., smart, dumb, intelligent) and non-ability-related adjectives. In the control condition, in which no test was given, entity and incremental theorists responded equivalently to both types of adjectives. In addition, both groups of theorists responded to non-ability adjectives in the same amount of time following failure feedback. However, significant differences were found between entity and incremental theorists in their response times to ability-related adjectives, with the former group responding much more slowly than the latter. In another indirect assessment, subjects who were given failure feedback were shown a list of sixty person adjectives, half positive and half negative, and they were asked to recall as many words as possible. The researchers were mainly concerned with the first cluster (the first five words) recalled, because it consisted of the

adjectives most salient to the subject. Similar to the findings with the other indirect measure, no differences were found in the control condition, with each group reporting negative adjectives about fifty percent of the time. However, in the experimental condition, about two thirds of the adjectives given by entity theorists were negative. The percentage reported by incremental theorists was similar to that of the control group.

In addition to the intelligence domain, implicit theories have been applied for understanding response patterns in the social domain, and have been associated with similar effects (Erdley et al., 1992; Goetz & Dweck, 1980; cited in Dweck et al., 1993). In this research, childrens' responses to social rejection were examined by having them experience a temporary setback in trying out for a pen pal club. Children classified as possessing either an incremental or entity theory were asked to write a sample letter to an evaluator on the pen pal acceptance committee. They were then told that the evaluator was not completely confident that their letter would be accepted. When asked for their attributions about the setback, entity theorists were more likely to identify problems with their social ability than incremental theorists. Furthermore, in Goetz and Dweck's (1980) study, children were told they could write another letter to convince the committee to allow them to join the club. Entity theorists were more

likely to give up on the task or to repeat the same unsuccessful letter without providing new information. Furthermore, they engaged in more defensive behaviors by bragging about their popularity with other groups.

Overall, goal orientation, attributions for failure, and their associated effects appear to be dependent upon implicit theories. Incremental theorists are more apt to adopt learning goals, respond in a mastery-oriented manner to failure, and focus on context-specific mediators of behavior that led to the outcome. By contrast, entity theorists tend to have performance goals, respond in a helpless manner under certain conditions, and focus greater attention on the outcome of performance. Thus, they are more likely to draw dispositional inferences regarding success and failure. Implicit theories set up cognitive and behavioral patterns that have been explicated by other researchers investigating self-perception and interpersonal processes. However, these other theories have not provided an underlying mechanism for such patterns. It may be that implicit theories can be applied for connecting these different views into a unified framework.

IMPLICIT THEORIES, PERCEPTIONS OF CONTROL, AND ATTRIBUTIONS

Self-Efficacy

A social-cognitive view of motivation that has been applied in a variety of settings is Bandura's (1977, 1986) theory of self-regulation. Bandura posits that motivation is regulated through an individual's anticipation of future outcomes, their internal standards, and self-evaluation. Central to his theory is the concept of self-efficacy, "people's beliefs in their capabilities that allow for mobilization of motivation, cognitive resources, and courses of action needed to control events in their lives" (Wood & Bandura, 1989, p. 183). Self-efficacy is a dynamic feature of the self-concept that interacts with the environment and other motivational and self-regulatory mechanisms (e.g., outcome expectancies), and with personal capabilities and personal achievements. A sense of self-efficacy helps psychosocial functioning in many ways. The "successful, the sociable, the nonanxious, the nondespondent, and the social reformers take an optimistic view of the personal efficacy to exercise influence over events that affect their lives" (Bandura, 1986, p. 9). The effects of self-efficacy on behavior have been examined in a wide variety of settings.

In the clinical literature Longo, Lent, & Brown (1992) conducted a study to determine if the social-cognitive model could be used as a framework for understanding clients

intended and actual continuance. The findings indicated that self-efficacy, outcome expectations, and motivation were significantly and positively interrelated. Both self-efficacy and outcome expectations significantly predicted motivation above and beyond problem severity and therapist experience. In addition, self-efficacy and motivation predicted client persistence.

Eden & Aviram (1993) offered unemployed people a workshop to increase self-efficacy, helping people to help themselves through role-playing and modeling behavior. Among those individuals with initial low self-efficacy, the treatment significantly increased job-search activity and subsequent reemployment. The experimenters concluded that since psychologists can't provide such interventions in most settings, managers are the persons best positioned to boost workers' general self-efficacy. Challenging workers by saying "I know you can do it!" with a supportive tone and an encouraging nod has long been part of management lore" (p. 359).

Furthermore, in the educational realm, Siegel, Galassi, & Ware (1985) tested two models of mathematic performance. A social learning model (self-efficacy, outcome expectations, math skills, and incentives) versus a math/aptitude anxiety model. The results indicated the predictive power of the social learning model, accounting for 55% of the variance in

math performance, as compared to the 16% explained by the other model. Betz & Hackett's (1983) study indicated the utility of math self-efficacy over math aptitude (ACT scores) in predicting the choice to pursue a science-based or math college major. Eyring, Johnson, & Francis's (1993) research on skill acquisition revealed that self-efficacy, not ability nor task familiarity, on an air-traffic control simulation task "predicted both only asymptotic performance and the learning-rate-constant" (p. 812). Self-efficacy effects differed from those of ability, as ability influenced initial differences. Overall, these finding imply the significance of self-efficacy in predicting learning, educational choices, and performance.

The industrial and organizational literature indicates the significant impact of self-efficacy on work-related behavior (Locke & Latham, 1990). For example, the literature on transfer of training shows that self-efficacy acts as a mediator between training and behavioral change on the job (Gist, Schwoerer, & Rosen (1989) Gist, Bavetta, & Stevens,1990). In addition, self-efficacy seems to be useful for understanding career-relevant behaviors (see Lent & Hackett, 1987). Finally, self-efficacy acts as an integrating mechanism between the social learning approach and theories such as goal setting (Bandura & Cervone, 1986; Latham & Locke,

1991; Locke, Frederick, Bobko & Lee, 1984); and self-management (Manz & Sims, 1980).

Some researchers consider self-efficacy to be a trait that is displayed across situations in the form of consistent behavioral patterns (Sherer & Adams, 1983; Tipton & Worthington, 1984), whereas other self-efficacy theorists (e.g., Bandura, 1977) do not predict behavioral consistency across situations. Consistent with the fundamental social-cognitive view, it is maintained that self-efficacy is best considered a state, and that situations in which self-efficacy is consistently reinforced allow for it to become more central to an individual's personality. Research should be directed at identifying the chain of psychological processes and contextual factors that serve to increase or diminish self-efficacy.

The Implicit Theories model is highly compatible with self-efficacy theory. Although the term self-efficacy is not used, the perceived ability of individuals performing tasks is in effect their self-efficacy. For individuals who hold incremental theories about their attributes, self-efficacy may not be as important for adaptive functioning as it for entity theorists. The cognitive and behavioral patterns of the latter group seem to be much more influenced by perceptions of ability. Therefore, environmental manipulations to increase self-efficacy may be best suited for entity theorists to

reduce the helpless orientation associated with failure to overcome obstacles. In support of this hypothesis, Hogan, Kimball, & Daigle (1994) examined how incremental-entity beliefs and self-efficacy were related to managerial behavior. They found that managers holding entity theories lost confidence in their ability to meet challenges to a greater extent than incremental theorists. Because self-efficacy is amenable to change, factors in the environment can be structured to enhance self-efficacy and minimize the maladaptive tendencies of entity theorists after experiencing failure.

Entity theorists who have high self-efficacy are likely to behave similarly to incremental theorists, sometimes even after an experience of failure if it is short-term and the individual is highly ego-involved. However, obtaining information on implicit beliefs, goals, and attributions for performance may demonstrate the important ways in which entity theorists differ from incremental theorists. The research on the Implicit Theories model has not given much attention to entity theorists who are highly confident in their abilities. The current proposal will focus on this group to determine the ways in which they are similar, as well as different, from incremental theorists.

Locus of Control and Attribution Theory

Implicit theories provide an essential initial link in other traditional conceptualizations of control. For example, one's locus of control (Rotter, 1966) may stem from implicit views about the malleability of attributes and features of the environment. An entity theorist may perceive a lack of control when they judge a relevant attribute as insufficient for influencing the outcome. In this case, it will be assumed by the individual that attempts to influence outcomes will be negative or determined by chance (i.e., external locus of control). This would not be the case if the entity theorist judged their attributes as adequate for control over the event. In contrast, beliefs by incrementalists that they can control basic factors that determine outcomes will necessarily result in a perception of control over regardless of perceived attribute level (i.e., internal locus of control.

Similarly, the underlying processes posited by the current approach may be a precursor to the adoption of attributional styles regarding the stability and controllability of oneself and the world (Dweck & Leggett, 1988). Specifically, implicit theories and their associated goals orient individuals toward interpreting behavior in a particular manner. For example, the static view of entity theorists, accompanied by a goal of assessing ability, increases the likelihood that ability attributions will be

used to explain performance. In contrast, the malleable beliefs of incremental theorists, and their goal of development, prime such individuals to interpret performance in terms of effort and strategy. Even in situations where both sets of theorists provide the same explanation for performance, beliefs about the controllability of outcomes are associated with different consequences.

The idea that incremental and entity theorists differ in views of controllability is inconsistent with classical attribution theory, which posits that certain attributes (i.e., ability) are either controllable (e.g., effort) or uncontrollable (e.g., ability) (Weiner, 1974). The implicit beliefs model emphasizes the role of the perceiver in determinations about the controllability of outcomes, and suggests a new approach for attribution research. The focus from a social-cognitive perspective is one that examines individual differences in attributional styles and the meaning associated with such patterns, as well as features of the situation that influence such processes.

Social Perception Processes

In addition to providing insight into intrapersonal behavior, implicit theories suggest a new approach for examining social perception processes. Recent evidence indicates that implicit theories are associated with differences in the frequency and nature of attributions that

are ascribed to the behavior of others. In particular, beliefs about the malleability of attributes held by incremental theorists lead them to make inferences about others based upon specific mediators of behavior (i.e., goals, needs, emotions, state of mind), and view behavior as conditional and subject to change. By contrast, entity theorists are likely to make broad global inferences about others even when given limited or contradictory information, to ascribe strong evaluative judgments to behavior, and to attribute stability to behavior. This results from a focus on non-malleable qualities as the unit of analysis and an orientation of evaluation and diagnosis (Diener & Dweck, 1978; Dweck & Reppucci, 1973, Erdley & Dweck, 1993).

The focus on individual differences and their associated processes provides a framework for relating two differing approaches that have dominated the attribution literature (Dweck et al., 1993). In particular, these are the correspondent approach primarily identified with Jones & Davis (1965) and the mediational approach originally proposed by Heider (1958), and more recently by researchers such as Shoda and Mischel (1993).

Correspondent approaches assume that lay perceivers attempt to understand an actor's behavior in a particular circumstance by analyzing the degree to which the behavior corresponds to an inferred underlying disposition of the actor

(Jones & Davis, 1965). This approach has stimulated a great deal of research indicating that individuals often make errors about the causes of behavior. These include correspondent biases and the fundamental attribution error, in which dispositional inferences are favored despite limited or objective information indicating situational causes as being responsible for the behavior (Ross, 1977). Entity theorists make attributions in line with the correspondent inference approach, drawing broad dispositional judgments from almost any behavior. Dweck et al.'s (1993) findings indicate that the belief in fixed dispositions held by entity theorists is associated with a goal of assessing dispositions to understand themselves and others. This goal affects the way in which information is obtained, encoded, represented in memory, and retrieved. The end result is that the cognitive-processing systems of entity theorists are highly schema driven and subject to the errors of attribution.

The mediational approach proposes that attributions are a function of person-situation interactions. Dispositions do not specify directly the behaviors most relevant to them independent of the situation. Rather, they specify the way in which behaviors are likely to be organized across different situations. Thus, lay perceivers test hypotheses about the dispositions of the target person based on situation-behavior patterns. Behavior must be observed in at least two different

situations to determine whether the behaviors represent the underlying personality trait (Shoda & Mischel, 1993). Incremental theorists look for these proximal mediators of behavior and the conditions under which they occur. They focus on a broad range of factors that can influence behavior in a situation, with an attempt to understand them in terms of both the person and the situation. Unlike entity theorists, their judgments are subject to change if new information indicates that their initial analysis was erroneous.

To explore how implicit theories set up different patterns of interpersonal inferences, Erdley and Dweck (1993) examined the influence of implicit theories of personality on a child's judgment of others. In this study, subjects made social judgments about a new classmate who displayed some negative behaviors (e.g., cheating lying, stealing) while trying to adapt to a new environment. The researchers developed two different endings to this scenario. In one story, the boy continued to act in this undesirable way. In the other, he learned from his mistakes and began to behave in a more socially appropriate manner. Children were then asked to rate the boy on both traits related to the scenario, as well as those that were more global in nature, to predict stability of the boy's behavior, and to assign punishment (which may have been none) for the boy's wrong doings.

The findings indicated that in the inconsistent condition, incremental theorists assigned more positive ratings to the specific traits. In the consistent condition, entity and incremental theorists did not differ on specific traits, but entity theorists did ascribe more global traits than incremental theorists. Furthermore, they viewed behavior as more stable in the short- and long-term, and recommended more punishment. Similar results were obtained in the moral domain, where entity theorists were willing to make moral judgments from small bits of personal information, and use it as a basis for judging guilt or innocence even when actual evidence indicated otherwise (Gervey, Chiu, & Dweck, 1992).

In sum, implicit theories contribute to other formulations of control by providing an origin for cognitive and behavioral patterns indicated by such models. However, these findings suggest that prior conceptualizations of control may have to be reconsidered. Implicit theories represent the core of person perception. These beliefs lead people to make different assumptions about the nature of dispositions and these assumptions may have far-reaching influences on important personal and interpersonal processes. The interpretation of control as a function of the individual has profound implications for theoretical issues in motivation and personality.

The current proposal attempts to provide insight into the effects of these processes in an organizational context. In particular, a leader's beliefs about followers impacts their assumptions about, and subsequent behavior toward, followers. In addition, followers' beliefs about themselves affect self-judgments and responses. However, these perceptions may be influenced in part by the leadership behavior that they receive from their leader. Therefore, follower performance may become a self-fulfilling prophesy, such that the follower behaves in ways that are consistent with the leader's judgment of their abilities.

CREATING HIGH EXPECTATIONS THROUGH SELF-MANAGEMENT

Leadership and Self-Fulfilling Prophesies

McGregor's (1963) theory X and theory Y illustrate how manager's expectations impact the way in which they treat their subordinates, and in turn how their subordinates act. Theory X assumes that people are generally lazy and must be controlled and pushed to work hard. A manager holding this belief treats workers in ways (i.e., close supervision, autocratic leadership, etc.) that fulfill the manager's prophesy. Conversely, theory Y assumes that people want to accomplish goals and can learn to accept responsibility when organizational conditions promote this orientation. A leader who possesses this view will trust subordinates with authority

to make their own decisions, and in turn, subordinates will achieve high levels of productivity.

Likert's theory emphasizes managerial leadership that involves the communication of high performance expectations. In his explanation of a competent manager Likert said "His confidence in his subordinates leads him to have high expectations as to their level of performance. With confidence that he will not be disappointed, he expects much, not little" (1961, p. 191; cited in Eden, 1990a, p. 21).

The notion of a self-fulfilling prophesy has been used to explain performance by researchers in both the educational and organizational literature (Dusek, Hall, & Meyer, 1985; Eden, 1984, 1986, 1988a, 1988b, 1990; Eden & Ravid, 1982; Eden & Shani, 1982; King, 1971; Rosenthal, 1985; Rosenthal & Jacobson, 1968). The "Pygmalion Effect" in the classroom is a term that was developed to describe how teacher's impressions about student ability affects student's performance. Specifically, performance parallels the teacher's initial view of the student's ability to achieve that level. Students who are believed to have high intelligence are provided with more feedback, taught more difficult material, and are given more opportunities to take on challenging assignments.

This Pygmalion Effect was initially replicated in the organizational area by King (1971), and then in a series of experiments conducted by Eden. Eden found that inducing the

belief in a superior that subordinates have high potential is effective in producing high performance in subordinates of varied ability levels. The expectation that the subordinate has superior capabilities is enough to influence how the superior treats the subordinate, and the subordinate's subsequent performance. Eden refers to this sequence as the self-fulfilling prophesy (SFP). In this view, the psychological processes underlying self-fulfilling prophesies are regarded as largely motivational in nature.

The special case of the SFP is called the Pygmalion effect, similar to the usage of the term in the educational context. The manager's expectation of high performance results in a decision to allocate better leadership to that subordinate. High expectations raise one's own expectations, leading to increased effort and high levels of achievement. The manager's expectations and the subordinate's self-expectations are simultaneously reinforced by superior performance.

The Galatea triangle represents sources that influence subordinate self-expectations other than the superior. Subordinates with high self-expectations intensify their effort, yielding enhanced performance and high achievement. High achievement subsequently reinforces subordinates self-expectations and sustains the SFP process, independent of any consequences resulting from superior expectations.

The Galatea effect and the Pygmalion effect are different variants of the SFP and theoretically can be separated. However, they influence each other to such a great extent that the effects become indistinguishable. Initiating a Pygmalion effect results in a self-sustaining process by the subordinate, as self-expectations become strong enough to operate independently. Omitting the manager from the SFP leaves intact the core motivational processes set into motion by the SFP.

The SFP model is useful in demonstrating the link between manager expectations and subordinate performance, however it fails to take into account the manner in which leadership expectations foster these high self-expectations. Attention to the implicit beliefs model helps to illustrate the underlying processes which may produce such outcomes. Specifically, it explains how leader expectations can orient followers toward adopting particular goals and developing cognitive and behavioral strategies that allow for adaptive motivational consequences. Furthermore, it may explain why this approach is more effective among some followers than others due to the possession of different implicit theories of leadership ability.

Self-Management Approaches

Based upon the evidence presented throughout this paper, the type of leadership that is necessary for followers to

adopt positive views of their ability and to overcome obstacles is one that provides opportunities for self-management practices. Approaches that create too much of a reliance on the leader and promote a dependence may be less likely to produce behavior which will be maintained in the leader's absence. Conditions that provide individuals with the opportunity to manage their own behavior result in favorable motivational and performance outcomes. This is best exemplified by the expression "Give a man a fish, and he will be fed for a day; teach a man to fish, and he will be fed for a lifetime" (Manz & Sims, 1989).

