

TRANSFORMATIONAL LEADERSHIP AND FOLLOWER RISK BEHAVIOR: AN
EXAMINATION OF FRAMING AND ISSUE INTERPRETATION

By

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A DISSERTATION PRESENTED TO THE GRADUATE SCHOOL
OF THE UNIVERSITY OF FLORIDA IN PARTIAL FULFILLMENT
OF THE REQUIREMENTS FOR THE DEGREE OF
DOCTOR OF PHILOSOPHY

UNIVERSITY OF FLORIDA

2005

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All of this work is dedicated to Dominique.

ACKNOWLEDGMENTS

I would like to thank Tim Judge for his leadership and support throughout my time at the University of Florida. I sincerely valued his wisdom, creativity, and personal attention. I would also like to thank Jason Colquitt for his feedback, guidance, and commitment to my professional development, and Amir Erez, whose help in the design of the studies in this dissertation proved invaluable. Thanks also go to John Kammeyer-Mueller and James Algina, who each provided valuable advice and feedback during the course of my study. I would also like to express special gratitude to Henry Tosi, who was gracious enough to grant me an opportunity to attend UF. I am forever grateful.

Finally, I'll express my love and appreciation for Dominique, who continues to be supportive and inspirational. She is an amazing woman.

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August 2005

Chair: Timothy A. Judge
Major Department: Management

Modern leadership theory asserts that followers of exceptional leaders are willing to take personal risk in support of stated organizational objectives. In that vein, two experimental studies were conducted to evaluate the influence of transformational leadership behaviors on followers' willingness to take risk. In each study, transformational leadership was manipulated with a trained actor, and student participants were asked to indicate their willingness to assume a risky position. Drawing on assertions contained within transformational leadership theory, I hypothesized that followers of transformational leaders would be more likely to put personal or company resources at risk. I further hypothesized that observed effects of leadership on risk behavior would depend on how aspects of the decision scenario were introduced.

In Study 1, students who observed a highly transformational, highly charismatic project coordinator were more willing to participate in an uncertain assignment than students who watched a leader who exhibited fewer charismatic leadership behaviors. In

Study 2, participants were asked to assume the role of a division manager in a fictional company and to make an investment decision on behalf of a company. Managers who observed a transformational CEO reported higher levels of expectancy in the investment's outcomes, and were less influenced by how aspects of the decision scenario were introduced.

Results of these studies make a contribution to transformational leadership theory by directly testing one of its main tenets – that followers are willing to take risks on behalf of the organization. Further, transformational leadership theory is enhanced through the observation that effects are realized through a cognitive mechanism, namely, issue interpretation.

CHAPTER 1 INTRODUCTION

Risk-taking behavior among leaders and agents of an organization is an important component of organizational success. In nearly every major industry, successful business executives can easily identify a risky decision that served as the platform for achievement of above average organizational results (“Setting a Direction,” 2001). Observers of business trends often attribute an organization’s success to the willingness of its leaders and employees to take risk in the face of competition and uncertainty (Collins, 1994; 2001; Peters & Waterman, 1982), and many popular press leadership guides emphasize the importance of risk taking in the executive suites of major companies (Fiorina et al., 2003) and throughout the middle and lower levels of management (Collins, 1994). In their influential discussion on leadership and organizational success, Kouzes and Posner (1995) encourage leaders to experiment, take risks, and encourage others to do the same because “showing others that you’re willing to risk is essential to getting others to do the same” (p. 85). Indeed, many managers consider risk taking to be a central and essential part of their jobs (March & Shapira, 1987), and risk taking has been described as an essential aspect of each industry leader’s strategy (Peters & Waterman, 1982).

As an important aspect of organizational success, risk behavior in an organizational setting has been explained from both economic and psychological perspectives (Lopes, 1987). Early examinations of risk behavior tended to utilize economic models that relied on strict assumptions regarding the concentration of information available to decision makers, and the manner in which decision makers categorize, evaluate, and utilize that

information. Studies of risk preference and risky choice regularly test economic models of decision-making under uncertainty with assumptions about the rationality of decision-makers (Mellers, Schwartz, & Cooke, 1998), the use of mental heuristics by decision-makers (Slovic, 1987), and the nature of the decision-task (March & Shapira, 1987; Sitkin & Pablo, 1992). In the economic approach, risky choice is often predicted with rational, utility maximizing cognitive models, which rely heavily on traditional economic assumptions. However, despite the comprehensive body of research dedicated to economic descriptions of risk, there exist regular variations in risk preference among decision makers that remain unexplained by traditional models.

For one, economic models assume that decision makers are risk averse and prefer a sure choice to one with uncertainty in the outcomes (Laughunn, Payne, & Crum, 1980). However, research in the personality literature has identified stable traits (e.g., sensation seeking) that are proposed to indicate an individual's willingness to engage in risky behavior (e.g., Rolison & Sherman, 2002; 2003), such as the study by Sorrentino, Hewitt, and Raso-Knott (1992), which argued that risk preferences are substantially shaped by an individual's tendency to avoid uncertainty. Further, studies involving working business professionals have reported notable differences in tolerance for risk and uncertainty between entrepreneurs and corporate managers (Stewart & Roth, 2001) and between male and female managers (Byrnes, Miller, & Schafer, 1999). Thus, contrary to a fundamental economic assumption regarding human behavior (i.e., risk aversion), it appears that certain individuals may be predisposed to take risk.

Second, economic models assert that decision-makers evaluate potential alternatives based on their stated probabilities, with little regard for the subjective

assessment of value an individual may place on a particular outcome. As noted by Starmer (2000), traditional approaches relied on two major assumptions: *procedural invariance*, which suggested that choices are made independently of the method used to elicit them, and *description invariance*, which asserts that preferences do not depend on how probability distributions are described. A central tenet of prospect theory (Kahneman & Tversky, 1979), however, is that tolerance for risk is enhanced, suppressed, or reversed depending on which outcomes of the decision scenario (e.g., gains or losses) are emphasized (Bazerman, 1984).

Finally, the economic approach assumes that decision makers have access to complete information about all alternative choices and that decision makers use all that information when ultimately deciding on a course of action (Mellers et al., 1998). The reality of practical business activity, however, is that these idealistic situations do not exist. Very often, managers are forced to make strategic decisions with incomplete information, and rely on intuition (rather than expressed probabilities) when estimating prospects for a new venture's success (Eisenhardt, 1999). Unfortunately, while these economic assumptions provide for the development of parsimonious models of decision making under uncertainty, the resulting models fail to account for individual choices that are inconsistent with calculated, self-maximizing thinking. Nor do these models account for changes in risk preference that take place across context and decision task, a serious shortcoming in our understanding of decision-making under risk and uncertainty.

More recently, research in social psychology has begun to address these limitations with consideration of the psychological processes that underlie decision making under uncertainty (Kahneman & Tversky, 1979; Lopes, 1987). Lopes (1987), for example,

argued that risk-seeking behavior could be justified by the internal processes that decision-makers use to evaluate the values and probabilities of alternatives. According to Lopes' (1987) summary, risk seeking behavior may have a motivational source (Larrick, 1993; McClelland, 1954), such that those with a high need for achievement are willing to assume risk. In addition, risk behavior may be undertaken to support or enhance existing self-judgments, such that those with a high level of self-esteem pursue risky adventures in the presence of others (Cohen & Sheposh, 1977). Further, substantial evidence exists to support the notion that choice under uncertainty is strongly influenced by transient affective states (for a review see Isen, 1993), an assertion that is consistent with the broader literature on the role of emotion in cognitive processing (e.g., Forgas, 1995; 2002). As such, a psychological approach to explaining risk provides a valuable platform for explaining variations in decision making under uncertainty, and in understanding deviations in choice from existing economic models.