The study of leadership has progressed immensely from the traditional "great man theories" that did not recognize any role for the follower in the leadership process. More recent approaches such as transactional leadership acknowledge that leadership is an exchange process between leaders and followers, and that leaders must be sensitive to the needs of followers and fulfill them in order to exercise power and to be effective (see e.g., Hollander, 1978, 1992a, 1992b). Visionary approaches, such as transformational leadership, concentrate on the ability of the leader to impact the desires and goals of subordinates through a motivating and inspiring vision (Bass, 1985). Both of these approaches view the follower as holding an active role in the leadership process, although the emphasis is primarily on the strength of the

leader. This seems to be especially true for transformational leadership, which does not acknowledge the counter-influence of followers on the leader. In addition, the quality of charisma, attributed to a transformational leader's ability to obtain a following, may be destructive in the sense that it distances leaders from followers and prevents leaders from seeing their own limitations. This behavior results in an inattentiveness to follower expectations (see Hollander, 1995).

Recent workplace modifications recognize that leadership approaches need to shift the power from the leader to the follower. The leader's role in the modern organization is "to lead others to lead themselves" (p. 119). However, in order for these approaches to operate effectively across situations and individuals, an understanding of the underlying mechanisms is essential. Therefore, the study of leadership should be modified to one which focuses on creating competent employees through modeling and instilling self-management behavior. This does not suggest that leaders are not important, but the position may be best thought of as a facilitator who assists in collaborating the efforts of independent able workers (Howell, Bowen, Dorfman, Kerr, & Podsakoff, 1990).

One technique that has been employed is self-managing work groups or work teams. This workplace design goes beyond initial employee involvement interventions, and is usually

accompanied by a changing of the organization to a high-involvement plant. Self-managing teams allow for a great deal of employee latitude, as employees work in one self-contained unit and perform many functions in the areas of personnel decisions, assigning work, and planning.

This approach is effective because it employs a variety of methods for obtaining peak organizational performance. It gives employees the support and incentive to take risks and attempt novel approaches to problems. It encourages self-development by providing individuals with the opportunity to engage in individual goal setting, self-observation, and self-supervision. Finally, it fosters trust, collaboration, and communication among organizational members (Harris & Harris, 1989).

Manz and Sims's (1987) research on leadership of self-managing teams revealed that employees who perceived their leaders as acting as coordinators and encouraging self-management, effectively carried out every aspect of the job for themselves, and reported that the leader was effective. Furthermore, officials indicated gains in productivity of twenty percent, increased quality, and decreased turnover rates.

Self-management approaches recognize that each person possesses an internal self-control system. Organizational control systems provide performance standards, evaluation

mechanisms, and systems of reward and punishment (Lawler, 1976). Similarly, individuals possess self-generated personal standards, engage in self-evaluation processes, and self-administer rewards and punishments in managing their daily activities (Bandura, 1977; Bandura & Shunk, 1981; Manz & Sims, 1980).

Recent work on cybernetic (control) theory provides a useful mechanism for elucidating the nature of employee self-regulating systems (Carver & Scheier, 1981). A person demonstrates self-control when he or she engages in a low probability behavior in the face of relatively few immediate external reinforcements (Thoreson & Mahoney , 1974, p. 12). The desire to fulfill personal standards and valued goals motivates an individual to change their current behavior regardless of environmental conditions.

In terms of cybernetic self-regulating systems, employee self-management techniques provide a set of strategies that facilitate productive behaviors, and serve to reduce deviations from higher level management values that the employee may or may not have helped establish. Self-management emphasizes rewards that are separate from the task and that are received for its completion. Such views are consistent with cognitive evaluation theory, which posits feelings of self-determination and competence as the core of intrinsic motivation (Deci, 1975). Specifically, rewards that

increase intrinsic outcomes will increase intrinsic motivation. Deci suggested that the natural propensity toward pursuing feelings of competence and self-determination leads to a behavioral pattern. This pattern includes a searching for challenges and exerting effort to surmount these challenges. However, as Bandura has pointed out in his social learning theory, individual differences in perceived self-efficacy will influence effort and persistence in the face of adversity. Furthermore, as Dweck's program of research indicates, the propensity for self-determination may stem from implicit theories of abilities and as a result of such beliefs these patterns can be quite different.

Latham and Locke (1991) suggest that leadership that supports self-determination, i.e., offers opportunities for self-improvement and challenging people, has a positive effect on intrinsic motivation, perceived competence, and goal commitment. It is widely agreed upon that self-directedness and personal control have a major impact on psychological adjustment and motivation (Bandura, 1977, 1986; Deci, 1975; Lefcourt, 1982; Taylor & Brown, 1988).

There are endless ways in which leaders can facilitate self-management in subordinates. Evans (1986) suggests "helping people reach their goals; ensuring that people can reach their goals; boosting, not destroying, confidence; developing an ideology of goal attainment; rewarding high

performance due to effort; (and) coaching;..." (p. 218) as ways in which managers can motivate workers and improve performance. Bandura (1986) also maintains that individuals need to be given mastery experiences and new ways of thinking and behaving to develop these positive practices. To develop such strategies it is also important that managers make employees aware of obstacles in the environment, and encourage them to confront these challenges. The relapse prevention literature indicates that such awareness can inoculate individuals from reacting negatively to unanticipated performance hindrances, and allow for viewing setbacks as opportunities for learning (Marx, 1983).

Furthermore, managers who communicate high expectations to subordinates foster positive self-concepts among their followers. This behavior allows for adaptive motivational processes to operate independently of the manager, as positive beliefs about oneself become internalized. To illustrate, Deci, Connell, & Ryan (1989) implemented a management development program in a major office machine corporation to promote self-determination of workers. They accomplished this through the following methods: Providing informational feedback; treating poor performance as a problem to be solved, not an avenue for criticism; and sensitizing managers to the subordinate's perspective. The results of this longitudinal delayed treatment study revealed that over time management's

orientation toward self-determination correlated with several of the work climate variables measured. These included the quality of feedback (r=.57), opportunity for inputs (r=.71), security (r=.60), trust in corporation (r=.55), potential for advancement (r=.53), and general satisfaction (r=.69). Therefore, it appears that positive consequences resulted from supporting subordinate's autonomy. Further research needs to be conducted on the extent to which these attitudes are transformed into adaptive motivational patterns and performance outcomes.

Anderson & Rodin (1989) found that cues fostering self-determination increased intrinsic motivation even when it was associated with mild negative feedback. Self-determination was encouraged by giving subjects a choice in the task to be performed, presenting subjects with a score on the task that they could read themselves, and emphasizing enjoyment of the task. In the controlling condition these freedoms were absent and public self-consciousness was made salient. When given negative feedback subjects in controlling condition expected their percentile ratings to stay the same or drop in additional problems. Conversely, those subjects given self-determination thought that their ratings would rise. Liden and Mitchell (1985) maintain that feedback attributed to lack of effort or luck is less likely to contribute to decreased efficacy or reduced effort. Their research indicated that

supervisors can manipulate the administration of feedback to promote internal or external attributions, which subsequently results in different responses among subordinates.

Gist, Bavetta, and Stevens (1990) demonstrated how teaching people self-management skills was effective in tasks involving the transfer of training. They found that those trained in this skill were able to overcome obstacles and accomplish the tasks by incorporating control strategies into their goal-setting activities. Similarly, in Latham & Locke's (1991) review of the goal-setting research they concluded that training in self-management teaches people to observe their own behavior and respond accordingly to sustain commitment toward their goals. These self-regulatory skills orient individuals to emphasize strategy as opposed to ability when striving for difficult goals. Therefore, subordinates who are given a great deal of self-determination, accompanied by specific strategies and productive patterns of thought, will believe that they can achieve the goal through their efforts and demonstrate persistence. In addition, they will be successful in achieving goal attainment, or at least continue striving to reach this end because providing individuals with challenging goals will increase the likelihood that known strategies will be used (Earley, Hanson, & Lee, 1986).

Overall, an incremental view of oneself (see e.g., Dweck et al., 1995; Dweck et al., 1993), a sense of self-efficacy

and self-regulation strategies (see e.g., Bandura & Cervone, 1986; Garland, 1984; Locke et al., 1984), and a climate that promotes autonomy and provides noncontrolling feedback (see e.g., Deci et al., 1981; Ryan, 1982; Koestner et al, 1984) all influence motivational patterns. In addition, the role of motivational variables seem to function similarly in the educational and organizational context. The factors that account for a mastery-orientation and reactions to failure in the achievement context appear to operate in the work environment. Organizations therefore will benefit when they provide performance standards, evaluation mechanisms, and systems of rewards and punishment that result in strengthened feelings of determinations and competence.

SUPERLEADERSHIP: A SELF-MANAGEMENT APPROACH

Manz and Sim's (1980, 1989, 1991) SuperLeadership approach is a recent leadership theory that is based upon many of the principles from these self-management approaches and social learning theory. In this approach, it is postulated that leaders can foster self-efficacy and high expectancy by facilitating self-leadership in their employees. This view of leadership focuses on followers, enabling them to unleash their potentialities through support and empowerment. Self-motivation and self-direction are achieved by providing subordinates with behavioral and cognitive-focused strategies.

By allowing individuals to lead themselves, a leader shows confidence in his or her followers' abilities. Furthermore, giving followers strategies along with the responsibilities, creates effective behaviors that satisfy the leader's initial expectations.

This approach resonates with strategies used by mastery-oriented children in the achievement setting. Mastery-orientated children use self-management skills (i.e., self-instructions and self-monitoring) to improve their performance on difficult tasks (Diener & Dweck, 1978). In an organization, leaders can encourage these skills by altering cognitive mediators of affect and behavior. This is accomplished by modeling performance standards, reinforcing desired behaviors, and developing followers. Direct control is decreased as time progresses, and the individual learns self-reinforcement, self-instructions, and personal goal setting. These views are consistent with those of self-regulation theories (Bandura, 1977, 1982; Deci, 1975).

The Superleadership view of leadership incorporates both cognitive- and behavior-focused strategies to provide employees with the abilities necessary for becoming self-determining. Superleaders help others to lead themselves through modeling and providing strategies to influence followers' thought processes and behavior. These strategies allow individuals to take responsibility for their behavior

and make it less likely that a person will attribute performance decrements as evidence of a dispositional limitation when it was actually due to an environmental constraint (Manz & Sims, 1980). A primary objective of self-leadership is to enhance self-efficacy, which is reciprocally related to performance (Kerr & Slocum, 1981; Manz & Sims, 1980). In addition, although not stated by the researchers, this leadership approach may foster a learning goal orientation among followers and help to reduce dysfunctional responses to obstacles. It may also impact the motives for success that are characteristic of entity theorists.

The cognitive-focused strategies of Superleadership consist of building natural rewards into tasks, focusing thinking on natural rewards, and establishing effective thought patterns through mental imagery, managing beliefs and assumptions, and internal self-talk. Building natural rewards into tasks involves redesigning them to augment the intrinsic rewards contained within a job. This process allows the task to become rewarding in and of itself and generates feeling of competence, self-control, and purpose. In addition to building such rewards into tasks, individuals must be taught to focus their thinking on naturally rewarding aspects of their work. Finally, followers need to develop effective thought patterns such as a tendency for viewing problems as opportunities or challenges rather than obstacles. This is

especially important when things are going badly for subordinates and they begin to doubt themselves. Through mental imagery, management of self-beliefs, and internal self-talk, subordinates can monitor their behavior and develop "opportunity thinking" as opposed to "obstacle thinking." Furthermore, Superleaders instill this in subordinates by treating mistakes as learning opportunities and providing constructive feedback, as opposed to using reprimand.

Overall, the cognitive strategies foster feelings of proficiency, self-control and determination, and allow workers to motivate themselves to achieve higher performance through interest and enjoyment. In addition, effective thought patterns can contribute to advancement toward excellence by an adaptive view of obstacles. Furthermore, the types of obstacles that are viewed as hindering performance are likely to be those that are external to performance capabilities due to the productive thought patterns that are instilled by Superleadership. Therefore, the learning goal orientation associated with Superleadership may promote a mastery-orientation that reduces the likelihood of an individual for relying on dispositional inferences as explanations for performance. Overall, its focus on strategies for achieving objectives may help to increase self-efficacy and feelings of personal control (Manz et al., 1988).

The behavior-focused strategies assist employees by outlining specific techniques for improving performance. They provide the necessary mechanisms for persisting during difficult and unpleasant tasks. The strategies are also consistent with social learning theory (Bandura, 1977, 1982) and personal control theory (Deci, 1975), in that individuals who engage in self-regulation alter the consequences of their own behavior. Therefore, these processes reinforce behavior irrespective of the leader and can serve as a substitute for leadership (Kerr and Jermier, 1978). Specifically, the behavior-focused strategies of the approach include self-set goals, management of cues, rehearsal, self-observation, and self-reward. Each strategy is described more thoroughly in the paragraphs below.

The positive effects of goal-setting have been strongly supported, regardless of whether goals are imposed or self-set (Latham & Baldes, 1975; Latham & Steele, 1983; Latham & Yukl, 1975; Locke, 1978; Locke & Latham, 1984; Locke et al., 1981). Goals provide a target for intentions, which are the most immediate cause of behavior (Fishbein & Ajzen, 1975; Ryan, 1970). In addition, they provide standards against which people can evaluate their capabilities. Goals have a direct effect on behavior by focusing attention, motivation, and effort toward achieving the goal level. In addition, they have an indirect effect on performance through strategy

development (Early et al., 1987). The research has clearly demonstrated that specific and difficult goals result in higher levels of performance than vague or easy goals (see Latham & Yukl, 1975 for a review). Specific goals are motivating because they provide clear objectives that guide and sustain effort. Challenging goals increase individuals' beliefs in their capabilities and generate elevated goal commitment.

Over the past several years there have been great advancements in combining goal-setting theory with social-cognitive approaches (Latham & Locke, 1991). Research has demonstrated that psychological processes, goal attributes, and situational factors influence goal choice, commitment and persistence to difficult goals. An understanding of these variables is essential in enhancing the existing motivation literature. The research by Rakestraw and Weiss (1981) has demonstrated that leaders who model high levels of performance to their subordinates greatly affect the goal level selected.

Furthermore, recent evidence by Latham and Locke (1991) suggests that goal commitment is obtained by providing followers with self-determination. Since the primary objective of Superleadership is to develop self-leadership among followers, self-set goals should result in this positive outcome. Superleaders model effective goal setting in their

own practices and coach subordinates on how they too can set challenging yet attainable goals.

The behavioral strategy of management of cues involves arranging and modifying cues in the workplace to promote desired behaviors. With respect to social learning theory, Bandura (1969), states that by altering stimuli (management of cues), individuals can regulate the frequency of behavior. For example, if an individual finds that engaging in informal conversations with colleagues is interrupting their work, he or she may close the door or move their desk so they are not facing the hallway. In addition, the strategy of rehearsal consists of covert or overt practice of desired performance, and can assist individuals in imagining potential consequences of alternative actions. Deciding on a particular course of action and rehearsing it either mentally or physically will be associated with confidence when actually carrying out the task. Finally, self-observation involves information gathering about one's behaviors, which establishes a basis for self-evaluation. This leads to insight on the causes of ineffective behaviors and a basis for self-reinforcement (i.e., self-reward). Superleaders encourage followers to evaluate their own behavior and provide themselves with personally valued rewards.

Superleaders recognize the value of teamwork in a self-leadership culture. One challenge for Superleaders is to

change the culture to encourage this philosophy throughout all organizational levels. Therefore, Superleaders should not limit this strategy to one-on-one relationships with followers, but attempt to "develop subcultures within their own control that stimulate the unique self-leadership strengths of their subordinates" (Manz & Sims, 1991, p. 30).

Superleaders do not view differences in performance as attributable to underlying differences in personality that are not subject to change. The self-leadership view insists that people can influence themselves and how they think about their jobs, and in addition, that they have the ability to learn how to change patterns of thinking and behavior. They recognize the importance of taking a risk on people and making success a self-fulfilling prophesy. Subordinates will become stronger if they are given opportunities to implement their own ideas. Furthermore, high expectations will result in increased commitment to difficult goals. Sometimes employees will fail, but overall they will benefit from the confidence gained through independence, using creativity and innovation to achieve success (Manz & Sims, 1989, p. 62).

Implicit Theories and Superleadership

Superleadership represents a radical approach to leadership compared to classic leadership models. Although Manz and Sims maintain that almost anyone can become a Superleader, they provide no evidence to support this

statement. Steps are outlined for becoming a Superleader, but no attention is given to the fact that situational factors and individual differences influence the likelihood of leaders employing this style of leadership.

Leaders who display self-leadership must relinquish a great amount of their position power. If leaders delegate tasks and subordinates fail to perform effectively, the consequences may be more detrimental for the leader than for the subordinate if the organizational culture is not characterized by Superleadership. Therefore, features of the situation and task-specific conditions should be considered when applying this theory across organizational settings.

In addition, leadership is generally associated with a high need for power. Individuals interested in becoming leaders are driven by a desire to influence people and the ability to serve as a formal authority (McClelland, 1965). Some leaders have a socialized power motive, and view power as an "expandable pie." However, others perceive their "power as a fixed sum," and are not as willing to give up control (Kirkpatrick and Locke, 1991, p. 52). Leaders who are too self-confident and overcontrolling will not impart their power to others, and hence will alienate subordinates (Hogan, Curphy, & Hogan, 1994). This is especially the case when followers are not viewed as competent for accomplishing tasks. Therefore, a leader's decisions about power sharing is

dependent upon both their leadership motivation as well as confidence in subordinates.

According to Graen's (1975) vertical dyadic linkage model, leaders have different circles of followers with different expectations for such groups. Liden & Graen (1980) found that those closer to the leader (as perceived by followers) were more likely to handle responsibilities and to add more value to the organization. Ratings of performance also tended to be higher than those who reported less immediate relationships. According to the developers of Superleadership theory, the immense optimism in other people and a dedication to exploring the potential of all followers characterized by Superleaders is associated with an exceptional interest in the development of others, and a belief in the malleability of attributes. Based on the social-cognitive model presented, it is expected that such views may not be characteristic of all leaders in all situations.

Many characteristics have been explored in relationship to leadership (see Hogan et al., 1994). Such research has generally examined the connection between leader personality traits and behavior (i.e., conscientiousness, intellect, emotional stability, surgency, agreeableness, etc.). The present study represents a different approach for understanding the relationship between leader qualities and

leadership style. Based upon the evidence presented, it follows that leaders implicit theories of leadership ability are related to the type of behavior that they display toward subordinates. Specifically, the goals and attributions associated with implicit theories are indicative of the interest that leaders have in developing subordinates, and therefore should be predictive of the likelihood that a leader will display Superleadership. Dwight D. Eisenhower, regarded as one of the most competent military leaders, expresses an incremental view of leadership ability in the following quote:

> "In our Army, it was thought that every private had at least a Second Lieutenant's gold bars somewhere in him and he was helped and encouraged to earn them. I am inclined by nature to be optimistic about the capacity of a person to rise higher than he or she has thought possible once interest and ambition are aroused (Everett, 1985; cited in Manz & Sims, 1989).