Perhaps the most important contribution of the psychological approach to explaining risk behavior is the observation that preferences for risk are not always bound by rational, normative patterns, but are also influenced by social and organizational factors that shape the decision context. Indeed, March and Shapira (1987) observed that managers consider the organization's relation to aspiration level when evaluating risk, and made cogent arguments for the notion that "risk-taking varies with the context" (p. 1412). Among the many potential situational modifiers, leader behavior may be one that has a particularly important influence on how decision makers assess and ultimately choose among risky alternatives, as followers look to their leader for cues on how to interpret and respond to organizational stimuli (Levinson, 1965).

Inherent in most modern theories of leadership is the notion that effective leaders arouse a high level of functioning among their followers and influence the manner in which followers interpret important information in the workplace (Conger, 1991; Pirola-Merlo, Hartel, Mann, & Hirst, 2002; Yukl, 1989). Transformational leadership theory, in particular, asserts that leaders have a profound effect on the attitudes, behaviors, and perceptions of followers (Bass, 1985), and inspire followers to perform beyond previous limits. Unlike trait (Bass & Stogdill, 1990) or exchange-oriented (Maslyn & Uhl-Bien, 2001) approaches to understanding leadership, which tend to emphasize stable personal traits of the leader or predictable patterns of communication across organizational levels, the transformational approach specifically suggests that leadership is realized through fundamental changes in followers (Bono & Judge, 2003). As such, a comprehensive body of research on transformational leadership theory supports the notion that effective leaders have an influence on how their followers feel about their work and how their followers ultimately perform. Further, the transformational approach emphasizes the need for a change in the status quo, and encourages behavior that supports the overall mission of the organization, no matter how risky (Conger & Kanungo, 1994).

Despite the expectation that aspects of the transformational approach influence followers' assessment and perceptions of risk, only one study to date has specifically tested such a link. By examining the reactions among equity analysts to charismatic appeals made by corporate CEOs, Flynn and Staw (2004) assessed the relationship between charismatic behaviors and third party judgments about the company's future. Results of the study suggested that companies with especially charismatic CEOs were offered favorable stock ratings by third party analysts, in spite of financial evidence that

would have suggested otherwise. In this way, charismatic CEOs appeared to shape judgments and behavior among equity analysts.

In that vein, the current studies were designed to examine the relationship between leader behavior and followers' assessment of and willingness to engage in risky behavior. Of particular interest is a transformational leader's influence on follower judgments about characteristics in the workplace, and followers' willing to engage in risky behavior on behalf of the organization.

In study 1, I attempt to establish a direct link between transformational leadership and risk behavior among followers by having participants observe a leader that exhibits behavior that is either consistent or inconsistent with the transformational approach. Participants then make a personally relevant choice between two alternatives with different levels of uncertainty. In study 2, I examine the influence of problem framing to determine if observed effects of leadership on risk are subject to moderating influences. In addition, I estimate the impact of issue interpretation among followers to determine if observed effects can be explained by a leader's influence on how followers interpret problem specific information. Despite transformational leadership theory's popularity in the business literature, only a handful of studies to date have considered the processes by which leaders affect followers' perceptions and attitudes (Bono & Judge, 2003; Kirkpatrick & Locke, 1996; Pillai, Schreisheim, & Williams, 1999; Podsakoff, MacKenzie, & Bommer, 1996). As such, the current studies examine a relatively unique dependent variable (risk behavior), and attempt to explain observed relations between leaders behavior and follower risk taking through a cognitive mechanism (issue interpretation).

In the following section, I provide an overview of transformational leadership theory, a description of theory and research on risk behavior in organizations, and an introduction of framing and issue interpretation.

CHAPTER 2 REVIEW OF THE LITERATURE

Transformational Leadership Theory

Based in part on Burns' (1978) conceptualization, Bass (1985) introduced transformational leadership theory to capture the impact of exceptional leaders on followers' behavior. Transformational leadership theory asserts that certain leader behaviors not only influence followers' attitudes and behaviors, but also inspire them to perform beyond their previous personal limitations. In contrast to more exchange-oriented models (e.g., leader-member exchange; Masyln & Uhl-Bien, 2001), transformational leadership theory describes the process by which leaders create a connection with followers, attend to their individual needs, and help followers reach their potential (Bass, 1985). By appealing to follower's higher ideals and values, transformational leaders enhance the commitment of followers to a well-articulated vision and arouse followers to develop new ways of thinking about problems.

During the last two decades, the positive effects of transformational leadership have been described in hundreds of empirical studies and summarized in three separate meta-analytic reviews (Fuller, Patterson, Hester, & Stringer, 1996; Judge & Piccolo, 2004; Lowe, Kroeck, & Sivasubramaniam, 1996). Of particular interest, the transformational approach has been shown to be a reliable predictor of important organizational outcomes including task and citizenship aspects of job performance (Howell & Frost, 1989; Podsakoff, MacKenzie, & Bommer, 1996; Podsakoff, MacKenzie, Moorman, & Fetter, 1990). In studies that have considered the relative effects of popular leadership concepts,

transformational behaviors have emerged as consistent predictors of organizational outcomes beyond other conceptualizations (Bycio, Hackett, & Allen, 1995; Howell & Avolio, 1993; Howell & Hall-Merenda, 1999; Judge & Piccolo, 2004; Jung, 2001).

A search of the *PsycINFO* database indicates that more studies of transformational leadership have been published since 1990 than all other modern theories of leadership. Despite its popularity in the literature, however, only a few articles to date have explored intervening mechanisms to explain transformational effects (e.g., McColl-Kennedy & Anderson, 2002; Pillai et al., 1999; Podsakoff et al., 1990; Shamir, House, & Arthur, 1993). Those studies have tended to focus on leader-referenced variables, such as trust in the leader, satisfaction with the leader, and perceived leader fairness (e.g., Pillai et al., 1999; Podsakoff et al., 1990). While such mechanisms are no doubt important, they represent a limited set of the potential mediators. Further, only one study to date has specifically examined the link between aspects of the transformational approach (i.e., charisma) and risk assessment among followers (Flynn & Staw, 2004).

Transformational leadership theory is a broad, process-based approach to leadership that was developed, in part, from research on prominent political leaders (Yukl, 1989). The theory suggests that certain leaders, through their charisma, vision, and intellect, can elevate follower frames of reference, ideological values, and attitudes towards self, peers, and the nature of their work (Burns, 1978). In contrast to economic models which imply that followers tend to act to satisfy their own self-interest (Bono & Judge, 2003), transformational leadership theory asserts that followers are inspired by leaders who articulate a compelling vision, who help followers identify a higher purpose in their work, and who recognize contributions to organizational objectives.

Since its original introduction by Burns (1978) and Bass (1985), transformational leadership theory has evolved to describe four dimensions of transformational behavior: idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration. *Idealized influence* is the degree to which leaders behave in admirable or charismatic ways that cause followers to identify with them. *Inspirational motivation* is the degree to which leaders articulate a vision that is appealing and inspiring to followers. *Intellectual stimulation* is the degree to which leaders challenge assumptions, take risks, and solicit followers' ideas. *Individualized consideration* is the degree to which leaders attend to followers' needs, act as mentors or coaches, and listen to followers' concerns and desires.

Recent studies of transformational leadership have involved a wide range of samples and settings, have examined a host of different organizational outcomes, and have utilized a variety of research methodologies (Conger, 1999). Assertions of the transformational approach have received empirical support at the individual- and organization-level (Howell & Avolio, 1993; Sosik, Avolio, & Kahai, 1997; Yammarino & Dubinsky, 1994; Yammarino, Dubinsky, Comer, & Jolson, 1997), in educational (Shamir, 1992; Zacharatos, Barling, & Kelloway, 2000), military (Shamir, Zakay, Breinin, & Popper, 1998; Yammarino, Spangler, & Bass, 1993), and business settings (Barling, Weber, & Kelloway, 1996; Baum, Locke, & Kirkpatrick, 1998; Bycio et al., 1995), and in several different international samples (Den Hartog, House, Hanges, Ruiz-Quintanilla, Dorfman, 1999; Jung & Avolio, 1998; Koh, Steers, & Terborg, 1995). These studies provide evidence of the theory's cross-cultural generalizability.

In addition to studies that used participants in an organizational setting, researchers have also tested the assertions of transformational leadership theory in experimental lab studies. In several lab studies of transformational leadership theory, video tapes of well known business and political leaders are used in an experimental transformational leadership condition (Flynn & Staw, 2004; Erez et al., unpublished). In other cases, trained actors exhibit behaviors that are proposed to characterize the transformational pattern (Awamleh & Gardner, 1999; Howell & Frost, 1989; Kirkpatrick & Locke, 1996; Shea & Howell, 1999). Based most often on the suggestions of Bass and Avolio (1997), actors playing transformational leadership express confidence, use language that includes symbolism and imagery, and appeal to followers' higher order values. In addition to these verbal indicators of the transformational approach, the trained actors use nonverbal cues such as dynamic voice inflection, animated facial expressions, and energetic physical movement (Kirkpatrick & Locke, 1996). Taken together, the positive effects of transformational leadership have been tested and verified in studies conducted in the lab and in the field.

Two meta-analytic summaries of the transformational leadership literature have been published in the last 10 years (Judge & Piccolo, 2004; Lowe et al., 1996). Lowe et al. (1996) provided a corrected estimate of charismatic leadership's relationship to leader effectiveness for ($r=.71$), whereas Judge and Piccolo (2004) summarized leadership's effect on 6 important organizational outcomes such as leader effectiveness, satisfaction with the leader, and motivation. In both studies, transformational leadership emerged as a consistent and significant predictor of work related attitudes (e.g., satisfaction,

motivation) and behaviors (e.g., contextual performance, group performance) across criteria and organization level.

Beyond transformational leadership's impact on a set of traditional organizational outcomes, there is early evidence that transformational leaders also influence the way followers think about themselves and their working environment. To suggest that leadership is realized in part by the social-cognitive processing system of followers, Brown and Lord (2001) introduced a model of the leadership process that described how follower self- and context-relevant thought patterns are influenced by a leader's ability to direct attention to critical bits of information. According to the authors, transformational leaders create emotional arousal among followers and make specific information regarding the work context more salient. Assertions of Brown and Lord's (2001) model were confirmed, in part, by Piccolo and Colquitt's (in press) study of transformational leadership and follower job perceptions, in which followers of transformational leaders described their jobs as enhanced along the five core job characteristics (Hackman & Oldham, 1976). This work by Lord and colleagues (1999; 2001) and by Piccolo and Colquitt (in press) asserts that followers of transformational leaders tend to think differently about their own potential, about their job experiences, and about problems they face within the organization.

One possible extension of the work by Lord and Brown (2001; 2004) is examination of a leader's influence on followers' willingness to take risk. Risk represents a special kind of decision-making problem (Yates & Stone, 1992), one that deals with uncertainty in the outcomes of a decision (March & Shapira, 1992) or with potential losses for the decision-maker and his or her organization (Fischhoff, Watson, & Hope

1984). It is possible that especially effective leaders inspire followers to reach beyond previous limits and risk personal resources for the sake of the organization. It may also be possible that transformational leaders provide information about the work environment and about the organization's future that influence follower judgments regarding the risk associated with their actions and decisions.

Despite transformational leadership's popularity in the management literature, very few studies to date have specifically tested a leader's influence on followers' willingness to take risk. Whereas the notion that effective leaders encourage followers to innovate and reach beyond comfortable personal boundaries is central to transformational leadership theory (Howell & Avolio, 1993), specific tests of this phenomenon are rare. Indeed, effective leaders are expected to influence risk behavior among followers, but only one study to date (Flynn & Staw, 2004) has specifically examined the conditions under which leadership influences risk behavior.

In the next section of the paper, I introduce some of the most relevant literature on risk behavior and decision-making among managers in an organizational setting. I provide an overview of economic and psychological approaches to explaining risk behavior and describe how each approach explains risk behavior among managers.

Risk-taking Behavior

As described in the introduction, risk-taking is often regarded as an important aspect of organizational success, and many managers consider the evaluation of risk and management of uncertainty as essential components of their jobs (March & Shapira, 1987). Despite its usefulness and popularity in the social sciences, however, a consensus definition of risk in an organizational setting does not seem to exist. Some authors tend to equate risk with the *uncertainty* or *variability* of potential outcomes. Sitkin and Pablo

(1992), for example, suggested that risk is "...the extent to which there is uncertainty about whether potential significant and/or disappointing outcomes of decisions will be realized" (p. 10), while March and Shapira (1992) noted, in a similar definition, that "...riskiness is associated with lack of certainty about the precise outcome of a choice and the variation in the probability distribution" (p. 172). These definitions describe risk in terms of the variability and uncertainty in potential outcomes. Of note, this approach does not necessarily suggest that risk is the potential for negative outcomes, only that outcomes are uncertain.

Other scholars have defined risk as the potential for meaningful loss.

MacCrimmon, Wehrung, and Stanbury (1986), for example, remarked that, "...a risky situation is one in which the magnitude and chance of exposure to an outcome [may] make a person worse off than some reference status quo" (p. 15). In a similar vein, Yates and Stone (1992) suggested that the risk construct is comprised of (a) potential losses, (b) the significance of those losses, and (c) the uncertainty of those losses. In the views of MacCrimmon et al. (1986) and of Yates and Stone (1992), risky situations are those that involve some potential for meaningful loss. Thus, while risk is an important and broadly studied concept in the social sciences, there appears to be some ambiguity regarding the construct's definition. Whereas risk is a construct that is expected to capture the dangers and uncertainties of life (Mellers et al., 1998), no single, objective definition of risk exists (Slovic, 1987).

In the economics literature, there have been several attempts to explain the manner in which individuals approach decisions under uncertainty. Expected Utility Theory (EUT), the "standard theory of individual choice in economics," is perhaps the most

popular (Starmer, 2000: p. 332). First proposed by Daniel Bernoulli (1738/1954), expected utility theory asserts that individuals place subjective values on monetary outcomes (i.e., utilities). The value of any particular gamble, therefore, is the expectation of these utilities (Starmer, 2000). The theory states that decision makers choose among risky alternatives by comparing their expected utility values. Beyond EUT, there exist a host of non-expected utilities models of risky decision making and choice (for a review, see Starmer, 2000). While Starmer (2000) classified theories of risk behavior into two broad categories, descriptive and normative, Lopes (1987) instead reviewed the risk literature and placed theories of risk into three descriptive categories.