Leaders who possess this theory should be more likely to encourage subordinates to take on difficult tasks and accept mistakes as part of the learning process, as holding an incremental theory of leadership ability implies a belief in its malleability. Similarly, an assumption underlying Superleadership is that anyone can become a self-leader. Moreover, an incremental theorist's goal orientation of understanding and improving attributes, should be associated

with a desire to provide development experiences for followers such as those related to Superleadership. In fact, Hogan et al. (1994) found that incremental beliefs were associated with a manager's belief in the value of developing subordinates.

Attributions for performance have been posited as influencing leader behavior toward subordinates and expectations for future behavior (Green & Mitchell, 1979). The choice of attribution (i.e., ability, effort, luck, task difficulty) is greatly influenced by three informational cues. These cues are consistency (past performance on the same task), distinctiveness (past performance on different tasks), and consensus (others performance on similar tasks). Although studies have indicated systematic relationships between information cues and particular attributions, several researchers have found that situational and personal variables mediate reactions to follower performance (Dobbins, Pence, Organ, & Sgro, 1983; Goodstadt & Hjelle, 1973; Heneman, Greenberger, & Anonyou, 1989; Ilgen, Mitchell, and Frederickson, 1981). These variables include leader power, sex of the leader and follower, and personal perceptions of control.

Ashkanasy's (1990) experimental research revealed that locus of control and supervisory control affect the use of informational cues and the types of attributions given by supervisors to explain subordinate performance. In his study,

managers who were identified as having an internal or external locus of control were allocated to conditions of high, shared, or low supervisory control over subordinates. They were then given descriptions of follower behavior and asked to give attributions for performance based upon consensus, consistency, and distinctiveness information. In addition, they were instructed to indicate their expectations for subordinate performance and aspirations (i.e., willingness to assign subordinate to achievement/related tasks).

The findings revealed that supervisors with an external locus of control were more likely to attribute poor performance displayed by subordinates to internal explanations without regard to performance information, whereas internal locus of control supervisors were more likely to make external attributions based upon the information provided. In addition, internals had higher expectations for a subordinate's future performance than externals. Finally, among superiors in the low-control condition, externals tended to make decisions to assign subordinate to achievement/related tasks without attending to individuating information, whereas internals used this information to a great extent. Therefore, under certain situational conditions, externals were more likely to rely on consensus information than internals, who demonstrated a greater sensitivity toward subordinate's past performance and their performance on other tasks.

Overall, it seems that different attributions made by leaders result from an unequal use of informational cues, as well as characteristics of the situation. Subjects with an internal locus of control attend to personal information in their attributions for, and expectations of, subordinate performance when they have little control over subordinates. This suggests that internals function most effectively when there is a high degree of situational ambiguity. Such conditions are likely to be associated with an environment that encourages Superleadership. Furthermore, based upon the evidence regarding the relationship between implicit theories and perceptions of control, these findings suggest that a leader's behavior toward subordinates is a function of their implicit theory. Incremental theorists are likely to behave similarly to those with an internal locus of control, whereas entity theorists' behavior is consistent with individuals who have an external locus of control.

Additionally, examining individual's implicit theories about others may even provide stronger evidence for different attribution tendencies and leadership behavior. For instance, incremental theorists avoid making global inferences, change attributions in response to contradictory information, and expect changes over time when evaluating the behavior of others (Dweck et al., 1993). Therefore, they are likely to provide opportunities to followers, such as self-leadership,

despite past mistakes or failure by subordinates. Conversely, entity theorists are inclined to make correspondent inferences when observing poor performance. This tendency may cause these leaders to develop only those followers viewed as having leadership dispositions. These inferences are unlikely to change because entity theorists are prone to make sweeping global judgments. In addition, behavior is viewed as stable over long periods of time despite disconfirming evidence. Finally, Dweck et al. (1993) have found initial evidence that indicates entity theorists tend to encode information with evaluative tags, which reduces sensitivity to future contextual information. Therefore, followers viewed as low performers may have little chance of changing an entity leader's perception, despite actual improvements in behavior. Followers viewed as high performers are likely to be given self-leadership experiences to develop, and consequently confirm the leader's initial expectations. Conversely, low performers may not be given similar opportunities based upon initial negative judgments of abilities.

Overall, these findings suggest that implicit theories are related to leadership behavior and expectations for subordinate performance. In addition, the developmental view of leadership held by incremental theorists seems to underlie a Superleadership approach that actively encourages followers to learn self-leadership skills.

PURPOSE

The present study examined the Implicit Theories Model of Motivation and Personality described throughout this paper at a military academy where development is a high priority, and individuals are typically ego-involved and confident in their abilities. Entity theorists characterized by these qualities have not been given much attention by the developers of the model. This unique context provides insight on how such individuals compare to incremental theorists.

Furthermore, given the vast amount of research demonstrating social-cognitive patterns in the achievement setting, it is important to investigate the utility of this framework in the organizational realm. Although the majority of the subjects are similar to college students in age, they hold leadership roles that involve management tasks corresponding to those of employees in organizations. Therefore, this study will contribute to the literature by generalizing the model beyond the achievement, moral, and social domains where it has been tested.

Moreover, the literature illustrates the positive effects of self-determination on feelings of competence and self-efficacy. Conditions that provide individuals with the opportunity to manage their own behavior result in favorable motivational and performance outcomes. In particular,

Superleadership is an approach that was designed to promote self-management. However, there has been no empirical work to demonstrate its effectiveness. As Superleadership is based upon social learning theory, it is consistent with Dweck and colleagues' model. The strategies that promote a mastery-orientation in achievement settings are similar to those of Superleadership, and should result in productive outcomes as well. Therefore, Superleadership will be examined as a context variable that combines with self-beliefs to produce motivational and behavioral outcomes among followers in a leadership role.

Finally, the research on implicit theories strongly indicates that views about the malleability of attributes influence the types of attributions made about others, as well as inferences about the stability of their behavior. Because Superleadership requires an extremely favorable view about the capabilities of all followers, it follows that such leaders have incremental theories about leadership behavior. The study predicted a strong relationship between these two variables, as explicated in the following section.

HYPOTHESES

Refer to Figure 1 for an pictorial overview of the relationships tested in the following hypotheses.

Hypotheses 1 and 1A reflect the belief that a leader's possession of an incremental theory of leadership ability is associated with an interest in developing subordinates, and therefore the display of Superleadership by a leader. In addition, the entity theorists' view that attributes are static and unchangeable was expected to result in a greater reliance on ability as the criterion for selecting this self-leadership style.

H1: An incremental theory of leadership held by leaders and perceived follower leadership ability are positively related to Superleadership behaviors.

H1A: The extent to which perceived leadership ability is related to Superleadership behaviors is dependent upon implicit theories of leadership held by leaders. For leaders who are entity theorists, Superleadership behavior ratings are more differentiated by perceived leadership ability than for leaders who are incremental theorists.

Hypothesis 2 addresses whether efficacious self-views result from Superleadership, as maintained by the theory developers. In addition, as self-efficacy is developed via

affirmation of ability, leadership performance was selected as an additional predictor.

H2: Superleadership and leadership performance are related to follower self-efficacy.

Hypotheses 3 and 3A are directed at the relationship between implicit theories and learning goals. Specifically, Dweck and colleagues have found that incremental theorists possess learning goals regardless of perceived ability; whereas entity theorists adopt learning goals only when accompanied by favorable self-views of ability. In the present study it was expected that perceived ability (i.e., self-efficacy) would be important for both groups of theorists in possessing such goals. However, in agreement with the researchers, it was hypothesized to be more essential for entity theorists than incrementalists.

H3: Self-efficacy is positively related to the possession of a learning goal orientation by followers.

H3A: The extent to which self-efficacy is related to a learning goal orientation is dependent on follower implicit theories. Self-efficacy is more highly related to learning goals for followers who are entity theorists than for those who are incremental theorists.

Hypothesis 4 reflects the expectation that Superleadership is a leadership style that focuses on development and learning, and one that de-emphasizes

performance outcomes. In addition, Dweck and colleagues' findings regarding the relationship between an entity theory and performance goals was the basis for including it as a predictor along with Superleadership.

H4: A lack of Superleadership behavior and an entity theory are related to the possession of a performance goal orientation by followers.

Hypotheses 5, 5A, and 5B address the relationships posited by Dweck and colleagues regarding implicit theories and attributions for performance. However, their research did not examine successful performance or the effects of self-efficacy on attributional choices. It was expected that followers who perceived themselves as successful would employ more dispositional attributions for their leadership performance than those who perceived their performance as unsuccessful, as individuals have been found to attribute success to personal and stable qualities and to blame failure on situational or unstable factors. Furthermore, it was hypothesized that this tendency would be greatest among entity theorists with high self-efficacy in order to reaffirm their leadership ability as an enduring and stable trait.

H5: Perceived success is more strongly related to dispositional attributions for leadership performance than perceived failure.

H5A: The extent to which perceived success is related to dispositional attributions given for leadership performance is dependent upon self-efficacy. Perceived success is a better predictor of dispositional attributions at higher levels of self-efficacy.

H5B: The extent to which perceived success is related to dispositional attributions given for leadership performance is dependent upon followers' implicit theories. Perceived success is a better predictor of dispositional attributions among followers with entity theories than incrementalists.[4]

METHOD

Participants and Procedure

The followers for this study consisted of the approximately 375 seniors ("Firsties") in 15 companies of cadets at the United States Military Academy. A total of 275 cadets from the 15 companies assembled for a questionnaire session where their voluntary participation was sought. Behavior during the questionnaire session (e.g., talking among the cadets, unexpectedly short completion times) suggested the need to examine closely the returns for completeness and

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[4] To the extent that dispositional and non-dispositional (context-specific mediators) attributions are negatively correlated, the relationships hypothesized between confirmed expectations and dispositional attributions apply similarly for disconfirmed expectations and non-dispositional attributions.

adherence to instructions. Therefore, each answer sheet was examined according to the following criteria:

- The respondent had provided the identifiers needed to place the respondent in a company and to link the respondent to data on leadership grades.
- All questionnaire items had been answered. Rejection of partial answers precluded the inclusion of respondents who, throughout or toward the end of the session, had not been fully motivated to respond conscientiously.
- Responses on the answer sheet appeared to comply with instructions (e.g., within range of the response scale) and to indicate serious attention in selecting responses (e.g., not having selected the same alternative for all items.

Of the 275 returns, 75 were rejected for research use for the following reasons:

- Lack of identifiers (n=10) needed for linking data.
- Incomplete answer sheets (n=31).
- Non-compliance with instructions or frivolous response patterns (n=34).

Therefore, the final sample of followers consisted of 200 seniors representing the 15 companies (175 male, 23 female, & 2 unidentified). The cadets provided responses to the following measures (a copy of the questionnaire appears in

Appendix A): (1) Implicit Theories of Leadership Ability; (2) Superleadership Strategies Questionnaire II; (3) Goal Orientation (consisting of both learning & performance goals); (4) Self-Efficacy and; (5) Attributions for Leadership Grade Performance. Although these measures were created or adapted to conduct the present research, they also serve as part of a longitudinal study on leadership being carried out collaboratively by USMA and the Army Research Institute. In this effort another measure of leadership behavior, the Multifactor Leadership Questionnaire (MLQ), was administered along with the five instruments listed above. Finally, the data collected on the cadet sample was merged with a file of their leadership grades from the past academic term (Fall 1995).

The leaders for this study consisted of Tactical Officers from the 15 cadet companies who voluntarily served as participants during a separate survey administration. Tactical Officers are army leaders charged with monitoring and shaping the individual development of cadets within a company. They responded to one of the five instruments that were completed by the cadets, the Implicit Theories of Leadership Ability measure. Table 1 shows the distribution of the number of retained respondents (cadets) per Tactical Officer.

Table 1

Classification of Cadets by Company

Cadet Company	Number of Cadets
1	22
2	17
3	10
4	21
5	16
6	13
7	9
8	11
9	8
10	9
11	17
12	9
13	13
14	12
15	13
15 Companies	200 Cadets

Measures

Implicit Theories of Leadership Ability

Implicit theories of leadership ability were measured with four items rated on a 6-point Likert scale ranging from strongly agree to strongly disagree. The items were as follows: (1) Leadership ability is something very basic about you an individual and it can't be changed very much; (2) training and development for leadership can teach individuals new things, but they are unlikely to change the

fundamental nature of leadership ability; (3) not everyone has the same ability for leadership, and these differences persist throughout life; and (4) whether individuals are leaders or not is deeply ingrained in their personality.

A pilot test of these items was conducted with a sample of approximately 200 cadets in the Third Class (sophomores). One half of the respondents were administered this measure worded in the third person, i.e., the general form, and the other half completed a form with the same items phrased in the first person, i.e., the self form. These two different versions were piloted to determine which would produce greater variability in responses and provide for a more reliable measure of implicit theories of leadership ability. The alpha coefficient for the general form was .75 (n=101) compared to the self form coefficient of .67 (n=100). The mean and standard deviation for the items listed in the order above were as follows: Item #1 (general M=3.1, SD=1.6; self M=3.2, SD=1.5); item #2 (general M=3.2, SD=1.5; self M=3.0; SD=1.4); item #3 (general M=2.6, SD=1.3; self M=2.5; SD=1.1); and item #4 (general M=2.7; SD=1.4; self M=2.6; SD=1.3). The higher reliability coefficient and greater variability associated with the general form in comparison to the self form provided the basis for choosing this measure for the present research.

The items created for the Implicit Theories of Leadership Ability measure are similar to the ones employed by

Dweck and colleagues to determine implicit theories of subjects across many studies. Only items phrased in terms of an entity theory were included because their prior work indicated that items depicting an incremental theory influenced the majority of subjects to agree with the statement.

In addition, such research has classified respondents as possessing either an incremental or entity theory by obtaining an average on the overall implicit items, ranging from 1 to 6. Subjects receiving a 3 or below are classified as entity theorists, and those with a score of 4 or above are classified as incremental theorists. Subjects falling in between these scores are excluded to ensure that only subjects with distinguishable implicit theories are part of the sample. The pilot study revealed that there were much fewer incrementalists than entity theorists. In addition, there was also a considerable amount of undifferentiated theorists. These findings presented a problem for classifying a sufficient number of respondents into the incremental category and for maintaining the majority of the sample. For this reason, treating the variable as continuous was considered, providing that statistical evidence supported the approach.

Chiu and Dweck (1992) report the psychometric properties and discriminant validity of the implicit theory measures. Their research indicated high internal reliability and test-

retest reliability for implicit theory measures in the intelligence and moral domain, and for a scale of the person as a whole. Factor analyses revealed independence between the domains and the absence of an acquiescence set. In addition, the extent to which subjects endorsed different theories was not related to tendencies to agree or disagree across other measures. The implicit theory items also demonstrated a lack of relatedness to measures of self-presentation, self-monitoring, and social desirability. Finally, discriminant validity was obtained by the presence of non-significant relationships between implicit theory scales and measures including cognitive ability and self-esteem.

Superleadership Behavior

The Superleadership scales from the Leadership Strategies Questionnaire II were used to assess the extent to which cadets perceived their leader as providing self-leadership strategies. The original survey consisted of 96 items with four different leadership styles (Strongman, Transactor, Visionary Hero, and Superleader). Only the 35 Superleadership items were used in the current survey. These items were rated on 5-point Likert scales ranging from definitely not true to definitely true.

Reliability and factor analytic evidence for the survey was collected by the developers. Exploratory factor analysis did not support the seven hypothesized apriori dimensions of

Superleadership However, the overall construct validity evidence was favorable. Five factors were found, with two apriori dimensions forming one factor, and another combining the Superleadership and Transactor items. The reliability of the scales was adequate, ranging from .75 to .92 (N=389 to 401). The prior factor analysis was used as a guide for interpreting the results. However, the analyses for the current sample was used to yield the final Superleadership scales.

Attitude and Beliefs Measures: Self-Efficacy and Goal Orientation Scales

The self-efficacy scale consisted of four questions taken from the Self-Leadership Questionnaire created by the developers of the Superleadership Strategies II Questionnaire. The items were rated on 5-point Likert scales ranging from definitely not true to very true. The items were as follows: I think I am capable of high performance, I think I can do very well in my leadership role; I expect that I will perform well; I have confidence in my ability to meet challenges; and I am sure that I am capable of overcoming any obstacle. The items loaded on a single factor in exploratory factor analysis with the loadings of .80, .79, .74, .72, .58. The alpha coefficient was .83 (N=395 to 403).

The goal orientation measure consisted of ten goals (five performance and five learning) that were part of the goals inventory created by DeBacker, Schraw, & Plake (1994)

Their study assessing the construct validity of these goals indicated test-retest reliabilities of r=.73 for learning goals and r=.76 for performance goals, and alpha coefficients of .80 and .75, respectively. Factor analysis revealed two uncorrelated factors that accounted for 64% of the variation, with all of the items loading on the expected factors. Finally, convergent and discriminant validity evidence was obtained by comparing this measure to measures of test anxiety, hope, and attributions for success and failure. All predictions of the model were supported.

Leadership Grades

Leadership grades were used to represent the leader's perception of cadet leadership ability. Cadets are administered leadership grades each academic term using a conventional 5-point letter to numeric conversion: A (4), B (3), C (2), D (1), and F (0). A forced distribution system is employed to restrict the number of cadets receiving grades of A, B, or C. The result of this forced distribution is that no more than 20% of cadets within a grader's span of control can receive an A, no more than 40% can receive a B, and no more than 40% can receive a C (U.S. Corps of Cadets, 1995). Official leadership grades are calculated by a weighted average of the individual grades awarded by a number of raters, usually four. For cadets in most duty positions, 50% of the final grade is determined by one's Tactical Officer.

The other 50% is composed of grades given by a cadet's chain of command (i.e., first-, second-, and third-level superiors). An exception to this rule is that Tactical Officers can determine 100% of the final grade when they believe cadets have demonstrated marginal or unsatisfactory performance.

The Tactical Officers' portion of the leadership grade was utilized as opposed to the "official leadership grade" because it was the most direct representation of Tactical Officers' views of cadet performance. However, for 12.5% of cadets, a small percentage of the sample, this grade was not provided and the official leadership grade was used in its place. In addition, two cadets surveyed could not be matched to the leadership grade file because they did not supply social security information. Finally, the grades of D and F were only assigned to three cadets, and were dropped from the analysis. Of the remaining 195 cadets receiving an official grade or one from a Tactical Officer the grade assignment was as follows: 47 A's (24%), 78 B's (40%), and 70 C's (36%). As the obtained percentages are consistent with those expected based on the forced distribution system, the surveyed cadets can be considered to be a representative sample of the senior class.

Attributions for Leadership Performance

Based upon the types of attributions provided by incremental and entity theorists in prior studies, attribution

theory (Weiner, 1974), and leadership research, a list of dispositional attributions (i.e., ability for leadership, achievement-orientation, leadership traits, self-confidence, and intelligence) and context-specific mediators of behavior (i.e., leadership experience, leadership training, leadership tactics, effort, self-management strategies) were created. These attributions served as the basis for measuring cadet's attributions for leadership performance. Specifically, cadets chose between dispositional attributions and context-specific mediators of behavior as explanations for leadership grade performance. They did so by selecting between the two types of attributions in 25 paired comparisons. The percentage of dispositional attributions was calculated to determine the extent to which dispositions were favored over non-dispositional attributions (i.e., context-specific mediators) for explaining leadership grade performance. Specifically, the calculation of dispositional attributions involved counting the number of times they were selected, dividing that figure by the total number possible (i.e., 25), and multiplying by 100 to obtain the percentage. Hence, the percentage of non-dispositional attributions was obtained by subtracting the percentage of dispositional attributions from 100. The paired comparison technique was employed to allow for examining the particular types of attributions that are most commonly employed to describe leadership performance.

This measure was pilot tested along with the Implicit Theories of Leadership Ability measure. Item total correlations indicated that the attributions were highly related to the overall attribution scale, offering evidence for the internal consistency of the scale. However, many of the attributions were significantly correlated with the other attribution scale as well (e.g., effort with overall dispositional attribution scale), suggesting a lack of differentiation among the two types of attributions. In response to these findings, items were reworded to accentuate the distinctions between the two types of attributions. See Appendix B for the original and revised attributions.

To examine attributions for success versus failure, cadets responded to a single item prior to making their attribution selections in the paired comparisons. They were asked to indicate the extent to which their leadership grade performance confirmed or disconfirmed their expectations on a four point scale. Cadets who provided a response that that their grade was equal to or greater than expected (confirmed expectations) chose between pairs of attributions that accounted for their "successful" performance. Conversely, cadets who indicated that their grade was lower or much lower than expected (disconfirmed expectations), selected between pairs of attributions that were most responsible for their "unsuccessful" performance. Inclusion of this item ensured

that the cadets' perceptions of leadership grade performance was obtained instead of relying on external criteria, e.g., leadership grade categories, for differentiating between successful and unsuccessful performance.

RESULTS AND DISCUSSION

EVIDENCE FOR SCALE RELIABILITY AND VALIDITY

Table 2 presents scale means and standard deviations as well as inter-scale correlations. Of particular interest in the correlation matrix is the lack of relationships revealed for the implicit theories of leadership ability measure administered to the 200 cadets. The Tactical Officer Implicit Theories of Leadership Ability measure was significantly related to several of the Superleadership scales, though many of these relationships were opposite than expected. Self-efficacy was strongly correlated with both goal orientation scales. Finally, the non-dispositional and dispositional attributions were negatively correlated with one another, as expected. However, a preliminary examination within the scales suggested a lack of relatedness among many of the attributions. A better understanding of the relationships (or lack of) among variables should emerge in tests of the hypotheses. Furthermore, comprehensive information on scale properties is provided in the individual sections below.

Table 2

Descriptive Statistics and Inter-Scale Correlations

Variable	N	M	SD	Min	Max
Cadet Implicit Theory Scale (IT)	199	3.1	1.1	1	6
2 Item Tactical Officer IT Scale[a]	15	4.0	1.3	2.3	6
3 Item Tactical Officer IT Scale[a]	15	4.2	1.1	2	6
Dispositional Attribution Scale	200	12.9	3.0	1	25
Ability for Leadership	194	2.5	.93	1	5
Desire for Achievement	197	2.7	1.1	1	5
Intelligence	192	2.7	.88	1	5
Leadership Traits	196	2.6	.94	1	5
Self-Confidence	195	2.7	1.0	1	5
Non-dispositional Attribution Scale[b]	197	12.2	2.7	2	24
Effort Devoted to Leadership	195	2.5	.97	1	5
Leadership Tactics	188	2.5	1.2	1	5
Past Leadership Experiences	191	2.41	.92	1	5
Self-Management Practices	190	2.6	.96	1	5
Training Opportunities	191	2.6	1.3	1	5
Superleadership	200	2.9	.85	1	5
Encourages Efficacy Expectations	200	2.9	.95	1	5
Encourages Goal-Setting	199	2.9	.83	1	5
Encourages Initiative & Self-Problem Solving	200	2.7	1.1	1	5
Encourages Self-Reward	200	2.7	.85	1	5
Encourages Teamwork	199	2.9	.90	1	5
Leadership Grade	195	2.1	.77	1	3
Leadership Grade Expectations	200	2.5	.91	1	5
Learning Goal Orientation	200	4.0	.72	1	5
Performance Goals	200	3.4	.81	1	5
Self-Efficacy	197	4.3	.66	1	5

[a] These scales were used in place of the four item one based on statistical evidence presented later in this section.
[b] The mean signifies the average number of times this type of attribution was selected over the non-dispositional attribution in the 25 paired comparisons. The same holds true for the non-dispositional scale in the opposite direction.

Table 2 cont.

Descriptive Statistics and Inter-Scale Correlations

Variable	1	2	3	4	5	6	7	8	9	10	11
1. Superleadership	1.0										
2. Ability for Leadership	-.10	1.0									
3. Desire for Achievement	.05	.05	1.0								
4. Intelligence	.04	.03	.20	1.0							
5. Learning Goal	.00	-.11	.04	.00	1.0						
6. Leadership Grade	.15	.02	-.10	.00	.05	1.0					
7. Non-Dispositions	-.06	-.28	-.56	-.43	.00	-.10	1.0				
8. Performance Goal	.08	-.14	-.09	.00	.42	.05	.12	1.0			
9. Self-Management	.00	-.38	-.22	.14	.15	.06	.34	.08	1.0		
10. Encourages Efficacy	.88	-.14	.00	.07	.05	.16	-.04	.14	.08	1.0	
11. Encourages Self-Reward	.79	-.09	.03	.06	-.06	.12	-.03	.09	.06	.75	1.0
12. Encourages Teamwork	.78	-.08	.03	.07	.00	.09	-.04	.13	-.07	.65	.63
13. Encourages GoalSetting	.85	-.15	.00	.08	-.02	.00	.00	.07	.06	.79	.77
14. Encourages Initiative	.79	-.11	.09	.09	-.04	.05	-.02	.05	-.02	.71	.66
15. Tactical Officer 3IT	-.21	.05	-.06	-.01	.08	-.05	-.04	.00	.10	-.19	-.26
16. Tactical Officer 2IT	-.26	.05	-.03	-.02	-.02	.10	-.05	-.02	-.07	-.26	-.31
17. Leadership Tactics	-.03	-.11	-.42	-.33	-.04	.15	.44	.12	.00	.03	-.01
18. Cadet IT	.05	-.02	.06	.02	.00	-.08	-.00	-.09	-.04	.06	.00
19. Grade Expectations	.10	-.11	-.03	-.04	.10	.31	.00	.17	.18	.15	.07
20. Effort	.10	-.16	-.33	-.35	-.12	.05	.53	.19	-.04	.10	.09
21. Self-Efficacy	-.04	-.10	.09	.00	.80	.00	-.03	.35	.09	.02	-.11
22. Self-Confidence	.11	-.02	.13	.20	-.03	.12	-.52	-.12	-.05	.13	.11
23. Dispositions	.06	.39	.60	.52	-.04	.07	-.99	-.15	-.33	.05	.03
24. Past Leader Experience	-.10	.00	-.31	-.18	.00	-.11	.55	.04	.00	-.13	-.06
25. Training	-.12	.13	.26	.16	.00	.07	.37	-.10	-.09	-.18	-.07
26. Leadership Traits	.12	.13	.26	.16	.00	.07	-.58	-.10	.11	.08	.08

Table 2 cont.

Descriptive Statistics and Inter-Scale Correlations

	12	13	14	15	16	17	18	19	20	21
12. Encourages Teamwork	1.0									
13. Encourages GoalSetting	.65	1.0								
14. Encourages Initiative	.57	.65	1.0							
15. Tactical Officer 3IT	-.19	-.17	-.22	1.0						
16. Tactical Officer 2IT	-.22	-.21	-.27	.94	1.0					
17. Leadership Tactics	-.03	.00	-.09	-.09	-.09	1.0				
18. Cadet IT	-.01	.09	.04	-.14	-.14	.02	1.0			
19. Grade Expectations	.07	.13	.07	-.04	-.04	.17	-.07	1.0		
20. Effort	.09	.11	.07	-.14	-.17	.39	-.03	.05	1.0	
21. Self-Efficacy	-.07	-.05	-.07	.12	.16	-.06	-.02	.09	-.05	1.0
22. Self-Confidence	.04	.12	.01	.00	.00	-.05	.04	.14*	-.16	-.02
23. Dispositions	.05	.02	.03	.00	.02	-.45	.04	.00	-.54	-.01
24. Past Leader Experience	-.06	.00	-.07	.04	.04	.05	.03	-.10	.12	.03
25. Training	-.06	-.16	.03	-.01	.02	-.31	.04	-.28	-.07	-.12
26. Leadership Traits	.08	.09	.02	-.03	-.04	.00	-.01	.06	-.18	.00

	22	23	24	25	26
22. Self-Confidence	1.0				
23. Dispositions	.58	1.0			
24. Past Leader Experience	-.35	-.54	1.0		
25. Training	-.45	-.38	.15	1.0	
26. Leadership Traits	.36	.63	-.39	-.39	1.0

Note. r=.14-.17 sig at $p < .05$; r=.18-.21 sig at $p < .01$, r>=.22 sig at $p < .001$.

Implicit Theories of Leadership Ability

An alpha coefficient of .80 for cadets, and a somewhat lower coefficient of .72 for Tactical Officers provided support for the internal consistency of the implicit theories of leadership ability measure (the "general form"). The third item appeared to be most responsible for the weaker reliability of the measure administered to the Tactical Officers, and when deleted a .77 alpha coefficient was produced. Furthermore, reliability estimations of a two item scale (the first two in the measure) produced an even stronger internal consistency coefficient of .83. Although the latter estimate was slightly greater, the three item scale was primarily used in subsequent analyses because it allowed for classifying a greater number of respondents into entity and incremental categories.

A comparison of descriptive statistics for the two samples is presented in Table 3. The lower means associated with Fourth Class Cadet responses indicated that the sample held stronger entity views of leadership ability than their Tactical Officers. Interestingly, an examination of the mean responses for Second Class cadets in the pilot study, revealed that they were the most entity in their leadership views. The associated means for the pilot sample were the following: 3.1, 3.2, 2.6, 2.7, and 2.9 for the total scale. The data suggest that a relationship may exist between

Table 3

Descriptive Statistics for Implicit Theories of Leadership Ability Measure: Tactical Officer and Fourth Class Cadet Samples

	Tactical Officers (n=15)		Fourth Class Cadets (n=200)	
Item	M	SD	M	SD
#1	4.4	1.5	3.6	1.5
#2	4.1	1.4	3.1	1.3
#3	3.3	1.4	2.6	1.4
#4	3.4	1.3	2.9	1.4
Scale	3.8	1.1	3.1	1.1

implicit theories of leadership ability and respondent age or years of leadership experience, such that stronger entity views are negatively correlated with these variables.

Another finding that emerged from comparing the means of the items was that all three groups expressed stronger incremental views in their ratings of the first two items than the latter two. An explanation for this finding is evident in viewing the content of the items. The first two items assessed beliefs about the mutability of leadership ability, whereas the second two surveyed views regarding ingrained differences in ability for leadership. There is a subtle distinction between these two types of items such that a belief in genetically determined and enduring differences in leadership aptitude, does not preclude viewing leadership development or training as mechanisms for improving one's predisposed leadership ability. Agreement with the first two items may therefore may be most indicative of a true entity theorist.

Table 4 shows the classification of cadets and Tactical Officers into the theory categories according to the procedure specified in the Method section. Among cadets, entity theorists accounted for a little over half of the sample, 107 out of the 200 responding to these four items. The remainder of the sample was almost evenly split between the incremental (n=43)and undifferentiated (n=50) categories.

As you will recall, undifferentiated theorists are those respondents whose scores fall between the values of three and four, and are typically excluded from the sample. In prior research these respondents have been few in number and removing them has not presented a problem. However, similar to the pilot sample, such theorists comprised a significant portion of the total cadet sample. Therefore, as discussed in the Method section, the undifferentiated theorist group was maintained and the implicit theories of leadership ability construct was treated as a continuos variable. Non-significant differences between the point biserial correlation and the Pearson correlation with the variables of interest provided statistical support for classifying the variable as such. Employing the 3 item scale for Tactical Officers resulted in categorizing 6 of the 15 as entity theorists and 8 as incrementalists. Additionally, only 1 respondent was undifferentiated in his or her view about leadership ability,

Table 4

Classification of Respondents in Implicit Theory Categories

	Entity	Incremental	Undifferentiated
Tactical Officers (N=15)	40%	53%	7%
Fourth Class Cadets (N=200)	53.3%	21.5%	25%

Note. Percentages for Tactical Officers represent those from the 3 item scale, excluding item #3.

theorists among Tactical Officers provided for treating the and was excluded from analyses. The lack of undifferentiated implicit theories of leadership ability construct as a categorical variable.

Analyzing implicit theories of leadership ability differently for cadets and Tactical Officers was considered to be appropriate due to the equivalency of categorical and continuous correlations. Additionally, the construct appeared to hold a different meaning for the two samples. The Implicit Theories model is a social-cognitive conceptualization of motivation and personality, positing that implicit theories both influence and are influenced by features of the environment. The present study supported the dynamism of implicit theories proposed by the model. Further construct validation is necessary to examine the nature of implicit theories in the leadership domain.

Finally, comparing the percentages in Table 4 with those associated with the pilot sample, suggested a similarity among the two cadet samples. 56.4% of the pilot

sample and 53.5% of Fourth Class cadets were classified as entity theorists, and 21.8% of the pilot sample and a comparable 21.5% of the Fourth Class cadets comprised the incremental theorist categories. Although the cadets responded more similarly to one another than to Tactical Officers, taking into consideration the mean differences among the three samples, Fourth Class cadets' responses could be characterized as falling in between the lower class cadets and more experienced Tactical Officers.

Superleadership Behaviors

As presented in Table 5, the alpha coefficients for the 7 apriori Superleadership scales ranged from .74 to .91, with an average reliability of .86. Item means centered around the scale mid-point and their standard deviations indicated adequate variability. It is interesting that the leadership ratings given by followers were not on the high end of the scale; it was expected that Tactical Officers charged with the development of cadets would be likely to employ such leadership strategies. An examination of the mean Superleadership ratings by Tactical Officer revealed that only five leaders received ratings above 3 (these rating were less than or equal to 3.5 as well), while two Officers received a rating below 2.5. The remainder of the ratings hovered around the Superleadership mean of 2.87 exhibited for the group as a

Table 5

Reliabilities and Descriptives for Superleadership Scales

Superleadership Scale	Item #'s	Alpha	M	SD
Encourages Opportunity Thought	1, 22 ,29, 34	.83	2.89	.92
Encourages Goal-Setting	2, 8, 15, 17, 26, 30	.86	2.86	.83
Encourages Self-Reward	3, 6, 19, 21, 24, 31, 33	.91	2.67	.95
Encourages Efficacy Expectations	4, 9, 13, 16, 23, 27	.91	2.93	.95
Encourages Self-Observation	5, 18	.74	3.02	.98
Encourages Teamwork	7, 12, 25, 28, 32	.90	2.87	.90
Encourages Initiative & Self-Problem Solving	10, 11, 14, 20	.91	2.68	1.09
Overall Superleadership Rating			2.87	.85

whole. Furthermore, these "average" ratings were not caused by disagreement among followers regarding their Tactical Officers' leadership performance, i.e., high and low ratings resulting in 3's when averaged across raters. In fact, standard deviations of mean Superleadership ratings were quite low among Tactical Officers, ranging from .42 to .66. These values indicate that followers held common perceptions of their leader and did not view them as providing high levels of self-leadership. Nonetheless, the following two points are important to consider when drawing conclusions about these results: (1) No normative data was provided by the creators of the instrument that would allow for a comparison between the ratings given to the current sample of leaders and others in a leadership position. Therefore, it is unfair to assume

that the ratings indeed represent "average" performance until more data is collected. (2) The relationship between cadets and their leaders was relatively short-term (i.e., 4 months), and there may have been insufficient time for the leaders to display many of the behaviors described in the survey instrument.

In principal components factor analyses of the Superleadership measure, five factors were extracted (see Table 6). This solution was selected as best fitting the data as the five factors each had eigenvalues over 1 and explained 68.2% of the variance. The first factor, accounting for the approximately half of the variance (i.e., 50.7%) and yielding the largest eigenvalue (17.2), seemed to best represent the "Encourages Efficacy Expectations" scale. Five of the six self-efficacy items exhibited a loading of .5 or greater on this factor. In addition, three of the items (#'s 4, 13, & 16) loaded exclusively on this first factor. Although the remaining items loaded on additional factors as well, these loadings were consistently higher than the others. The remaining four factors cumulatively accounted for 17.5% of the variance and yielded eigenvalues between 1 and 2. The first two of which explained approximately 5% a piece, and the other factors slightly less (4.3% & 3.3%). The first of these four factors, the second factor to emerge in the analysis, appeared to represent the scale of "Encourages Self-Reward." The seven

Table 6

Principal Components Factor Analysis of Superleadership Items

ITEM	FACTOR 1	FACTOR 2	FACTOR 3	FACTOR 4	FACTOR 5
1	.47	.25	.44	.12	.35
2	.71	.00	.11	.15	**.24**
3	.13	**.67**	.27	.14	.22
4	**.76**	.15	.28	.16	.24
5	.61	.03	.09	.25	.40
6	.25	**.47**	.16	.19	.51
7	.20	.08	.28	**.69**	.25
8	.30	.32	.30	.26	**.51**
9	**.43**	35	.40	.28	.30
10	.19	.30	**.78**	.18	.12
11	.37	.06	**.63**	.29	.26
12	.20	.12	.30	**.76**	.19
13	**.67**	.29	.28	.12	.05
14	.21	.28	**.80**	.18	.11
15	.26	.25	.46	.12	**.54**
16	**.63**	.30	.36	.32	.13
17	.20	.27	.22	.18	**.71**
18	.42	.20	.12	.35	.55
19	.17	**.62**	.15	.12	.44
20	.21	.32	**.77**	.20	.19
21	.02	**.67**	.40	.14	.28
22	.38	.32	.39	.32	.17
23	**.51**	.43	.33	.34	.25
24	.39	**.51**	.26	.31	.32
25	.19	.18	.30	**.76**	.24
26	.55	.31	.07	.33	**.41**
27	**.63**	.53	.17	.16	.08
28	.15	.40	.05	**.78**	.10
29	.50	.48	.25	.34	.03
30	.17	.43	.11	.25	**.58**
31	.11	**.73**	.15	.29	.24
32	.30	.29	05	**.71**	.13
33	.30	**.64**	.25	.24	.21
34	.44	.59	.27	.19	.07

Note. Items from their respective scale factor appear in bold face.

items associated with this scale exhibited adequate loadings, although some items did load on subsequent factors.