First, Lopes described theories that explain differences between *people* who regularly take risk and those who do not (e.g., Achievement Motivation, Atkinson, 1957; McClelland, 1961). These theories tend to emphasize individual differences in risk preference and suggest that willingness to engage in risky behavior remains constant across situations. Second, Lopes described theories that explain differences between *situations* that promote risk taking and those that promote risk aversion (e.g., Prospect Theory, Kahneman & Tversky, 1979). These theories describe the contextual factors that facilitate risky decision-making, and assume that people of all dispositions will engage in risk when the situation is right. Finally, there are theories that explain why certain people take risks in certain situations. Aspiration-level theory (Lopes, 1987), for example, evaluates how dispositional and situational factors interact to produce “complex patterns” of risk behavior. As Lopes (1987) remarked, “...risk-averse choices and risk-seeking choices exist side-by-side in the same individual’s behavior” (p. 275).

Each approach to understanding risk behavior tends to have its own set of assumptions regarding the decision-maker, and each proposes a unique role for emotional, situational, and individual factors. For example, very early observations of human decision-making (e.g., Bernoulli) tended to emphasize the utility of expected outcomes. That is, Bernoulli proposed a theory in which individuals place subjective values on potential outcomes, the subjective evaluation being regarded as the outcome's "utility." These and other economic models emphasize rational thinking among decision-makers. Modern approaches to decision-making, on the other hand, have relaxed the hard assumptions of rationality among decision-makers and have begun to recognize the "hot" affective influences on risky decision-making alongside "cold" cognitive processes (Brown & Lord, 2001).

The Economic Approach to Risk Behavior

In the social sciences, risk-taking and risky decision-making have been most thoroughly covered in the economics literature (Lopes, 1987). Most approaches to understanding decision-making under risk uncertainty depend on economic models rife with assumptions about the rationality of the decision-maker and the process by which decision-makers evaluate a set of potential alternatives. In an economics approach, the stereotype is an individual who could forgo the influence of emotion and intuition during the decision process and rely strictly on an objective evaluation of the information presented. Decision theories presented in economics tend to rely on the rational choice model, which suggested that a single correct answer existed for every decision scenario (Mellers et al., 1998). Unfortunately, many of these early approaches failed to account for choices that were inconsistent with rational evaluation of expected outcomes.

Worth noting, economic approaches to understanding decision-making under risk rely heavily on cognitive explanations (Mellers et al., 1998). That is, models of risk-seeking and decision-making under uncertainty make assumptions about the rationality of decision-makers and the manner in which complex decision scenarios are categorized, simplified, and deliberated. Decision models that emerged from early studies assumed that decision-makers have access to and use of full information on the possible alternatives, and make careful decisions based on objective evaluations of that information. With the expectation that decision makers utilize strictly rational decision processes, many early models ignored the emotion that decision-makers experience during the decision process or the emotional reactions that decision makers experience after outcomes are revealed. Only recently have more flexible models emerged that relax traditional assumptions (e.g., complete information, rationality) regarding the decision process (e.g., Isen, 1984a; 1984b).

Beyond the above stated assumptions, the economics literature also assumes that decision makers are risk averse and rely on diminishing marginal utilities to justify choice (Larrick, 1993; Laughhunn et al., 1980). That said, expected utility models, which are at the heart of the economic approach to decision-making, fail to explain why people simultaneously engage in risk averse behavior (buying life insurance) and risk seeking behavior (buying a lottery ticket) (Wu, Zhang, & Gonzalez, 2004). Furthermore, models that assume rational thinking among decision makers fail to explain variation in expected outcomes or deviations from a single, correct choice. The expected utility approach, in a sense, makes unreasonable assumptions about how most people engage in evaluations of risk, ignoring irrational and impulsive reactions to environmental cues. Slovic (1987)

remarked, "...whereas technologically sophisticated analysts employ risk assessment to evaluate hazards, the majority of citizens rely on intuitive risk judgments" (p. 280).

Individual Differences in Risk Behavior

Authors in the risk and decision-making literature tend to disagree on whether or not preference for risk behavior is a stable individual difference. On the one hand, Sitkin and Pablo (1992) developed a model of the antecedents of risk behavior and identified three individual characteristics that influence risk related decision-making: *risk preference* – a stable preference for risky situations, *risk perceptions* – a decision-maker's assessment of the riskiness in a situation, and *risk propensity* – an individual's tendency to engage in risky behavior. These three characteristics are proposed to be stable individual differences that predict risk behavior across context.

In support of risk propensity as a stable individual difference, one recent study reported differences in risk preference between entrepreneurs and corporate managers (Stewart & Roth, 2001). In particular, Stewart and Roth (2001) argued that entrepreneurs tend to report, on average, higher levels of risk propensity than corporate managers. In their meta-analytic review of 14 studies on risk propensity, the authors reported a corrected effect size of $d=.36$ (.30, .44), suggesting that entrepreneurs displayed a higher level of risk-seeking behavior across decision task than did corporate managers. In addition, there appear to be risk seeking differences by other stable characteristics including gender (Byrnes, Miller, & Schafer, 1999) and age (Sitkin & Pablo, 1992). In a meta-analysis of 150 studies on risk behavior, Byrnes et al. (1999) examined the difference in risk behavior between men and women and reported a positive mean effect size ($d=.13$, $p<.05$), suggesting that men tended to exhibit slightly more risky behavior

than women. Studies of this kind relied on the notion that decisions to engage in risky behavior do not rely exclusively on rational assessments of a given set of alternatives, but also on stable individual predispositions towards risk (Bromiley & Curley, 1992).

However, despite reported differences between men and women and between entrepreneurs and managers in terms of risk preference, the differences reported by Bromiley and Curley (1992) and by Byrnes et al. (1999) were moderated by factors that shaped the working context. For example, the difference between men and women was significant when participants in a study were faced with a choice dilemma (men tended to exhibit more risk), but men and women tended to display equal levels of risk in studies that manipulated the frame of a decision outcome (a gain or loss). Thus, despite the expectation that preference for risk remains stable across context, it may be unlikely that risk propensity is the same in every situation. As MacCrimmon and Wehrung (1985) noted, "...the person who takes business risks may avoid risks in personal decisions" (p. 3). That is, a person's willingness to take risk depends on contextual factors that shape the environment in which a decision is made (Miller & Chen, 2004). Whereas Bromiley and Curley (1992) argued that risky decisions depend on individual predispositions to engage in risky behavior, decision-makers use information about the situation when choosing among risky alternatives. In that vein, risk behavior has often been explained as a function of characteristics that shape the context within which decision-makers work.

Contextual Influences on Risk Behavior

In consideration of the possible contextual factors that influence decision-making under risk, a number of studies have emphasized the role of reference points or target performance levels in the evaluation of risky alternatives (Fiegenbaum & Thomas, 1988;

March & Shapira, 1992). These studies tended to highlight the role of contextual factors and asserted a motivational component to risky decision making. As Heath, Larrick, and Wu (1999) noted, "...the traditional literature in economics assumed that risk aversion is the norm, but the decision literature has demonstrated that risk attitudes change depending on whether people are above or below a reference point" (p. 93). This idea was extended to organization-level reference points when Miller and Chen (2004) concluded that a manager's preference for risk was shaped by the organization's current level of performance relative to expectations. These studies highlight the role of information provided by aspiration levels or previous performance levels in explaining risky behavior among managerial decision-makers.

The nature and availability of organizational resources also appears to influence a manager's willingness to take risk. Managers tend to consider the importance and concentration of resources in the risk-related decision process. March and Shapira (1992), for example, found that managers with slack organizational resources were willing to put those resources at risk, while those same managers were more willing to risk organizational resources than their own personal resources. Samuelson and Zeckhauser (1988) found that managers were more willing to risk newly acquired resources than resources that had been held for a long time, a result that was similar to what Thaler and Johnson (1990) labeled the "house money effect." That is, in a laboratory study of students placing bets, Thaler and Johnson found that gamblers were more willing to risk money won from the house in early bets than their own money. Taken together, these studies indicate that risk preferences depend in part on the nature of the resources at risk.

In sum, risk taking behavior in organizations is a complex matter. There do appear to be some individual differences that shape risk preference. Adolescents and young adults, for example, tend to exhibit more risky behavior than do senior citizens (Sitkin & Pablo, 1992). However, risk taking behavior in organizations may best be explained as a function of individual differences and social constructions of information provided in the working context (e.g., leadership).

Framing and Issue Interpretation

In the previous section, I introduced some of the most prevalent research in the social sciences on risk behavior. Normative economic models laid the groundwork for early understanding of risk, but whereas these models assume rational thinking among decision makers, several studies revealed that individuals regularly and systematically make choices that violate traditional assumptions. For example, early economic models of decision-making under risk, including expected utility theory (Bernoulli, 1738/1954; von Neumann & Morgenstern, 1953), assumed that decision makers had access to complete information regarding the decision. These models further assumed that decision makers use fully rational thinking patterns during the decision process such that decision makers rely strictly on information *content* when making choice and ignored the manner in which information was delivered. In addition, many conventional theories assume further that preferences are independent of the methods used to elicit them (procedural invariance) and that preferences do not depend on how probability distributions are described (description invariance) (Starmer, 2000). Assumptions of this kind, however, have been ardently disputed (Kahneman & Tversky, 1979).

In the risk and decision literature, a series of classic studies by Kahneman and Tversky (1979; 1986) questioned assumptions of the economic approach and revealed

weaknesses in expected utility theory. Despite the suggestion that rational decision makers disregard the manner in which decision information is presented, Kahneman and Tversky (1979) observed that preferences for risk reversed with modifications to how a decision problem was introduced. In a study that introduced the Asian disease crisis to student decision makers (Tversky & Kahneman, 1981), the authors noted that, “...inconsequential changes in the formulation of choice problems caused significant shifts in preference” (p. 457). The implication, of course, was that preferences depended not only on rational evaluation of information content, but also on perceived value of outcomes based in part on how the information is presented.

Tversky and Kahneman (1981) called the observed shift in risk preference a *framing* effect, which occurs when decisions change with minor adjustments in how decisions are introduced. As Kühberger (1998) noted, “framing [is] the fact that simple and unspectacular changes in the wording of decision problems can lead to preference reversals” (p. 24). In a sense, framing involves “making things look better or worse by making some aspects of the situation more salient than other aspects” (Slattery & Ganster, 2002: p. 90), so that decision choices can be influenced by both content and delivery.

The most influential series of experiments conducted by Kahneman and Tversky (1979) involved a variation of the Asian disease problem. The authors manipulated the framing of the decision problem as either a gain or loss relative to the status quo. In one such study, Tversky and Kahneman (1981) presented their subjects with the following problem (p. 453):

Problem 1:

Imagine that the U.S. is preparing for the outbreak of an unusual Asian disease, which is expected to kill 600 people. Two alternative programs to combat the disease have been proposed. Assume that the exact scientific estimates of the consequences of the programs are as follows:

If Program A is adopted, 200 people will be saved.

If Program B is adopted, there is 1/3 probability that 600 people will be saved as 2/3 probability that no people will be saved.

Which of the programs would you favor?

Results of this particular problem indicated that a majority of respondents preferred saving 200 lives for sure (72%) (the risk averse choice) rather than a 1/3 probability of saving all 600 lives (28%). Thus, when the problem was framed as a gain (e.g., lives saved), study participants were risk averse.

Tversky and Kahneman (1981) then tested a loss frame condition with the following problem:

Now consider this problem with a slightly different verbal description of the outcomes:

Problem 2:

If Program C is adopted, 400 people will die.

If Program D is adopted, there is 1/3 probability that nobody will die and 2/3 probability that 600 people will die.

Which of the two programs would you favor?

As the authors noted in summaries of their research, options C and D are equivalent to options A and B respectively. When presented with Problem 2,

however, a majority of respondents (78%) preferred Program D (the risk-seeking choice) to Program C (the risk-averse choice). Tversky and Kahneman (1981) noted that when the decision problem was framed as a potential loss (i.e., lives lost), decision makers tended to prefer the risky alternative.

Results of this and other similar studies (e.g., Tversky & Kahneman, 1974; 1981; 1986) served as the platform for *prospect theory*, which suggested that decision preferences change with mild manipulations of the decision frame. According to prospect theory, individuals could be both risk seeking and risk averse depending on how language in the decision problem is introduced. At the heart of prospect theory is the notion that decision makers, in general, tend to be risk averse in a *gain* frame, and risk seeking in a *loss* frame. That is, decision makers evaluate outcomes in comparison to a reference point, which shifts with changes in the phrasing of the problem (Kühberger, 1995).

Prospect theory has garnered favor among economists and psychologists alike, and the predictions of prospect theory have been replicated in a number of studies (Bazerman, 1984). In a recent meta-analysis of 136 studies of the framing effect, for example, Kühberger (1998) reported support, in general, for the assertions contained within prospect theory. As Kühberger (1998) ultimately concluded, a framing effect, though moderate, does exist across research designs in that emphasis on the positive aspects of a problem (i.e., gain frame) leads to risk aversion, while emphasis on the negative aspects (i.e., loss frame) encourages risk-seeking behavior. Kühberger did note the roles of problem characteristics and response style in moderating the framing effect, but concluded that the main tenet of prospect theory was confirmed. In addition, basic premises of prospect theory have been extended and supported at the organizational-level

of analysis in a study by Fiegenbaum and Thomas (1988), who noted that firms performing below target levels tended to implement risk seeking organizational strategies while firms above target level tended to choose strategies that were more conservative (i.e., risk averse). Until recently, propositions contained within prospect theory were not disputed.

Several recent studies of framing on risky decision-making, however, have yielded results that are directly opposite to the predictions of Kahneman and Tversky (1979). Hollenbeck, Ilgen, Phillips, & Hedlund (1994), for example, tested the impact of framing on willingness to take risk and reported effects that were contrary to prospect theory predictions. In a lab study that manipulated framing, goal setting, and past performance level, Hollenbeck et al. (1994) found no direct effect of framing on risky choice, and suggested that observed interactions among framing and goal setting were contrary to the main assertions of prospect theory. In addition, von Schie and vander Pligt (1995) argued that emphasis on positive features of a decision problem encouraged risk-seeking while emphasis on negative features encouraged risk aversion. Further, Highhouse and Yuce (1996), using Kahneman and Tversky's (1979) manipulation of the Asian disease problem, were able to distinguish gain and loss frames from perceived opportunities and threats. Highhouse and Yuce (1996) argued that decision-makers in the "lives saved" frame regarded the risk averse choice as an opportunity, and the risk seeking choice as a threat. It was the decision-maker's perception of opportunity or threat that shaped risk behavior, results that conflicted with assertions of prospect theory.