The next two factors in the analysis best exemplified the scales of "Encourages Initiative and Self-Problem Solving" and "Encourages Teamwork," respectively. All of the scale items loaded heavily on the appropriate factor. Factor 5, explaining the relatively least amount of variance, best represented the scale of "Encourages Goal-Setting." Four of the six items exhibited their highest loading on this factor (#'s 8, 15, 17,& 30). The other two scale items were relatively poorer indicants of the construct, especially item #2 which exhibited the weakest loading of .24 (& a .71 on factor 1). Despite such deviations from the hypothesized scale structure, though, the factor analysis provided evidence for the construct validity of a five scale Superleadership measure. In addition, the factor analysis conducted by the developers of the Superleadership measure also revealed five factors, lending further support for the chosen solution.

The scales of "Encourages Opportunity Thought" and "Encourages Self-Observation" did not emerge in the factor analysis. The items from the "Encourages Opportunity Thought" scale loaded on the first three factors with approximately equivalent loadings. It is not surprising that this scale shared common variance with the others, as promoting opportunity seeking is in accord with encouraging efficacious

thinking, taking initiative, and rewarding oneself. Therefore, the positive cognitions associated with opportunity seeking may be an important foundation for promoting these other leadership behaviors.

The items from the "Encourages Self-Observation" scale seemed to load on the "Encourages Goal-Setting" and "Encourages Efficacy Expectations" factors. The loadings on "Encourages Goal-Setting" may be explained by the fact that keeping track of performance and monitoring behavior are inherent in the goal-setting process. A loading on factor 1 may have been due to the relatively large amount of variance explained by this factor. Additionally, the absence of a factor representing these items is consistent with the findings attained by the creators of the Superleadership measure. Overall, the findings on the Superleadership measure obtained in the present study resonate with those in the initial validation study despite minor variations.

The lack of factor analytic evidence for the scales of "Encourages Opportunity Thought and "Encourages Self-Observation" resulted in excluding them from subsequent analyses, despite adequate scale reliability. The remaining five scales were averaged to calculate an overall rating of Superleadership, and were assessed as independent constructs of Superleadership in tests of the hypotheses.

Attitudes and Beliefs Measures

Individual Scale Properties

Strong evidence was found for the internal consistency of both the self-efficacy and learning goal scales, with respective alpha coefficients of .87 and .86. These estimates were slightly greater than those obtained by the developers of the scales (.83, .80). Inter-item correlations for the scales are shown in Tables 7 and 8. The means for both measures were on the high end of the scale: Self-efficacy M=4.3, SD=.66; Learning goals M=4.0, SD=.72.

Table 7

Self-Efficacy Item Correlations

	#120	#124	#126	#128	#131
#120	1.0				
#124	.41	1.0			
#126	.43	.66	1.0		
#128	.50	.65	.65	1.0	
#131	.59	.67	.71	.75	1.0

Note. 197>=N<=200, all correlations sig p< .001.

Table 8

Learning Goal Orientation Item Correlations

	#121	#125	#130	#132	#134
#121	1.0				
#125	.50	1.0			
#130	.47	.55	1.0		
#132	.65	.61	.53	1.0	
#134	.53	.55	.45	.63	1.0

Note. N=200, all correlations sig p< .001

In contrast to these two measures, the alpha coefficient of .69 associated with the performance goal measure was slightly lower than the reliability estimate obtained in the

Table 9

Performance Goal Orientation Items Correlations

	#122	#123	#127	#129	#133
#122	1.0				
#123	.33	1.0			
#127	.28	.38	1.0		
#129	.33	.80	.53	1.0	
#133	.45	.49	.26	.49	1.0

Note. N=200, all correlations sig p< .001

initial validation study (.75). Upon viewing the correlations in Table 9, it is evident that the relationships among some of the items were relatively weak, resulting in a somewhat lower reliability than the estimates associated with the other scales. In addition, comparing the scale mean of 3.4 with that obtained for the learning goal scale (4.0), indicated that the sample was less oriented toward performance outcomes than learning goals.

Relationships Among the Three Scales

Inter-scale correlations for the attitude and belief instruments were statistically ($p < .001$) significant. Performance goals correlated similarly with self-efficacy ($r=.35$) and learning goals ($r=.42$). A considerably stronger relationship was found for self-efficacy and learning goals ($r=.80$).

In addition, factor analysis produced a two-factor rotated matrix, displayed in Table 10, with self-efficacy and learning goal items on one factor and performance goal items on the other. The first factor to emerge consisted of the 5

Table 10

Principal Components Factor Analysis of the Attitudes and Beliefs Scales

Item	Factor 1	Factor 2
S-E #120	**.66**	.03
PG #129	.20	**.84**
LG #130	**.62**	.25
S-E #131	**.90**	.14
LG #132	**.80**	.22
PG #133	.16	**.71**
LG #134	**.74**	.16
LG #121	**.66**	.19
PG #122	.01	**.64**
PG #123	.22	**.80**
S-E #124	**.75**	.17
LG #125	**.79**	.15
S-E #126	**.82**	.12
PG #127	.18	**.60**
S-E #128	**.77**	.16

learning goal (LG) and 5 self-efficacy items (S-E). It explained 44.6% of the variance and yielded an eigenvalue of 6.7. The second factor consisted entirely of the 5 performance goal items (PG), explained 13.9% of the variance, and yielded an eigenvalue of 2.1. As no other factors in the analysis revealed eigenvalues over 1 and/or explained a comparable amount of variance, this solution was considered to be a good fit of the data. In addition, the relationships revealed between learning goals and self-efficacy in the

present study, as well as the 2 factor solution obtained in prior analysis of learning and performance goals, provide further evidence for the commonality between the first two constructs and the uniqueness of the third. Overall, the data suggest that self-efficacy was highly aligned with a preference for challenge and hard work. Furthermore, a desire to display superior leadership performance, though certainly related to these leadership beliefs and motivations, represented a distinct and somewhat obscure type of motivation.

Attributions for Leadership Performance

The hypothesized distinction between dispositional and non-dispositional attributions in this measure was not evidenced in the data, even with the revised attribution list. The alpha coefficient revealed In addition, as statistical support was not provided for the reliability of the attribution measure, the last set of hypotheses could not be tested as planned. Therefore, independent attributions were employed as the dependent variable to examine relationships specified in the Hypothesis section.

TEST OF THE HYPOTHESES

Assessing Relationships Between Superleadership, Leadership Grades, and Tactical Officer Implicit Theories

H1 and H1A predicted that an incremental theory of leadership held by Tactical Officers and perceived cadet leadership ability (as indicated by assignment of leadership

grades) would be related to Superleadership behaviors. However, it was expected that Superleadership behavior ratings would be more differentiated across grade categories for entity theorist Tactical Officers than incremental theorists.

A Nested ANOVA was used to examine the hypothesized main effects and the 2-way interaction. The results provided support for the effects of cadet leadership grade and Tactical Officer implicit theories of leadership ability. However, the 2-way interaction did not explain significant variance in the Superleadership rating. An examination of the main effects revealed that entity theorist leaders received higher mean Superleadership ratings than incremental theorists. See Table 11 for ANOVA results employing the three item Implicit Theory scale.

As hypothesized, higher leadership grades were associated with higher mean Superleadership ratings: (C) $\underline{M}$=2.6, (B) $\underline{M}$=3.1, (A) $\underline{M}$=3.2. Post-hoc analyses using Tukey's HSD procedure revealed that Superleadership ratings by cadets receiving grades of B and A were significantly ($\underline{p}$ = .05) different than those of cadets assigned a grade of C.This finding indicated that cadets with greater leadership ability reported receiving more Superleadership behavior than those with less competence.

Table 11

Nested ANOVA of Superleadership by Implicit Theories of Leadership Ability within Tactical Officer(3 Item Measure) and Leadership Grades

Source of Variation		Type III SS	DF	MS	F	Sig
Intercept	Hyp.	208.5	1	208.5	258.1	.000
	Error	34.8	43	.82		
Theory	Hyp	1.67	1	1.7	1.2	.299
	Error	15.2	10.8	1.4		
Officer(Theory)	Hyp.	14.9	12	1.3	2.3	.008
	Error	76.4	161	5.6		
Grade	Hyp.	11.7	2	2.3	4.0	.001
	Error	76.4	161	.5		
Grade * Theory	Hyp.	2.0	2	208.5	1.2	.31
	Error	90.1	161	.82		

Note. Alpha=.05

In addition, regression analyses were conducted to examine the Superleadership criterion. Cadet implicit theories of leadership ability, leadership grades, and their interaction were entered into multiple regression equations using the stepwise procedure. Implicit theories of leadership ability were dummy coded with a value of 1 for the incremental theory category and 0 for the entity theory category. Leadership grades were converted to numerics, with the highest value assigned to the grade of "A." The multi-dimensional model explained 13% of the variance in Superleadership ratings, [F (2,169)=13.2, p < .0001]. Similarly, a model with the two item scale produced an

r^2=.14 [F(2,142)=11.5, p <. 0001]. In both cases, Tactical Officers' implicit theories entered on the first step followed by leadership grade.

The finding that leaders who expressed the strongest entity beliefs about leadership ability were perceived by subordinates as engaging in the most Superleadership behaviors was contrary to predictions. A faulty assumption may have been made when formulating the hypotheses that rectifies this result. Specifically, it was expected that leaders would view a class of cadets as having an unknown and varying amount of leadership ability. However, it may be the case that acceptance into the academy is equated with the possession of high leadership potential, especially by entity theorists. If this is true, entity Tactical Officers would be less likely to make distinctions among cadets (as originally expected), and more apt to provide the same "good" leadership behaviors to this "high potential" group. Conversely, incremental theorists may have been more likely to display a wide-range of leadership behaviors dependent upon the person and situation. Thus, their style was likely to have been based to a larger extent on proximal factors than on pre-conceived views of cadet success. Nonetheless, the small number of Tactical Officers who were rated on the qualities of Superleadership should be given consideration when drawing conclusions regarding the relationship between

implicit theories and leadership effectiveness. Additional research with larger samples is necessary to validate such preliminary findings.

Overall, cadets with higher leadership grades rated their leaders as displaying greater Superleadership behavior. This finding could indicate that this style was most appropriate for those subordinates who excelled in their duty positions. However, the higher ratings given to leaders by subordinates with better grades could have been due to the fact that such information was known prior to completing the questionnaire. Therefore, leadership ratings may have been given in exchange for the grade received. The norm of reciprocity prescribes that individuals should give benefits to those from whom they have received benefits (Homans, 1974). In accord with transactional leadership approaches, leadership involves a mutually dependent relationship between leaders and followers (see e.g., Hollander, 1978,1992a, 1992b, 1995).

Effective leaders provide their followers with desired tangible and intangible rewards. In response, followers offer the leader benefits such as positive evaluations as well as increased quality and quantity of performance. In the present study, cadets who thought that their Tactical Officers were attentive to their leadership needs may have reacted in this manner.

In addition, the attributions for performance of followers who received high grades may have been extended to their leader, and vice-versa for those with lower grades. Similar to the findings in research on interpersonal attraction, an association made between oneself and another is likely to influence evaluations toward that individual (Curtis & Miller, 1986). Further studies may want to address these issues by obtaining leadership ratings of followers who are unaware of the evaluation given to them by their leader.

T-test Comparisons of Entity and Incremental Tactical Officers on Superleadership Behaviors

To further examine the relationship between Superleadership scales and implicit theories, T-tests were conducted comparing entity and incremental Tactical Officers ratings. As displayed in Table 12, in each case there was a significant mean difference in the direction of higher ratings for entity theorists. Taken as a whole, the findings provide considerable support for a relationship between possession of an entity theory of leadership ability by leaders and favorable Superleadership behavior ratings by subordinates.

Examining Relationships Between Superleadership, Self-Efficacy and Leadership Grades

Superleadership ratings, leadership grades, and their interaction were entered stepwise into a multiple regression

Table 12

T-Test Comparisons of Entity and Incremental Theorist Groups on Superleadership Behaviors

Leadership Scale			Entity Theorist		Incremental Theorists	
	T	DF	M	SD	M	SD
Encourages Goal-Setting	2.5*	188	3.0	.85	2.7	.81
Encourages Initiative and Self-Problem Solving	3.8**	189	3.2	.87	2.7	.90
Encourages Self-Reward	4.1**	189	2.9	.83	2.5	.81
Encourages Teamwork	2.8*	197	3.1	.84	2.7	.92
Encourages Efficacy Expectations	2.8*	189	3.2	.99	2.8	.90
Superleadership Scale	2.9**	189	3.1	.87	2.7	.83

* $p < .01$
** $p < .001$

equation to examine their relationship to the dependent variable of self-efficacy. The resulting model was non-significant [$F(3,193)=.47$, n.s.], indicating a lack of support for the predictions associated with H2. Therefore, neither leadership ability nor the leadership behavior displayed by the Tactical Officer was found to be a determinant of leadership capability beliefs. The lack of a relationship between ability, as measured by the leadership grade, and self-efficacy may have been due to the fact that the leadership grade is subject to a forced distribution scale and may not be the best differentiator of ability. In addition, the self-efficacy scale was restricted in range, not adequately representing the lower ends of the spectrum. This too may have resulted in a failure to uncover a relationship.

The results regarding self-efficacy suggest that this variable operated independently of the leadership environment. However, it should be recognized that the surveyed cadets had a relatively brief working relationship with their Tactical Officer. In addition, the cadets were in their final year at West Point and had been subject to many leaders, each of whom had a potential influence on their sense of self-efficacy. The cumulative impact of the leadership received by the cadets was likely to have influenced beliefs in leadership ability. Yet, it may not be realistic to expect effects on leadership beliefs from a relatively short leader-follower relationship. It also may have been the case that the leadership behaviors which did have an effect on self-efficacy were not measured in the current study, or that such beliefs were indeed derived from another source of an external of internal origin.

The Role of Self-Efficacy in Learning Goal Orientation

The next set of hypotheses (H3 & H3A) examined relationships between self-efficacy, cadet implicit theories of leadership ability, and learning goal orientation. It was hypothesized that self-efficacy would be positively related to a learning goal orientation. However, self-efficacy would be more highly related to learning goals for entity theorists than for incremental theorists.

In stepwise multiple regression analyses, the predictors of cadet implicit theories of leadership ability, self-

efficacy, and their interaction explained 64% of the variance in a learning goal orientation [$F(1, 194)=351.7$, $p < .0001$]. The predictive capability of the model, however, emanated entirely from the self-efficacy scale. Neither implicit theories of leadership ability nor the interaction entered the model. Regardless of whether one was an incremental or entity theorist, a motivation for challenge and mastery was highly related to beliefs in ones leadership competence.

The failure to find a relationship between implicit theories and a learning goal orientation may have resulted from the instrument employed to measure the latter variable. The learning goal scale consisted of items that are typical of a mastery-orientation to challenges, often exhibited by incremental theorists. However, these reactions would also be typical of the high self-efficacy entity theorists comprising this cadet sample. Items that focused on why individuals enjoyed challenging tasks, i.e., process versus an outcome orientation, may have resulted in more of a differentiation between entity and incremental theorists.

Clearly, the strength of the relationship found between self-efficacy and a learning goal orientation indicates a need for uncovering the precursors to self-efficacy. A learning goal orientation, at least as measured in the present study, can be fostered whether one is an entity or incremental theorist by increasing self-efficacy. Therefore, the key is

to examine features of the environment that promote this adaptive belief set. Unfortunately, the variable that was hypothesized as a contributing factor to self-efficacy, i.e., leadership behavior, did not perform according to expectations.

Assessing Relationships Between Superleadership, Implicit Theories of Leadership Ability, and Performance Goal Orientation

H4 predicted that a lack of Superleadership behavior and an entity theory possessed by cadets would be related to a performance goal orientation. This set of independent variables and their interaction failed to produce a significant model when entered into stepwise regression analyses with performance goal orientation as the criterion [$F(3, 195)=1.5$, n.s.]. Although the effect size was negligible ($r^2=.01$), an examination of the individual predictors revealed that the implicit theories of leadership ability variable was functioning in the expected direction.

Furthermore, in regression models with individual Superleadership scales as predictors, a finding opposite than hypothesized emerged for the scale of "Encourages Efficacy Expectations." The scale was significantly positively related to a performance goal orientation. However, the Superleadership scale only explained 2% of the variance [$t(197)=2.05$, $p < .05$]. The implicit theories of leadership ability predictor functioned similar to how it performed in the equation with the overall Superleadership rating. That

is, an entity theory exhibited a weak relationship to a performance goal orientation.

In addition, examining the bivariate relationships between individual cadet implicit theories of leadership ability items and performance goal orientation revealed a negative relationship between the second item in the scale and a performance goal orientation (r=-.13, p = .06). This item, which exhibited the highest item-total correlation, assessed cadet beliefs about the mutability of leadership through training or leadership development. The direction of the relationship suggested that greater agreement with the item (i.e., lower scores) was associated with higher performance oriented leadership goals.

To examine the influence of both the cadet's implicit theories of leadership ability and the environment (i.e., leadership behavior) in predicting cadet leadership motivation, this item and the Superleadership scales were entered into multiple regression equations. To clarify, each equation consisted of a single Superleadership scale and the second Implicit Theories of Leadership Ability item. Significant variance was explained in performance goal orientation for models containing the scales of "Encourages Efficacy Expectations" [F(2,197)=4.1, p = .01), "Encourages Goal-Setting" [F=(1,197)=4.0, p < .05), and "Encourages Teamwork" [F=(1,197)=4.0, p < .05)]. Although the consistency

of results does indicate a trend, the actual amount of variance explained is considerably small and a single item was used to represent one of the predictors. These factors should be taken into consideration when interpreting the findings that appear in Table 13.