Prospect theory has been a popular approach to understanding choice under uncertainty and as Wu et al. (2004) noted, Kahneman and Tversky's (1979) influential

article was the second most cited paper in economics during the period 1975 – 2000. That said, prospect theory has not closed the book on decision making under uncertainty as enhancements to the prospect theory approach have been introduced and tested in the last two decades. Modern approaches, for example, now take fluctuating reference points, cognitive heuristics, and human emotion into consideration. Recent advancements have attempted to bridge the gap between economic and psychological explanations of choice, and research on risk behavior following the success of prospect theory has addressed the concerns of both economists and psychologists (Wu et al., 2004). Whereas economists longed for simple, parsimonious, and mathematically sound predictions of risky choice, psychologists sought explanations of underlying evaluation processes. In modern studies of risk, researchers examine the role of experienced emotion in the decision process (e.g., Isen, 1987), the social construction of environmental cues (e.g., Ginsberg & Venkatraman, 1992; Mittal & Ross, 1998), and the interaction of framing and task characteristics (Mano, 1994).

In the current set of studies, the roles of leadership and cognitive processes among followers are of particular interest. Indeed, issue interpretation and subsequent cognitive processing is of critical importance in the formation of judgments about decision problems. As Tversky and Kahneman noted (1981), "...when faced with a complex problem, people employ a variety of heuristic procedures to simplify the representation and evaluation of prospects" (p. 317). That is, an individual's evaluation of alternative choices may be shaped by the social construction of information provided in the work context. As such, I describe, in the following sections, two studies that were designed to

estimate the influence of transformational leadership on cognitive patterns among followers, including their willingness to engage in risky behavior.

Throughout the remainder of this paper, I rely on definitions contained within traditional behavioral decision theory, in which the term “risk” is synonymous with and used interchangeably with the term “uncertainty.” “Decision makers are said to be as risk averse if they prefer a sure thing to an option whose outcome is uncertain” (i.e., a risky option) (Highhouse & Yüce, 1996: p. 159), or as Sitkin and Pablo (1992) noted, risk is “...the extent to which there is uncertainty about whether potentially significant and/or disappointing outcomes of decisions will be realized” (p. 10).

CHAPTER 3

STUDY ONE: TRANSFORMATIONAL LEADERSHIP AND RISK

Most examinations of decision-making under risk or uncertainty have noted that aspects of the decision context have an important and significant influence on risk preference and choice. Whereas several authors have explored risk preferences as having a dispositional source (e.g., Judge, Thoresen, Pucik, & Welbourne, 1999), factors that shape the working context and specific decision problems have an important influence on judgment and choice. The perceived level of organizational support for innovation (Sitkin & Pablo, 1992), for example, is regarded as a critical factor in risk preference, as is the performance level of an organization relative to its aspiration level (Miller & Chen, 2004). Indeed, a critical conclusion of the research conducted by Kahneman and Tversky (1979) was that preferences for risk change with relatively minor adjustments in the way outcomes are described (i.e., framing).

Beyond framing, a number of other individual and organizational aspects influence evaluation of risk and subsequent risk behavior. For example, managers tend to be risk seeking with newly acquired resources (Thaler & Johnson, 1990), when they are familiar with the decision problem (Slovic, 1987), when they have had success on similar decisions problems in the past (Osborn & Jackson, 1988), and when slack resources are readily available (March & Shapira, 1992). Thus, social and contextual factors that shape the decision scenario play an important role in the formulation of risk perceptions and subsequent reactions to risky scenarios (March & Shapira, 1987).

Central in the observation that framing and other contextual factors influence choice under uncertainty is the recognition that decision-makers regularly violate traditional, economic assumptions regarding risk-oriented decisions (Mellers et al., 1998). Among the many contextual factors that shape risk preference, leader behaviors could be among the most influential (MacCrimmon, Wehrung, & Stanbury, 1986). Leaders are central elements in the work context and have a profound effect on how aspects of work are evaluated. Followers rely on informational cues provided by the leader when making judgments about job characteristics and work assignments (Ferris, 1983; Levinson, 1965; Piccolo & Colquitt, in press), and employees regularly look to their supervisors for guidance regarding acceptable behavior in the workplace, organizational preferences for innovation, and leader support for risk taking. Drawing on a social information processing perspective (Salancik & Pfeffer, 1978), work-oriented judgments depend not only on tangible characteristics of the task and work environment, but also on social constructions of information available to workers when judgments are made, including the overt and implied preferences of the leader.

The notion that judgments regarding work problems rely on interpretations of information in the working context is particularly relevant to the relationship between leadership and risk behavior. Shamir et al. (1993) suggested that leaders who exhibit transformational behaviors are able to influence the manner in which followers judge the work environment by using verbal persuasion, by communicating the value of a clear mission, and by connecting followers to higher-order values (collective goals, for example). These ideas are similar to those proposed by Ferris and Rowland (1981), who argued that leadership effects are realized in part, through follower perceptions of job

characteristics. Transformational behaviors, such as intellectual stimulation, are related to perceptions of job autonomy, which places control for task engagement in the hands of the employee. That is, when a leader offers an employee some control over organizational decisions, the employee regards their job as having more autonomy, which can translated to risk taking behavior among managers (Liverant & Scodel, 1960; March & Shapira, 1987).

Beyond job characteristics, effective leaders are capable of shaping the manner in which followers perceive aspects and likely outcomes of organizational problems. Effective leaders can make decision scenarios look better (or worse) by emphasizing certain aspects of the situation more than other aspects (Slattery & Ganster, 2002; Smircich & Morgan, 1982), and can make salient the reward aspect of the “risk-reward” evaluation associated with decision-making under uncertainty. Transformational leaders have the ability to crystallize the organization’s mission and direct attention among followers to the most critical features of the current assignment. As Bass (1985) noted, “...transformational leaders attempt and succeed in raising colleagues, subordinates, followers, clients or constituencies to a greater awareness about the issues of consequence” (p. 17). Transformational leaders encourage change in the status quo and heighten sensitivity to opportunities in the environment (Conger & Kanungo, 1994), and as Highhouse and Yuce (2002) noted, “...emphasizing opportunities [has] the effect of highlighting the positive outcomes associated with risk taking” (p. 161).

In addition, leaders can influence follower preferences in the work place by providing a model of the kind of behavior that is expected from followers (Levinson,

1965). This may be especially true for a leader's influence on followers' risk preferences, which is often shaped by the leader's orientation towards risk (Sitkin & Pablo, 1992) and the leader's support for innovation (Howell & Avolio, 1993). Transformational leaders, in particular, tend to exhibit behaviors that are regarded as bold and courageous (idealized influence), and charismatic leaders engage in behaviors that subordinates interpret as involving great personal risk (Conger and Kanungo, 1994). These types of leaders, by example, indicate to followers that risk-taking is an activity worth emulating, and when making judgments about risk, followers tend to look at the behavior and preferences for risk displayed by leaders.

Further, transformational leaders stimulate followers to seek alternative and innovative solutions to organizational problems (intellectual stimulation), and in doing so, followers may develop and ultimately choose more risky solutions. Leaders who use persuasive language draw on symbolism and ideology to inspire action (inspirational motivation) such that followers feel empowered and willing to act on behalf of the leader. Followers feel a sense of empowerment about their work (Thomas & Velthouse, 1990) which encourages innovation and risk taking behavior (Sitkin & Pablo, 1992). Lastly, by connecting followers to the organization's mission and by emphasizing each participant's contribution to organizational objectives (inspirational motivation), the transformational leader motivates followers to assume more risk.

Effective leaders tend to arouse positive attitudes and positive emotions from followers, which are often associated with risk-seeking behavior. That is, transformational leaders have the potential facilitate a desire for achievement of extraordinary results (Bass, 1985), a positive self-concept (Lord & Brown, 2001; Lord,

Brown, & Freiberg, 1999), and situationally-induced self-esteem (Cohen & Sheposh, 1977). Each of these attitudes has been identified as a predictor of innovative and risk-seeking behavior (Cohen & Sheposh, 1977; Sorrentino et al., 1997). Further, transformational leaders have the ability to arouse positive emotions among followers (McColl-Kennedy, 2002), and high levels of arousal tend to facilitate risk-seeking behavior (Mano, 1991).

Consistent with the inspirational motivation aspect of transformational leadership theory, transformational leaders tend to speak optimistically about the organization and articulate a clear and compelling vision for future success. These leaders emphasize positive expected results of organizational effort and by doing so, reduce the uncertainty and perceived variability of future outcomes. Hollenbeck et al. (1994) argued that decision alternatives depend not only on past performance levels or on gain/loss framing of potential outcomes, but on the specificity of future aspirations (i.e., goals and vision). Transformational leaders are able to convince followers to buy-in to their vision, even if the objectives seem extraordinary and the outcomes uncertain. As Flynn and Staw (2004) remarked,

Charismatic leaders often ask followers to accept their vision of the future, based more on faith in the leader than upon the critical analysis, their communications may influence follower's willingness to engage in risky behavior. The charismatic leader may lead followers to frame investment decisions in a less skeptical manner, resulting in a greater acceptance of risk, not only in regard to the leader's own organization but relative to other investment opportunities as well. (p. 313)

It is therefore likely that transformational leaders will have a positive influence on follower's willingness to take risk.

Hypothesis 1: Followers of transformational leaders will be more willing to take risk than followers of non-transformational leaders.

In the explanation of risky choice among decision-makers, researchers have attempted to examine preference for risk as a stable, individual trait (e.g., MacCrimmon & Wehrung, 1990; Williams & Narendan, 1999). Similar to other enduring personality traits (e.g., extraversion), a dispositional preference for risk is proposed to shape attitudes and risk seeking behavior across situations. Risk-averse decision-makers, for example, avoid taking chances in business and in their personal lives, and prefer outcome alternatives with known probabilities to those that are variable. Trait measures of risk aversion are associated with achievement motivation (Atkinson, 1957), an orientation towards safety (Lopes, 1994), reports of unhappiness in situations that involve risk (Maehr & Videbeck, 1968), and negative views of risk-oriented assignments (Cable & Judge, 1994). In their model of the antecedents of risk-seeking behavior, Williams and Narendon (1999) considered culture, locus of control, and gender as predictors of risk propensity and choice, and though modest, Stewart and Roth (2001) reported a difference in risk preference among entrepreneurs and corporate managers. Thus, despite the strong influence of situational factors, there is some evidence for a dispositional source of risk preference.

That said, while risky choice may have a dispositional source, leaders have the potential to move followers beyond existing personal preferences for the sake of organizational objectives. Sitkin and Pablo (1992) argued that decision makers maintain inertia in response to risky decision scenarios, such that individuals often prefer to maintain the status quo and the routine nature of organizational response. However, transformational leaders may be especially effective in shaping personal preferences regarding uncertainty and risk, and in encouraging behavior that is inconsistent with

personal preferences. Indeed, a central assertion of transformational leadership theory is that effects are realized by a fundamental change among followers, such that follower preferences and motives are “transformed,” raised from individual- to group-oriented, or from focused on the self to focused on interests that are best for the organization (Bass, 1985). In general, transformational leaders emphasize the need for individual and organizational activity that is beyond the existing status quo.

Using inspirational motivation, for example, transformational leaders convince followers to pursue the organization’s mission over their own personal agendas. As Bass and Avolio (1997) noted, “Transformational leadership is seen when leaders [generate] awareness of the mission or vision of the organization and motivate [followers] to look beyond their own interests towards those that will benefit the group” (p. 2). In this way, personal preferences among followers of transformational leaders are often suppressed for the sake of the organization.

In addition, transformational leaders encourage followers to align individual interests with those of the organization. Indeed, followers of transformational leaders tend to regard the organization’s goals (Jung & Avolio, 2000) and the organization’s values (Bono & Judge, 2003) as consistent with their own, and come to behave in ways that express congruence with organizational norms. Thus, effective leaders shape follower beliefs and subsequent behaviors.

As transformational leaders encourage followers to forgo personal preferences for the sake of the organization, I hypothesized:

Hypothesis 2: Transformational leadership will predict risky choice beyond a trait measure of risk aversion.

Method

Manipulation of Transformational Leadership

A number of studies have manipulated transformational leadership in a laboratory setting. Among other things, these studies have attempted to isolate the impact of leadership on follower reactions (e.g., [Brown & Lord, 1999](#)), to identify the psychological and affective responses that underlie leadership effects (e.g., [McColl-Kennedy & Anderson, 2002](#); [Kirkpatrick & Locke, 1996](#)), and to examine the conditions under which leadership has its effect ([Shamir & Howell, 1999](#)). In many cases, the recommendations of [Bass and Avolio \(1997\)](#) have been at the heart of the experimental manipulations (e.g., [Jung & Avolio, 1998, 2000](#); [Sosik, 1997](#); [Sosik, Avolio, Kahai, & Jung, 1998](#)). According to [Bass and Avolio](#), willing participants can learn to execute behaviors that characterize the transformational leadership pattern. In their plan for leadership development, [Bass and Avolio](#) described a set of specific behaviors and verbal benchmarks that characterize transformational leadership.

In studies that have relied on the [Bass and Avolio \(1997\)](#) program, manipulations of high transformational leadership have (1) emphasized the importance of the task and its broad contribution to the organization's goals ([Jung & Avolio, 1998](#)), (2) presented a high level of expectation to inspire performance ([Jung & Avolio, 1998](#)), (3) stressed the importance of questioning assumptions ([Sosik, 1997](#)), (4) encouraged originality ([Sosik, 1997](#)), (5) expressed confidence in the group and its individual members ([Sosik et al., 1998](#)), (6) suggested new and creative methods to analyze problems ([Jung & Avolio, 2000](#)), and (7) stressed the importance of questioning assumptions ([Sosik et al., 1997](#)). These behaviors are consistent with manipulations of charismatic leadership that not only emphasize verbal persuasion, such as articulating an ideological goal ([Shea &](#)

Howell, 1999), but also non-verbal charismatic behaviors such as the use of hand gestures and a captivating voice tone (Kirkpatrick & Locke, 1996).

In each of the experimental studies described above, a *high* transformational leadership script is presented in contrast to *low* transformational leadership. The *low* transformational conditions tend to emphasize the economic payoff of a specific accomplishment (Sosik et al., 1998), the steps that should be taken to accomplish desired outcomes (Jung & Avolio, 2000), a specific set of low level goals (Sosik et al., 1997), and the quantity of work to be accomplished within a specified time period (Shea & Howell, 1999). In addition, the *low* transformational leader tends to be neutral towards the task and participants, and relies less on language that refers to history, tradition, and a set of collective values.

In the current set of studies, original scripts were written for each condition, based on the recommendations of Bass and Avolio (1997) and on examples presented in previously published articles. In particular, the leader's high transformational address to student participants was meant to include *content* that is characteristic of the transformational pattern (clear and articulate vision, positive outlook for the future, emphasis on collective set of objectives, reference to higher-order values) and *non-verbal communication* that is typical of a charismatic leader (use of hand gestures, active engagement with audience during the presentation, animated facial expressions, a meaningful pattern of voice tone and inflection). The high and low transformational scripts are presented in Appendix A.