Table 13

Stepwise Regression Analyses: Predicting Performance Goal Orientation from Superleadership Scales and Implicit Theories of Leadership Ability

	B	R^2	ΔR^2
Encourages Efficacy Expectations			
Step 1			
Encourages Efficacy Expectations	.14	.02	.02
Step 2			
Encourages Efficacy Expectations * Item #2 Interaction	-.17	.04	.02
Encourages Goal-Setting			
Step 1			
Item #2	-.14	.02	.02
Encourages Team Work			
Step 1			
Item #2	-.14	.02	.02

Note. The item from the implicit theories of leadership ability scale (#2) was entered as a predictor in each equation with the Superleadership scale that appears in the table.

In the model containing "Encourages Efficacy Thought" as a predictor, the first variable to enter the equation was the scale itself followed by its interaction with the Implicit Theories of Leadership Ability item. An examination of the interaction indicated that the relationship between this leadership behavior and a performance goal orientation was stronger among those who expressed greater agreement with the item. Therefore, although the scale functioned in a direction opposite than predicted, in line with expectations, the

leadership behavior was more highly associated with performance motives among entity theorists compared with incrementalists. These findings indicate that encouraging efficacy expectations among subordinates who believe their leadership ability is fixed at a high level may spark a competitive motivation to be "best in class."

In the second and third models, only the Implicit Theories of Leadership Ability item was a significant predictor in the model, with greater entity views being more strongly related to performance motives.

Overall, considering these findings as a whole, they suggest that an entity view regarding the immutability of leadership behavior was associated to a small degree with a focus on performance outcomes, and that the use of certain Superleadership behaviors may have reinforced this orientation among such theorists. Therefore, the manner in which leadership behavior is construed may depend to a large extent on individual characteristics of the follower. As with the other variables that were measured in this study, stronger relationships may have been revealed if there was more variability in responses.

Examining Relationships Between Goal Orientation and Leadership Behaviors

Interestingly, Superleadership showed no relationship to a learning goal orientation. This relationship was not predicted in a direct manner, as it was assumed that

Superleadership would result in feelings of self-efficacy (Hypothesis 2). Self-efficacy in turn would interact with implicit theories of leadership ability to produce a learning goal orientation (Hypotheses 3 and 3A). As stated above, self-efficacy and Superleadership were not significantly related. Therefore, Superleadership was not responsible for the self-efficacy-learning goal relationship. Surprisingly, self-efficacy was not even associated with the "Encourages Efficacy Expectations" Superleadership scale, which was essentially the same scale with a different pronoun (My leader vs. I). Superleadership behaviors were conceptualized as highly consistent with an orientation of self-development and learning from mistakes.

Examinations of bivariate relationships between learning goal orientation and behaviors measured by the other leadership measure, the MLQ, were also insignificant for the most part. Furthermore, a negative relationship was found for the extra effort scale (r=14, p=.05). The items making up this scale were the following: "He/she motivates me to do more than I thought I could do;" "He/she heightens my motivation to succeed;" and "He/she gets me to do more than I expected to do."

On other hand, a performance goal orientation was significantly positively related to several of the MLQ scales such as extra effort (r=.17, p< .05), attributed charisma

(r=.18, p= .01), contingent reward (r=.13, p< .10), individualized consideration (r=.16, p< .05), idealized influence (r=.16, p< .05), inspiration (r=.21, p< .01) and transformational leadership (r=.16, p< .05). Additionally, this scale showed a slightly negative relationship to laissez-faire leadership (r=-.11, p= .13). Overall, the data strongly reveal that good leadership practices, as measured by two separate instruments, were associated with results-oriented and competitive subordinate goals.

Exploring Relationships Among Attributions for Leadership Performance

The final set of hypotheses (H5, H5A, & H5B) examined relationships between the dependent variable of attributions for leadership performance and leadership grade expectations, self-efficacy, and cadet implicit theories of leadership ability. Given that the dispositional and non-dispositional scales were not found to be reliable, these hypotheses were not testable as stated. Therefore, the following paragraphs outline different analyses that were conducted comparing the types of attributions given by respondents whose expectations were confirmed versus those whose were disconfirmed. Such analyses provided some insight into the why there was a lack of reliability for the measure and its hypothesized scales. In addition, results are presented for those individual attributions that produced a significant model in multiple regression analyses.

Examining the mean attribution usage within the two groups in Table 14, it is evident that the order of selection was highly inconsistent with predictions in H5A. The non-dispositional attributions of leadership tactics, self-management practices, and effort devoted to leadership were the three least used attributions for leadership grade performance by the disconfirmed leadership grade expectation group. Available training opportunities was selected most often among those whose expectations were disconfirmed as predicted. Surprisingly, these cadets selected the dispositional attributions of ability for leadership, desire for achievement, intelligence, and self-confidence as the primary reasons (top 5 selected), aside from available training opportunities, for their failure to achieve leadership success.

It seems counter-intuitive that a group of individuals who for the most part possessed entity theories of leadership ability, and rated themselves remarkably high on self-efficacy would cite dispositional explanations for their failure to achieve expectations. High self-efficacy individuals protect their self-image by employing non-dispositonal attribuitions for unsuccessful performance. Conversely, the tendency to attribute failure to dispositional causes has been associated with negative

Table 14

Mean Usage of Attributions for Disconfirmed and Confirmed Leadership Grade Expectations Groups

Attributions for Performance for Disconfirmed Expectations Group	M	SD
1. Available Training Opportunities	3.05	1.25
2. Intelligence	2.78	.85
3. Desire for Achievement	2.75	1.01
4. Ability for Leadership	2.62	.94
5. Self-Confidence	2.58	1.00
6. Past Leadership Experiences	2.52	.88
7. Leadership Traits	2.47	.93
8. Effort Devoted to Leadership	2.45	.94
9. Self-Management Practices	2.38	1.01
10.Leadership Tactics	2.28	1.16

Attributions for Performance for Confirmed Expectations	M	SD
1. Self-Confidence	2.81	1.06
2. Self-Management Practices	2.79	.89
3. Leadership Traits	2.76	.93
4. Intelligence	2.73	.92
5. Desire for Achievement	2.63	1.13
6. Leadership Tactics	2.57	1.17
7. Effort Devoted to Leadership	2.53	1.00
8. Ability for Leadership	2.45	.93
9. Past Leadership Experiences	2.31	.94
10.Available Training Opportunities	2.26	1.17

consequences in other studies (e.g., learned helplessness). Within this environment, however, the interpretation of attribution selection may not be consistent with conclusions drawn from such research. As the attribution measure wasnot found to be a reliable scale for differentiating dispositional and non-dispositional attributions, it is difficult to determine how cadets construed this set of performance explanations. Certainly, they did not classify them into the two expected categories. Furthermore, the

hypothesis that non-dispositional attributions would be selected more than dispositional attributions, was created with the expectation that cadets would be more likely explain unsuccessful performance by employing attributions that would not reflect dispositional limitations. However, it cannot be discerned whether the attributional patterns reflected this line of thinking, or if cadets did provide more "genuine" responses. Training was the only instance in which this was evident. As it was the most often used by the disconfirmed group and least often by the confirmed group, it can be assumed that its usage was consistent with the hypotheses.

Overall, the confirmed expectation group responded more similarly to what had been hypothesized, with the top 4 out 5 attributions selected being dispositional in nature. Self-management practices behaved in an unexpected direction by appearing as the second most often used attribution among such respondents and second least often used for the disconfirmed expectation group. Finally, ability for leadership, was not employed to the same extent as the other dispositional attributions to explain performance among respondents who claimed to be successful in their leadership grade performance.

These findings are consistent with a tendency among individuals with a strong sense of self-efficacy to

attribute success to dispositional causes. It is surprising, however, that ability for leadership was not cited as often as the others, considering that it was the attribution most directly related to leadership performance.

Another means of assessing the attributions was to examine their relative importance in the paired comparisons. That is the extent to which particular pairings of attributions were associated with the selection of dispositional versus non-dispositional attributions. In Table 15, dispositional and non-dispositional pairs appear in separate grids for the disconfirmed and confirmed leadership grade expectation groups. In each box of the grid, an "N" for non-dispositional or a "D" for dispositional appears indicating which of the two attributions was selected with a higher frequency. In addition, the percent difference appears underneath the letter in the cell to allow for examining the extent of the difference. For the disconfirmed expectation group, the N's are shadowed because it was expected that non-dispositional attributions would be used to a greater extent than the dispositional attributions. The opposite was expected for the confirmed expectation group, and in this grid the D's are shaded.

Inspecting the grid containing responses of those whose leadership grade expectations were disconfirmed, one can

Table 15

Relative Selection of Dispositional and Non-Dispositional Attributions for Leadership Grade Expectation Groups

Disconfirmed leadership grade expectations

	Ability	Traits	Confi-dence	Intelli-gence	Achieve-ment
Effort			D 28.8%	D 40%	D 40%
Experience	D 26.6%			D 26.6%	
Tactics		D 33.4%	D 26.6%	D 26.6%	D 13.4%
Self-Management	D 48.8%	D 35.6			D 17.8%
Training	D 33.4%				

Note. Shaded boxes represent instances in which the expected attribution was selected with a greater frequency than its counterpart.

[a] N=Non-Dispositional, D=Dispositional

[b] Percent difference in attribution selection.

Confirmed leadership grade expectations

	Ability	Traits	Confi-dence	Intelli-gence	Achieve-ment
Effort	N 26.4%	N 5.6%			N 18.8%
Experience	N 9.4%				
Tactics		N 9.4%			N 11.4%
Self-Management		N .9%	N 11.4%	N 19.8%	N 8.5%
Training	N 15%				

observe that of the 25 comparisons only 12 non-dispositional attributions were selected over dispositional attributions.

Furthermore, an examination of the rows reveals that the non-dispositional attributions of leadership tactics and available training opportunities behaved in the exact opposite direction. For the former non-dispositional attribution, its item counterpart (the dispositional attribution) was selected with a greater frequency each time with the exception of ability for leadership. Conversely, available training opportunities was selected to a much greater extent than each dispositional attribution except when paired with ability for leadership. Effort devoted to leadership behaved similarly to leadership tactics except for its comparison with leadership traits, and past leadership experiences functioned comparable to available training opportunities aside from its pairing with intelligence. Self-management performed somewhat differently than the four non-dispositional attributions, only being used as a reason for failure when paired with confidence and intelligence. Glancing at the confirmed grid, it can be seen that this attribution was the only non-disposition to be selected more frequently than these two dispositions.

Some overall conclusions about the non-dispositions can be drawn from this grid. Specifically, effort and tactics, both representing internal attributions (though non-dispositional in nature) behaved considerably alike. The

same was true for experience and training, both being external non-dispositional attributions. External explanations were relatively more likely to be employed than internal ones for disconfirmed leadership grade expectations. The low usage of internal attributions suggests that may have been viewed as even more negative than some of the dispositional attributions. An alternative explanation is that they were seen as largely insignificant to failure. Yet, as shown in the confirmed grid, most notably with effort, these attributions were utilized as attributions for successful performance. In addition, even in cases where the dispositional attribution was favored, the percentage differences were considerably smaller than those in the disconfirmed grid. Such evidence is indicative that these non-dispositions were indeed considered relevant.

Looking down the columns in this first grid, it is evident that leadership traits and self-confidence were less likely to be selected compared to the other three dispositional attributions. Furthermore, self-confidence functioned similarly to both intelligence and desire for achievement with the exception of one pairing. The same was true for leadership traits and desire for achievement. Ability for leadership exhibited the most unique pattern and did not appear to be viewed in the same light as the rest of the dispositions.

The confirmed leadership grade expectation grid was represented by 14 D's and 11 N's. Although dispositional attributions were selected with a greater frequency, the difference for some pairs was relatively insignificant. The grid provides some evidence that confidence and intelligence were viewed considerably alike by respondents, and were perceived as highly responsible for successful leadership grade performance. Furthermore, leadership traits and desire for achievement were viewed as highly similar in orientation, with each only being selected with a greater frequency than its pair when positioned next to the non-dispositional attributions of past leadership experiences and training. Thus, they were considered to be less important to success than many of the non-dispositional attributions. Again, ability for leadership revealed a distinct pattern and rather uninterpretable from the other dispositions.

Examining the rows, it can be observed that effort devoted to leadership, tactics, and self-management were frequently selected non-dispositional attributions. Self-management was even viewed as more critical to leadership success than self-confidence and intelligence. Finally, past leadership experiences and available training opportunities performed in exactly the same manner. That

is, they were viewed as playing a rather insignificant role in leadership grade success.

Analysis of the attribution patterns produced some similarities for particular pairs of attributions. However, conclusions about their relationships may be limited to this setting. Clearly, the findings for the confirmed leadership grade expectation were easier to interpret, as dispositional attributions dominated among the group (with the exception of self-management). However, it should be noted that mean differences between the confirmed and disconfirmed groups were not significantly different from one another for most of the attributions. Another conclusion that can be drawn is that the non-dispositional attributions of training and experience were viewed as least important to successful grade performance. For the disconfirmed group, more information is necessary to determine the reasoning behind attribution choices.

Assessing Relationships Between Attributions, Self-Efficacy, Implicit Theories of Leadership Ability and Leadership Grade Expectations

Three significant models were produced in multiple regression equations consisting of the individual attributions as dependent variables and the predictors of self-efficacy, cadet implicit theories of leadership ability, leadership grade expectations, and 2 two-way interactions (i.e., leadership grade expectations with self-efficacy and cadet implicit theories of leadership ability).

The interaction between self-efficacy and leadership grade expectations explained a significant 6% of the variance in selection of self-management practices, [$F(1,182)=11.3$, $p < .001$], and 11% of the variance in available training opportunities, [$F(1,183)=22.7$, $p < .0001$]. Graphing the first interaction revealed that achieved leadership grade expectations was a better predictor of self-management practices among respondents with relatively high levels of self-efficacy. This relationship was not expected for non-dispositional attributions. However, as discussed above, self-management practices seemed to function more like a dispositional attribution rather than a non-dispositional one.

The second interaction demonstrated an opposite pattern, such that disconfirmed leadership grade expectations was a better predictor among cadets with higher levels of self-efficacy. This relationship was predicted, as it was hypothesized that among those whose leadership grade failed to meet expectations, the cadets with the strongest beliefs in their capability would be most likely to use non-dispositional attributions (e.g., available training opportunities) to explain their leadership grade.

Finally, the interaction between leadership grade expectations and self-efficacy was a significant predictor

dispositional attribution rather than a non-dispositional one.

CONCLUSIONS AND IMPLICATIONS

The purpose of this study was to determine the generalizability of the Implicit Theories model of motivation and personality to a new domain, i.e., leadership from both follower (implicit theories of oneself) and leader (implicit theories of others) perspectives. In addition, it was designed to examine the impact of self-efficacy and Superleadership on the motivation and behavior of followers.

To review, the Implicit Theories model as conceptualized by Dweck & Leggett (1988) states that implicit theories about the malleability of attributes underlie cognitive and behavioral patterns of individuals in a particular domain. Specifically, such beliefs provide a framework for processing information about oneself and the world. Aligned with an orientation for assessing behavior, these cognitive representations guide inferences about the self and others, as well as actions (e.g., treatment of people and responses to adverse circumstances). For some individuals, i.e., incremental theorists, an understanding of behavior involves identifying the mediators (e.g., goals, expectancies, & emotions) that lead to actions and the situations associated with their occurrence. For others, i.e., entity theorists, a

much more simplistic world exists in which mediators are largely irrelevant. Instead, traits are the unit of analysis for such individuals (Dweck et al., 1993). These general assumptions have been studied in a program of research in a variety of domains, and as a result specific intra- and interpersonal patterns have been delineated for incremental and entity theorists. The findings from this research were the basis for the hypotheses tested in the present research.

Overall, there were some notable differences between the predictions stemming from their model and the results reported in this study. A few of the hypotheses were a deliberate departure from the model, and therefore similarity of results was not expected. However, even among those hypotheses designed to follow directly from the model's assumptions, areas of non-conformance were revealed. Given that Dweck and colleagues conducted their research with respondents representative of the general population, more support may have been provided with a heterogeneous sample of leaders and followers. Nonetheless, the model does not adequately explain the motivational and behavioral patterns of the highly confident subordinates comprising the present sample. Suggestions for modifying the model to account for such populations and additional research directions are discussed below.

Implicit Theories and Interpersonal Perception

The conclusions regarding interpersonal processes can be presented somewhat separately from the remainder of the research, as this portion of the study did not constitute its primary emphasis. In this vein, leaders' implicit theories of leadership ability were examined in relation to their treatment of subordinates. That is, the extent to which views about the malleability of leadership ability held by leaders, as well as perceived subordinate performance, impacted their usage of Superleadership behavior.

The model posits that an entity theory is related to global and conclusive judgments about others with the objective of assessing and assigning causality to their behavior. An incremental theory is associated with conditional and provisional views of behavior with the goal of understanding its mediators. In the present study, this was interpreted to mean that leadership behavior decisions by entity theorist leaders would be highly dependent on static views of cadet leadership ability, and that better opportunities would be afforded to those identified as possessing greater leadership ability. Incremental theorists would take a mediational approach, allowing for situational influences in leadership decisions. Furthermore, their developmental orientation would result in a willingness to

provide Superleadership to any subordinate, despite prior conceptions of leadership ability.

As revealed in the Results and Discussion section, entity theory leaders received higher Superleadership ratings than incrementalists. If it is assumed that entity theorists viewed every cadet entering West Point as a natural born leader, and used such dispositional judgments in allocating leadership, the model accounts for these findings. The schematic cognitive processes of entity theorists are associated with a propensity to apply stereotypes when judging behavior, and to rely on such information even after contradictory facts are provided (see e.g., Gervey et al., 1992). This may be caused by a tendency to encode information with evaluative tags and to store positive and negative information separately (Dweck et al., 1993). Abstract encoding, characteristic of entity theorists, has been associated with a reliance on dispositional inferences and a lack of attention to situational factors in explaining behavior (Brown & Fish, 1983; Fiedler & Semin, 1988). Therefore, preliminary views about leadership ability, either positive or negative, may interfere with objectivity in performance judgments.

The reliance on prior information and stereotypes in evaluations has been examined by researchers such as Eden (Eden, 1984, 1986, 1988a, 1988b, 1990; Eden & Ravid, 1982;

Eden & Shani, 1982). He has found that giving leaders information about subordinate ability results in a self-fulfilling prophesy for the leader. The expectation that a subordinate has superior capabilities may be enough to influence how the superior treats the subordinate and subsequently how the subordinate performs irrespective of situational influences on behavior. Specifically, high expectations on the part of the leader raise the subordinate's own expectations, leading to increased effort and high levels of achievement. Similarly, research on the expectancy confirmation process (for a review see Darley & Fazio, 1980) has shown that expectancies of perceivers act to sustain or establish a social reality. This is accomplished either through behaviors that modify the target's actions, or by cognitions that alter the construal of the situation to fit with pre-conceived notions about the target. Finally, Feldman's (1981) work has revealed that supervisors categorize subordinates in terms of pre-existing prototypes that affect performance appraisal ratings. Such processes, however, are not equally characteristic of individuals across situations. The cognitive processes of entity theorists seem to support the usage of global stereotypes, resulting in correspondent biases and other errors of attributions described by classic personality theorists (e.g., Heider, 1958; Jones & Davis, 1965; Kelley 1967, 1973).

The lower Superleadership ratings given to incremental theorists in each leadership grade category suggests that they were more selective in their employment of Superleadership behaviors. Attention to person-situation interactions and proximal mediators of behavior may have led them to act more conservatively in their leadership decisions. In addition, incremental theorists use multiple occasions to test their behavioral hypotheses. This research-based approach involves a complex process that may result in delayed use of Superleadership behavior. Incremental leaders may choose to employ this style only when they are comfortable that the individual has demonstrated a readiness for self-leadership strategies and the situation is compatible with such an approach. Thus, the characteristics of incremental theorists are consistent with those described in social-cognitive reconceptualizations of personality (e.g., Mischel, 1973; Shoda & Mischel, 1993; Trope, 1986).

These findings question what type of theorist is more effective with followers perceived as having superior leadership ability. As entity leaders were rated higher on all of the leadership scales, it seems that they were viewed more favorably than incrementalists by subordinates. Such leaders may be responsible for creating, or at least maintaining, positive self-expectations of their followers. However, such views can also create an over-confidence among

subordinates that is not warranted, providing them with unrealistic expectations for success. Incremental theorists may take a more pragmatic approach, only giving self-leadership opportunities when they are appropriate. Situational leadership approaches (e.g., Hersey & Blanchard, 1969) suggest that suitability of leadership styles is dependent on follower maturity, i.e., level of task-relevant knowledge and commitment. Superleadership may result in positive or negative consequences when such an approach is taken with subordinates who are at the lower end of this spectrum. Additional research needs to be conducted to address the effectiveness of Superleadership behaviors for subordinates at varying levels of maturity. In addition, further studies should examine the behavior of entity and incremental leaders toward subordinates of known versus unknown leadership ability.

In summary, although it was hypothesized that the developmental orientation of incrementalists would be associated with a more constructive leadership style, it may be that this theory has greater relevance when a high degree of situational ambiguity exists, or when subordinates are perceived as having low leadership potential. In an environment where few individuals are poor performers, the positive biased processing systems of entity theorists may result in more productive and satisfying behavioral patterns.

Personal and Social Influences on Goal Orientations

A primary objective of the study was to gain insight on how implicit theories of leadership ability and Superleadership, either directly or indirectly (via self-efficacy) influenced learning and performance goal orientations. The present study differed from Dweck's research by allowing for the endorsement of both goal orientations by respondents. In her work, implicit theories have been associated with a particular goal orientation. However, this study revealed that high-potential leaders may have a dual motivation that is more dependent on their self-efficacy than implicit theories of leadership ability.

Learning Goal Orientation

An incremental theory has been conceptualized as highly compatible with a learning goal orientation irrespective of self-confidence (self-efficacy). In the present study, it was predicted that entity theorists would also have learning goals when the theory was accompanied by high self-efficacy. In fact, self-efficacy was positively related to a learning goal orientation for both entity and incremental theorists. Therefore, efficacious beliefs about one's leadership ability are associated with an adaptive stance toward challenges and a concern with mastery. Despite the malleable view of leadership ability held by incremental theorists, learning goals may be more characteristic of those who have higher

confidence in their leadership. In addition, as it is conceivable that individuals hold performance goals simultaneously, this motivation may have an impact on a desire for challenge as well. Additional research should examine the interaction among different levels of goal orientation, and subsequent effects on motivation and behavior. Finally, it should be acknowledged that the endorsement of learning goals by entity theorists may not have been as similar to incrementalists if respondents were asked why they had a desire to work hard as opposed to the extent to which the attitude described themselves.

Performance Goal Orientation

A performance goal orientation was expected to result from an entity theory and a lack of Superleadership. In fact, the data did suggest that entity theorists were slightly more concerned with documenting their ability than those with stronger incremental beliefs. Overall, implicit theories of leadership ability had a greater influence on a performance goal orientation than a learning goal orientation. Incremental theorists may be content with self-challenges in their leadership roles, whereas entity theorists are likely to be concerned with competing against their own standards as well as comparing themselves with others.

In addition, self-efficacy, though not hypothesized to predict a performance goal orientation, was more strongly

related to this leadership motive than implicit theories of leadership ability and Superleadership. The relationship between self-efficacy and performance goals was not predicted because it was expected that self-efficacy and Superleadership behavior would be highly related, and a performance goal orientation was hypothesized to result from a lack of Superleadership. As Superleadership was considered to be a favorable mechanism for promoting self-efficacy, and a performance goal orientation was conceptualized as unfavorable, the two were not considered to be related.

However, both learning and performance goal orientations may be possessed by highly confident followers and most likely play a role in their success. Furthermore, leadership success may reinforce a performance goal orientation, as was exhibited in the present study. Specifically, subordinates whose leadership grade expectations were confirmed had higher performance goals than those whose were disconfirmed. This finding indicates that obtaining desired outcomes leads to an increased competitive drive. In prior work, performance goals have been viewed as maladaptive to effective functioning under conditions of failure. While this may be the case, they may also be the same factor that leads other individuals to succeed.

Leadership Behavior and Goal Orientation

Contrary to expectations, a negative relationship was not revealed between Superleadership and a performance goal orientation. Instead, this prediction was more characteristic of the relationship between Superleadership and a learning goal orientation. A consistently positive correlation was found in bivariate correlations between the Superleadership scales and performance goals. Although these values were not powerful by any means, a potential relationship between leader behavior and an outcome-oriented motivation was further supported by the findings for Transformational Leadership behaviors.

In attempting to understand the basis for these relationships, two alternatives are possible. Either the leadership behavior oriented subordinates toward competing with others, or subordinates conceptualized behaviors as providing them with strategies to be better leaders than their classmates. In terms of the latter explanation, research has revealed that individuals use cognitive categories to formulate leadership appraisals, relating their leader's actions and attributes to their prototype of an effective leader (Lord, Foti, & Phillips, 1982). Therefore, subordinates may have based their ratings on expectancies to a greater degree than objective observations. However, consistent with the social-cognitive approach, some

individuals are more prone to categorize leadership behavior in terms of a performance orientation than others. The interaction between "Encourages Self-Efficacy" and implicit theories of leadership ability (measured by a single item), suggests that, at least with regard to this leadership behavior, ratings were dependent on characteristics of the rater.

The failure to find stronger interaction effects may have been due to the presence of a homogeneous environment in which a particular set of beliefs, values, and goals are proscribed. A salient culture may have caused a shared configuration that resulted in attention to the same features of a situation and common interpretations, regardless of the unique cognitive representations possessed by individuals (Shoda & Mischel, 1993). In the military a strong emphasis is placed on competence and confidence, resulting in a performance goal-oriented culture. Perhaps if the items had been more extremely worded such that a focus on competitiveness and outcome-oriented goals was more of an obsession than typical behavior, the measure may have tapped into more individual performance goals versus those associated with the culture.

In conclusion, leadership ratings may be associated with varying interpretations of behavior by subordinates, stemming from individual differences in cognitive processing systems.

Yet, when context is such a powerful determinant of behavior, personal effects may be negligible in comparison. Furthermore, similar to what occurred for learning goals, the leadership behavior of one individual may not have been influential enough to significantly impact the goal orientations of followers. Nevertheless, additional research is necessary to examine the behaviors underlying the ratings given by entity and incremental theorists, and the manner in which such assumptions about leadership ability may affect categorization of leadership behavior.

The Role of Self-Efficacy in Motivation and Performance

Inclusion of self-efficacy is a meaningful contribution to research on the Implicit Theories model, as it was highly related to the possession of both goal orientations. Although self-confidence has been found to differentiate entity theorists, the research until now has not indicated any effects on incremental theorists. The present findings suggest the need for additional research to further address this issue. Also, recent work on attributions for performance (Dweck et al., 1993) has paid little attention to how this variable might influence the inferences made by entity theorists. Finally, including self-efficacy as opposed to self-confidence in the model allows for combining these social-cognitive theories into a unified framework.

A multitude of literature exists to provide evidence for the link between self-efficacy expectations and performance made by Bandura (1980). In a recent meta-analysis by Sadri & Robertson (1993), a .40 correlation was revealed between self-efficacy and performance, and a .34 correlation between self-efficacy and behavioral choice, after corrections were made. It is clear that self-efficacy is associated with such positive consequences. Further investigation should examine the personal and environmental factors that act to facilitate as well as impede self-efficacy beliefs.

In the present study it was predicted that Superleadership would serve this purpose, fostering self-efficacy through cognitive and behavioral leadership strategies. As discussed earlier, at this point in a cadet's career, their self-beliefs are probably impervious to the behavior a single leader. However, studies (e.g., Eden & Aviram, 1993) have shown that low self-efficacy can be improved with mechanisms such as training. The importance of self-efficacy for possessing learning goals in the present sample indicates the potential positive outcomes of such beliefs. Even stronger effects may be found among heterogeneous groups of subordinates where differences in self-efficacy are bound to be greater. An understanding how individuals develop self-efficacy beliefs certainly should be

a high-priority objective among those interested in leadership development.

Similar to self-efficacy beliefs, implicit theories are viewed as amenable to change (Dweck & Leggett, 1988). The increase in mean responses on the Implicit Theories of Leadership Ability measure from Third Class cadets in the pilot test to First Class cadets in the present study suggests that implicit theories of leadership ability may be impacted over time. Such views are potentially affected by external sources, and uncovering such antecedents has implications for understanding the motivation and behavioral patterns that follow from them. The cross-sectional design of the present study does not provide conclusive evidence that observed differences were due to age or experience. However, the longitudinal study being conducted at West Point will allow for examining individuals' theories of leadership change over the years, and factors associated with changes.

In sum, the explanatory power of the Implicit Theories model would be greatly improved by explicitly including self-efficacy, i.e., the manner in which it creates similarities as well as differences among and between theorists. It is not likely that high self-efficacy entity theorists will display helpless orientations, even after several bouts of failure. Positive beliefs about oneself allow for a perseverance that is similar to incremental theorists. Yet, outward behavior

may reflect differing levels of performance and learning goals that stem from implicit theories and self-efficacy. Thus, a more complex process may guide interpretations of the environment and behavioral and motivational patterns.

Koestner and Zuckerman's (1994) study provide support for a more elaborate framework underlying observed actions. They examined the relationship between Deci & Ryan's (1985) causality orientation theory, composed of three personality types, and the goal orientations associated with Dweck and Leggett's (1988) model. The first type in Deci & Ryan's model is the autonomous individual, characterized by a high confidence and the possession of learning goals. This orientation is associated with an effective approach toward achievement. Conversely, an impersonal orientation, the second type, is related to performance goals and low confidence. The behavior of impersonals can be described as a helpless response to obstacles and challenges. Finally, a controlled orientation represents a combination of the other two. Such individuals have a strong sense of confidence similar to an autonomous style and possess performance goal motives characteristic of impersonal individuals. The controlled orientation is positively related to an internal locus of control, and the associated behaviors parallel those of autonomous individuals. That is, people with a controlled orientation respond in a mastery-oriented approach to failure.

However, they have an extrinsic motivation and are focused on rewards. In addition, controlled individuals regulate their behavior on the basis of internal controls and pressure themselves to prove competence under conditions of failure, thus protecting self-esteem. Although Koestner & Zuckerman do not refer to implicit theories in their work, their findings highlight that controlled and autonomous individuals have an incremental view of their abilities but possess different goals. Overall, their work indicates a wider continuum of orientations beyond the dichotomy conceptualized by Dweck & colleagues.

Intrapersonal Performance Attributions

The findings did not reveal many implications for the performance attribution processes of subordinates. Neither Dweck and colleagues' predictions (for a review see Dweck et al., 1993) nor the present hypotheses were accurate regarding differential usage of dispositional and non-dispositional attributions by entity and incremental theorists. The primary reason for the lack of findings regarding performance attributions is that the data did not support the distinction made between the two types of attributions. One approach is to note is that these attributions essentially were characterized by three categories: internal non-dispositions, external non-dispositions, and dispositions. However, it is difficult to identify any consistent cognitive categorization

of attributions because the unique processing systems possessed by individuals play a large role in how attributions are construed. Therefore, this limits now much researchers can make assumptions regarding the differentiation of attributions. To circumvent this obstacle and gain more insight into the underlying person variables that influence the interpretation of attributions, further research should ask respondents to provide information regarding their categorization of attributions.

Among the disconfirmed group, dispositions and external non-dispositions had relatively higher selection rates than internal non-dispositions. The frequent usage of external non-dispositions may represent a strategy for avoiding blaming failure on oneself, as the pattern of usage was exactly opposite among the confirmed expectation group. In addition, the higher selection rate of available training opportunities by subordinates lower in self-efficacy suggests that the need to protect one's self-image may have been greater for those who were less confident in their leadership beliefs. The employment of dispositions, especially by entity theorists, reveals that such attributions do not always represent a dysfunctional response to failure. The assumptions made by the Implicit Theories model regarding dispositional inferences for failure does not seem to apply individuals who are mastery-oriented and highly confident. The relatively low

usage of internal non-dispositions is not discernible. Further information on how these attributions were viewed by such individuals may provide an explanation for attribution selections. For example, how In addition, the context probably exerted a significant influence on how attributions were perceived, outweighing any potential differences arising from implicit theories of leadership ability.

Among subordinates in the confirmed leadership expectation group, dispositions were used most often to explain success, followed by internal non-dispositions, and finally external non-dispositions. Singer (1989) found that individuals with higher leadership aspirations also cited internal-dispositional factors (personality, intelligence, and competence) as more important for effective leadership than those with lower aspirations. Thus, the selections of dispositions seem to be characteristic of those who have a strong motivation to be leaders. Although no internal non-dispositions were included in the study, it can be assumed that accepting personal credit for success, regardless of the attribution type, is characteristic of high self-efficacy subordinates given leadership responsibilities.

Dweck has primarily focused on reactions to failure, and has not drawn conclusions regarding the consequences of choosing different types of attributions for success. The possession of high self-efficacy seems to be associated with

an internal locus of control (see e.g., Rotter, 1966), irrespective of implicit theories of leadership ability. Examining the nature of inferences made by successful individuals would complement the prior work conducted on those who have experienced failure.

It is interesting that self-management was employed to explain success by those highest in self-efficacy, given the evidence presented earlier in this paper regarding its similarity to a mastery-oriented approach. In an environment where discipline is critical, managing oneself effectively may be viewed as one of the most important factor for being successful.

In Kanungo & Misra's (1992) leadership framework, they have pointed to this behavior as holding a primary role for mastering effectiveness in all other aspects of a leader's performance. Furthermore, in a construct validation study of a 12 dimension leadership behavior rating system employed at West Point for leadership development, the dimensions of duty motivation and military bearing, both self-management behaviors, were viewed as highly relevant to effective leadership performance by multiple raters, i.e., subordinate, peers, and subordinates (Schwager & Evans, 1996). They were also rated as most essential to successful cadet performance by subject matter experts (Office of Institutional Research, 1989).

Finally, Superleadership is based on self-management principles. Its relationship to the leadership grade as well as with Transformational leadership suggests that it is considered to be an effective leadership style and associated with successful performance. Overall, self-management appears to play a significant role in this context and in leadership more generally. The present study lends some support for using the Superleadership measure to examine encouragement of self-leadership behaviors.

Limitations

The major limitation of this study clearly relates to the setting and respondents comprising the sample. The highly homogenous population stems from the nature of individuals who attend West Point as well as a culture that instills a common set of values, ethics, behaviors, dress, etc. Both of these conditions serve to reduce the amount of variability among individuals. The restriction of range on several of the instruments clearly stemmed from these factors, and played a role in the non-significant relationships found for many of the variables. In addition, the unique environment presents difficulties for applying the findings to other settings and populations. However, they do reveal the limitations of the model and the need for further research with other high-potential groups.

Another limitation is that a non-behavioral measure, i.e., confirmation/disconfirmation of leadership grade expectations, was used instead of a leadership exercise in which cadets either succeeded or failed to obtain desired outcomes. An example of such an exercise is having cadets act as the leader of a group charged with accomplishing a particular task. In this exercise failure or success is immediate, observable, and most likely more profound than the experience associated with confirmed/disconfirmed leadership grade expectations. Therefore, if a leadership exercise was used it may have influenced attribution selections to a greater extent than was found with the non-behavioral measure employed. Especially among the disconfirmed group, it was necessary that a significant failure occurred for dispositional selections to have been viewed as reflecting negatively on capabilities. Leadership grades were also given to cadets during the prior semester, which may have reduced any potential impact. Finally, using an exercise would have allowed for obtaining other measures of behavior such as persistence after failure and the abandonment of ineffective strategies for new behaviors to overcome obstacles.

Summary

In general, the Implicit Theories model demonstrated a limited degree of generalizability to the researched domain. However, the findings indicate the existence of more complex

motivational and behavioral patterns than conceptualized by its developers among aspiring leaders who are highly confident in their leadership abilities. One step toward building a more comprehensive model is recognizing the possession of multiple goals by theorists. Additionally, the model would benefit by explicitly including self-efficacy, as indicated by the implications of such beliefs in the present study as well as in the literature. Moreover, greater emphasis should be placed on the adaptive patterns exhibited by entity theorists.

As revealed, entity theories are characteristic of individuals who have been selected for leadership roles. Furthermore, a performance goal orientation may exert a strong influence on motivation to become a leader and the success achieved in obtaining such a role.

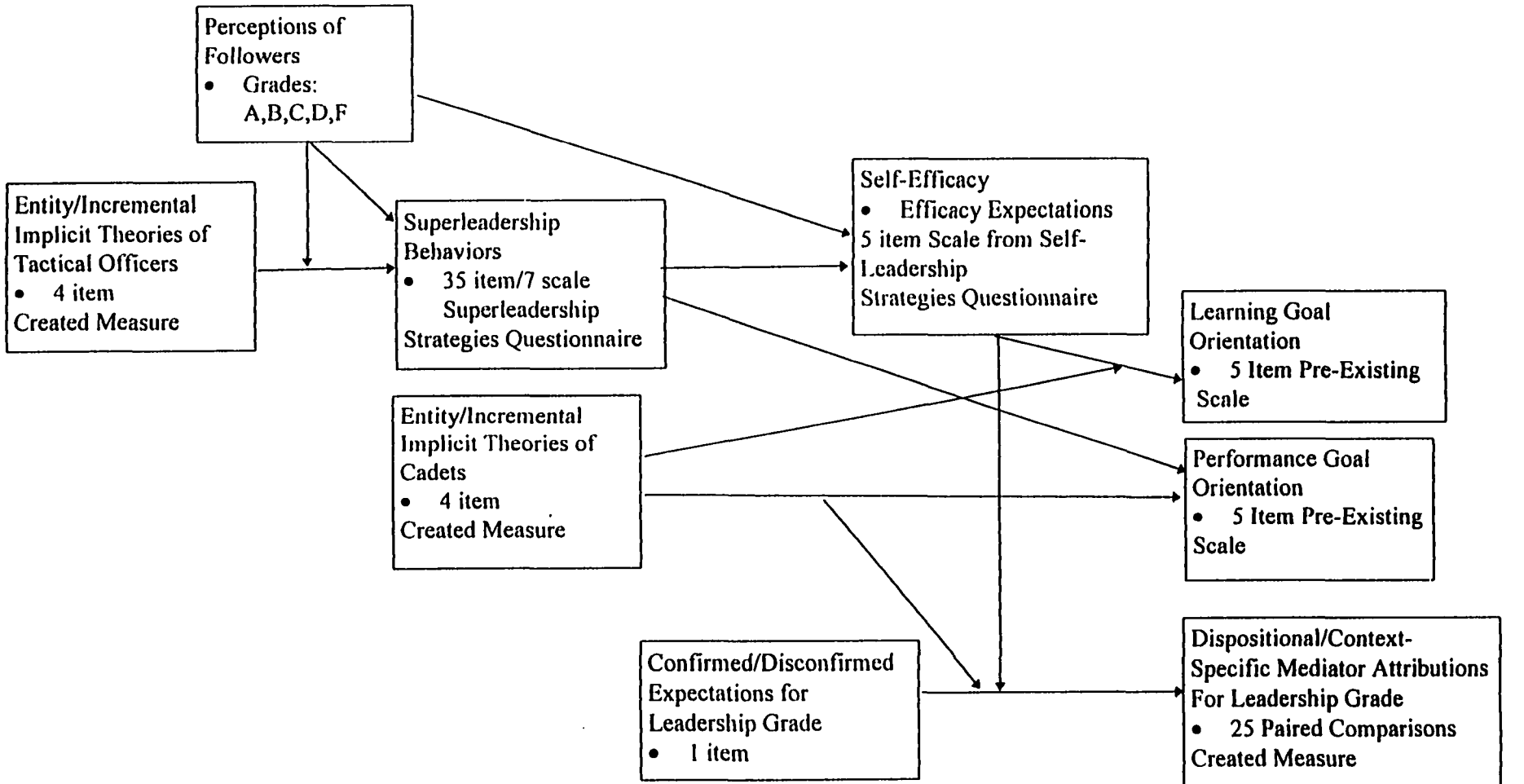
The absence of findings for many of the variables measured does not indicate they are not relevant for understanding the motivation and behavior among subordinates in a leadership position. As stated earlier, non-signficant relationships may have been associated with low amounts of variability in responses. In addition, some of the findings such as those exhibited for performance attributions may be limited to this population. The highly selective nature of the respondents and context should be taken into account when interpreting the findings.

Overall, this study represented an investigatory exploration of implicit theories in the leadership domain. Further research, both cross-sectional and longitudinal, with more diverse samples and settings is recommended to validate the implicit theories of leadership ability construct. Additional areas worthy of investigation include: Characteristics of followers and leader perceptions that moderate the effectiveness of entity and incremental leaders; the influence of implicit theories of leadership ability on subordinate interpretation of leadership behaviors (i.e., providing performance vs. learning goal motives); the goal orientation(s) and attributional styles of successful leaders; and how self-management styles such as Superleadership can be effectively utilized to promote self-efficacy and other adaptive beliefs among subordinates. In closing, addressing the issues raised in this research has the potential to add a new dimension to the existing leadership literature and hopefully enrich our understanding of leader selection and development.

Figure 1

Hypothesized Relationships among Variables and Proposed Measures

Figure 1
Hypothesized Relationships Among Variables and Proposed Measures



Appendix A

Questionnaire Administered to Cadets

The next items[1] describe behaviors that a leader may perform. For each statement, judge HOW FREQUENTLY YOUR TACTICAL OFFICER has displayed the behavior described.

Indicate your judgment by choosing from the following scale:

A	B	C	D	E
Frequently if not always always	Fairly often	Sometimes	Once in awhile	Not at all

MY TACTICAL OFFICER:

1. Makes personal sacrifices for the benefit of others.
2. Avoids getting involved when important issues arise.
3. Talks to us about his/her most important values and beliefs.
4. It requires a failure to meet an objective for him/her to take action.
5. Sets high standards.

---

6. Focuses attention on irregularities, mistakes, exceptions, and deviations from standards.
7. Emphasizes the value of questioning assumptions about what's important.
8. Gets me what I want in exchange for my support.
9. Treats me as an individual rather than just a member of a group.
10. Takes no action even when problems become chronic.

---

11. Remains calm during crisis situations.
12. Work has to fall below minimum standards for him/her to try to make improvements.
13. Emphasizes the importance of being committed to our beliefs.
14. Closely monitors my performance for errors.
15. Envisions exciting new possibilities.

---

16. Makes clear what I can expect to receive, if my performance meets designated standards.
17. Re-examines critical assumptions to question whether they are appropriate.
18. Is absent when needed.
19. Listens attentively to my concerns.
20. Fails to intervene until problems become serious.

GO TO NEXT PAGE

[1]Items 1 - 81 are used with permission and form The Multifactor Leadership Questionnaire, copyrighted by Bass & Avolio, 1991.

Continue to judge HOW FREQUENTLY YOUR TACTICAL OFFICER has displayed the behavior[2] described. Choose your response from this scale:

A	B	C	D	E
Frequently if not always always	Fairly often	Sometimes	Once in awhile	Not at all

MY TACTICAL OFFICER:

21. Instills pride in being associated with him/her.
22. Spends his/her time looking to "put out fires".
23. Specifies the importance of having a strong sense of purpose.
24. Works out agreements with me on what I will receive if I do what needs to be done.
25. Talks optimistically about the future.

---

26. Fails to follow-up requests for assistance.
27. Encourages us to rethink ideas which had never been questioned before.
28. Tells me what I've done wrong rather than what I've done right.
29. Provides useful advice for my development.
30. Keeps track of my mistakes.

---

31. Goes beyond his/her own self-interest for the good of our group.
32. Negotiates with me about what I can expect to receive for what I accomplish.
33. Considers the moral and ethical consequences of his/her decisions.
34. Resists expressing his/her view on important issues.
35. Expresses his/her confidence that we will achieve our goals.

---

36. Things have to go wrong for him/her to take action.
37. Questions the traditional ways of doing things.
38. Enforces rules to avoid mistakes.
39. Focuses me on developing my strengths.
40. Provides his/her assistance in exchange for my effort.

GO TO NEXT PAGE

[2]**Items 1 - 81 are used with permission and form The Multifactor Leadership Questionnaire, copyrighted by Bass & Avolio, 1991.**

Continue to judge HOW FREQUENTLY YOUR TACTICAL OFFICER has displayed the behavior[3] described. Choose your response from this scale:

A	B	C	D	E
Frequently if not always always	Fairly often	Sometimes	Once in awhile	Not at all

MY TACTICAL OFFICER:

41. Provides reassurance that we will overcome obstacles.
42. Avoids making decisions.
43. Displays conviction in his/her ideals, beliefs, and values.
44. Shows he/she is a firm believer in "If it ain't broke, don't fix it".
45. Provides continuous encouragement.

---

46. Directs his/her attention toward failure to meet standards.
47. Seeks differing perspectives when solving problems.
48. Tells me what to do to be rewarded for my efforts.
49. Spends time teaching and coaching me.
50. Delays responding to urgent questions.

---

51. Displays extraordinary talent and competence in whatever he /she undertakes.
52. Problems must become chronic before he/she will take action.
53. Takes a stand on difficult issues.
54. Searches for mistakes before commenting on my performance.
55. Focuses my attention on "what it takes" to be successful.

---

56. Makes sure that we receive appropriate rewards for achieving performance targets.
57. Suggests new ways of looking at how we do our work.
58. Diverts his/her attention away from addressing work-related problems.
59. Treats each of us as individuals with different needs, abilities, and aspirations.
60. He/she motivates me to do more than I thought I could do.

GO TO NEXT PAGE

[3]Items 1 - 81 are used with permission and form The Multifactor Leadership Questionnaire, copyrighted by Bass & Avolio, 1991.

Continue to judge HOW FREQUENTLY YOUR TACTICAL OFFICER has displayed the behavior[4] described. Choose your response from this scale:

A	B	C	D	E
Frequently if not always always	Fairly often	Sometimes	Once in awhile	Not at all

MY TACTICAL OFFICER:

61. His/her actions build my respect for him/her.
62. I earn credit with him/her by doing my job well.
63. Clarifies the central purpose underlying our actions.
64. Talks enthusiastically about what needs to be accomplished.
65. Encourages me to express my ideas and opinions.

---

66. Teaches me how to identify the needs and capabilities of others.
67. Displays a high sense of power and confidence.
68. Talks about how trusting each other can help us overcome difficulties.
69. Arouses awareness on what is essential to consider.
70. He/she heightens my motivation to succeed.

---

71. Emphasizes the importance of having a collective sense of mission.
72. Articulates a compelling view of the future.
73. Gets me to look at problems from many different angles.
74. Promotes self-development.
75. Behaves in ways that are consistent with his/her expressed values.

---

76. Shows determination to accomplish what he/she sets out to do.
77. Encourages non-traditional thinking to deal with traditional problems.
78. Gives personal attention to members who seem neglected.
79. He/she gets me to do more than I expected I could do.
80. Expresses his/her satisfaction when I do a good job.
81. Encourages addressing problems by using reasoning and evidence, rather than unsupported opinion.

GO TO NEXT PAGE

[4]Items 1 - 81 are used with permission and form The Multifactor Leadership Questionnaire, copyrighted by Bass & Avolio, 1991.

Items 82 - 115 also describe ways in which a leader could behave. You are to indicate how well each item described the leadership of YOUR TACTICAL OFFICER DURING THE PAST TERM.

Enter your response on the answer sheet. Choose your response from the following scale:

A	B	C	D	E
Definitely not True	Not True	Neither True nor Untrue	True	Definitely True

MY TACTICAL OFFICER:

82. Advises me to look for the opportunities contained in the problems I face.
83. Actively encourages me to set goals for myself.
84. Encourages me to treat myself to something I enjoy when I do a task especially well.
85. Urges me to think I am capable of high performance.
86. Encourages me to keep track of my progress on tasks I'm working on.
87. Encourages me to give myself a pat on the back when I meet a new challenge.
88. Advises me to work together with other cadets who report to him/her as a team.
89. Works with me to develop my performance goals.
90. Encourages me to think about eventual success rather than possible failure.
91. Advises me to solve problems when they pop up without always getting his/her stamp of approval.
92. Advises me to make improvements on how I do my work on my own initiative without being told to do so.
93. Urges me to work as a team with other cadets who report to him/her.
94. Advises me to expect that I will perform well.
95. Encourages me to find solutions to my problems without his/her direct input.
96. Reaches a mutual understanding with me regarding the goals for my work.
97. Encourages me to have confidence in my ability to meet challenges.
98. Works together with me to decide what my performance goals are.
99. Encourages me to keep track of how well I'm doing while I work.
100. Urges me to do tasks that make me feel good about myself.
101. Encourages me to search for solutions to my problems without his/her supervision.
102. Urges me to reward myself with something I like when I have successfully completed a major task.
103. Encourages me to view unsuccessful performance as a change to learn.
104. Assures me that I am capable of overcoming any obstacle.
105. Advises me to feel good about myself when I perform well.
106. Encourages me to work together with other cadets who report to him/her.
107. Advises me to set goals for my own performance.

GO TO NEXT PAGE

Continue to judge how well each behavior below described YOUR TACTICAL OFFICER DURING THE PAST TERM. Choose your response from the scale below:

A	B	C	D	E
Definitely not True	Not True	Neither True nor Untrue	True	Definitely True

MY TACTICAL OFFICER:

108. Encourages me to think I can do very well in my work.

109. Advises me to coordinate my efforts with other cadets who report to him/her.

110. Advises me to think about how challenges can be met, rather than why they cannot.

111. Sits down together with me and reaches agreement on my performance goals.

112. Urges me to reward myself for doing a good job.

113. Wants teamwork between me and other cadets who report to him/her.

114. Encourages me to take time to do tasks that I like to do.

115. Urges me to think of problems as opportunities rather than obstacles

Items 116 - 119 describe beliefs that you could have about the NATURE OF LEADERSHIP IN GENERAL. Indicate your agreement with each statement as it describes YOUR VIEW OF THE GENERAL NATURE OF LEADERSHIP.

Continue on the answer sheet. Indicate your agreement by choosing from the following scale:

A	B	C	D	E	F
Strongly agree	Agree to some extent	Agree to a small extent	Disagree to a small extent	Disagree to some extent	Strongly disagree

116. Leadership ability is something very basic about an individual, and this ability can't be changed very much.

117. Training or development for leadership can teach individuals new things, but they are unlikely to change the fundamental nature of leadership ability.

118. Not everyone is born with same ability for leadership, and these differences will persist throughout an individual's life.

119. Whether individuals are leaders or not is deeply ingrained in their personality.

GO TO NEXT PAGE

Items 120 - 134 describe attitudes and beliefs which leaders could have about their performance in a leadership role. Consider how true each statement is of <u>YOUR ATTITUDES AND BELIEFS ABOUT YOUR OWN LEADERSHIP DURING THE PAST TERM</u>.

Enter your response on the answer sheet. Choose your response from the following scale:

A	B	C	D	E
Definitely not True	Not True	Neither True nor Untrue	True	Definitely True

<u>ABOUT MYSELF</u>:

120. I am sure that I am capable of overcoming any obstacle.
121. I prefer challenging tasks even if I don't do as well on them.
122. It bothers me the whole day when I make a big mistake.
123. It is important to me to always do better than others.
124. I think I am capable of high performance.
125. I persevere even when I am frustrated by a task.
126 I expect that I will perform well.
127. I like others to think I know a lot.
128. I think I can do very well in my leadership role.
129. It is important to me to always do better than others.
130. I try even harder after I fail at something.
131. I have confidence in my ability to meet challenges.
132. I enjoy challenging assignments.
133. I feel angry when I do not do as well as others.
134. I feel most satisfied when I work hard to achieve something.

135. Think about your leadership performance and the leadership grade you expected this past term. <u>HOW WELL DID THE LEADERSHIP GRADE ASSIGNED THIS PAST TERM ACTUALLY MEET YOUR EXPECTATIONS</u>?
Enter your response on the answer sheet. Choose from the scale below.

A	B	C	D
Much lower than expected	Lower than expected	Equal to expected	Higher than expected

GO TO NEXT PAGE

Keep in mind your response to item 135 as you complete the next items, items 136 - 160. Items 136 - 160 contain pairs of commonly cited explanations for leadership performance. For each item, **compare the two explanations**, and choose the explanation which you believe was **more responsible for YOUR LEADERSHIP GRADE THIS PAST TERM.** Darken the circle on the answer sheet for the letter corresponding to your choice.

Note that each explanation appears several times in the next items. **Please evaluate each pair separately.**

136.	A. My ability for leadership	vs	B. Effort devoted to leadership
137.	A. Leadership tactics used	vs	B. My intelligence
138.	A. My desire for achievement	vs	B. Available training opportunities
139.	A. My self-confidence	vs	B. Past leadership experiences
140.	A. My intelligence	vs	B. Available training opportunities
141.	A. Self-management practices	vs	B. My ability for leadership
142.	A. My leadership traits	vs	B. Past leadership experiences
143.	A. Leadership tactics used	vs	B. My desire for achievement
144.	A. Effort devoted to leadership	vs	B. My self-confidence
145.	A. My intelligence -	vs	B. Self-management practices
146.	A. Leadership tactics used	vs	B. My leadership traits
147.	A. Available training opportunities	vs	B. My ability for leadership
148.	A. Effort devoted to leadership	vs	B. My intelligence
149.	A. Self-management practices	vs	B. My leadership traits
150.	A. Effort devoted to leadership	vs	B. My desire for achievement
151.	A. My self-confidence	vs	B. Self-management practices
152.	A. Past leadership experiences	vs	B. My intelligence
153.	A. My self-confidence	vs	B. Available training opportunities
154.	A. Past leadership experiences	vs	B. My ability for leadership
155.	A. My leadership traits	vs	B. Effort devoted to leadership
156.	A. Leadership tactics used	vs	B. My self-confidence
157.	A. My desire for achievement	vs	B. Past leadership experiences
158.	A. My ability for leadership	vs	B. Leadership tactics used
159.	A. My leadership traits	vs	B. Available training opportunities
160.	A. Self-management practices	vs	B. My desire for achievement

THANK YOU. THIS ENDS THE QUESTIONNAIRE.

Appendix B

Piloted and Revised Attributions for Leadership Performance

Leadership Grade Attributions:
Piloted and Revised List

DISPOSITIONAL ATTRIBUTIONS

Piloted	Revised
Ability for Leadership	My ability for leadership
Intelligence	My intelligence
Achievement-orientation	My desire for achievement
Self-Confidence	My self-confidence

NON-DISPOSITIONAL ATTRIBUTIONS
(CONTEXT-SPECIFIC MEDIATORS)

Piloted	Revised
Effort	Effort devoted to leadership
Leadership tactics	Leadership tactics used
Leadership training	Available training opportunities
Self-management strategies	Self-management practices

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