Sample and Research Design

Undergraduate students (54% male) enrolled in an upper-level management course at a southeastern university participated in the research study. Students were

offered one extra credit point for their participation and were randomly assigned to the experimental or control condition. Using original scripts and case studies, I manipulated transformational leadership (high transformational leadership vs. low transformational leadership) in a completely randomized between-subjects design. Fifty-four students were in the high transformational condition and 58 students were in the low transformational condition.

Procedure

Participants accessed a secure web site which contained the study's material. Each participant was asked to read a brief outline of the study and to complete a short questionnaire, including a trait measure of risk aversion. Upon completing the survey, each participant was randomly directed to one of two separate web sites, which contained the video files for the manipulation of transformational leadership. In each of the two videos, a trained actor portrayed a research coordinator at the University of Florida, described the business school's current research program, and introduced two assignments in which students could participate. The actor was male, in his early 30's, and was trained to portray behaviors characteristic of the high and low transformational style in a manner that is consistent with previous experimental studies of transformational leadership theory.

In the experimental condition, the research coordinator used transformational language and charismatic speech consistent with the recommendations of Bass and Avolio (1997). The speech included imagery, collective goals, and an optimistic outlook for future success. Manipulation of leadership in this manner is consistent with other laboratory studies of transformational leadership (e.g., Kirkpatrick & Locke, 1996). In the control condition, the coordinator utilized less transformational behavior,

with little use of charismatic language or expressive non-verbal communication, and with more attention to the specific processes and intermediate activities necessary for accomplishment of individual goals.

Immediately after watching the video, participants were asked to choose between an assignment with clearly defined objectives, time demands, and responsibilities, and an assignment in which time demands and responsibilities were uncertain. After making this choice, students completed additional survey items and submitted their responses to a secure database.

Measures

Transformational leadership. The four dimensions of transformational leadership were measured with items from the Multifactor Leadership Questionnaire (MLQ; Bass & Avolio, 1995). The MLQ was developed and empirically validated to reflect dimensions of transformational leadership and has been used in over 75 studies across a variety of settings (Lowe et al., 1996). Participants were asked to indicate on a 5-point Likert scale (1=Not at all, 5=Frequently, if not always) the frequency with which the project coordinator exhibited the set of leadership behaviors. Four items were used to measure intellectual stimulation (e.g., “My supervisor...seeks differing perspectives when solving problems”), inspirational motivation (e.g., “...articulates a compelling vision of the future”), and individualized consideration, (e.g., “...treats me as an individual rather than just a member of a group”). Eight items were used to measure idealized influence (e.g., “...instills pride in me for being associated with him/her” and “...talks about his/her most important values and beliefs”). The measure of transformational leadership is presented in Appendix D.

Risk aversion. Risk aversion was measured with the 8-item scale developed by Cable and Judge (1994). Participants were asked to indicate on a 5-point Likert scale (1=strongly disagree, 5=strongly agree), the extent to which they agreed with statements such as, “I am a cautious person who generally avoids risks”, “I view risk of a job as a situation to be avoided at all costs”, “I always play it safe, even if it means occasionally losing out on a good opportunity,” and “People must take risks in their careers to be successful” (reverse coded). The measure of risk aversion is presented in Appendix E.

Risky choice. Each participant was asked to choose between one of two possible extra credit assignments. One of the assignments (Project 1) had very little uncertainty, in that the time requirements, tasks, setting, location, and expectations were clearly described by the project coordinator. The other assignment was described in more vague terms, with ambiguity regarding the expectations for participation. The coordinator explained, for example, “In Project 2, the tasks vary from student to student and there are no standard time limits for your participation – you could be finished in 15 minutes, or be given a task that demands nearly two hours. [This] assignment could be a lot of fun, with excitement and mystery, but, it could also be long and quite embarrassing.” Immediately after watching the video, participants made their choice, which was coded as a dichotomous variable (0=Project 1: non-risky choice, 1=Project 2: risky choice).

Perceived risk. To evaluate the quality of the experimental material, I asked participants to describe the extent to which they perceived risk and uncertainty in each of the project choices. Using a 5-point Likert scale (1=strongly disagree, 5=strongly

agree), participants indicated the extent to which they agreed with three statements about each project, “Project 1 [Project 2] is risky”, “The expectations for Project 1 [Project 2] are uncertain”, and “The requirements for Project 1 [Project 2] are unknown.”

Lastly, I recorded each participant’s gender (0=female, 1=male).

Analysis

Logistic regression was used to assess the hierarchical (multivariate) contribution of leadership and risk aversion as predictors of risky choice. Logistic regression is the appropriate method of analysis when the dependent variable is dichotomous, such as the risky choice variable used in this study (Agresti & Finlay 1997). Unlike ordinary least squares regression, logistic regression does not assume linearity between the independent and dependent variables, nor does logistic regression require that the variables be normally distributed.

Results

To determine whether participants correctly perceived the intended manipulation of transformational leadership, post-experimental manipulation checks were conducted. A series of independent samples *t*-tests were computed for each dimension of transformational leadership. As expected, there were highly significant differences between the high and low leadership groups in their respective assessments of idealized influence ($m_{\text{HIGH}}=3.60$, $SD_{\text{HIGH}}=0.57$; $m_{\text{LOW}}=2.70$, $SD_{\text{LOW}}=0.64$; $t=7.84$, $p<.05$), inspirational motivation ($m_{\text{HIGH}}=4.37$, $SD_{\text{HIGH}}=0.71$; $m_{\text{LOW}}=2.81$, $SD_{\text{LOW}}=0.79$; $t=10.97$, $p<.05$), individualized consideration ($m_{\text{HIGH}}=2.89$, $SD_{\text{HIGH}}=0.82$; $m_{\text{LOW}}=2.10$, $SD_{\text{LOW}}=0.92$; $t=4.79$, $p<.05$), and intellectual stimulation ($m_{\text{HIGH}}=3.32$, $SD_{\text{HIGH}}=0.81$; $m_{\text{LOW}}=2.83$, $SD_{\text{LOW}}=0.86$; $t=3.11$, $p<.05$). These results indicate that participants in the

experimental, high transformational group perceived their leader as having exhibited more behaviors consistent with the transformational pattern than those in the control, low transformational group.

Prior to evaluating the relationship between leadership and risk, I conducted a series of paired sample *t*-tests to estimate participants' perception of risk and uncertainty in each project. If Project 2 item mean scores on the perceived risk scale are significantly higher than item mean scores for Project 1, then Project 2 is regarded by participants as more risky and more uncertain. Consistent with expectations, participants regarded Project 2 as more risky ($m_{\text{RISK, PROJECT2}}=4.18$, $SD_{\text{RISK, PROJECT2}}=0.93$; $m_{\text{RISK, PROJECT1}}=1.62$, $SD_{\text{RISK, PROJECT1}}=0.95$; $t=17.67$, $p<.05$), as having more uncertain expectations ($m_{\text{UNCERTAINTY, PROJECT2}}=4.38$, $SD_{\text{UNCERTAINTY, PROJECT2}}=0.81$; $m_{\text{UNCERTAINTY, PROJECT1}}=1.80$, $SD_{\text{UNCERTAINTY, PROJECT1}}=1.02$; $t=17.53$, $p<.05$), and with having more unknown requirements ($m_{\text{UNCERTAINTY, PROJECT2}}=4.38$, $SD_{\text{UNCERTAINTY, PROJECT2}}=0.93$; $m_{\text{UNCERTAINTY, PROJECT1}}=2.08$, $SD_{\text{UNCERTAINTY, PROJECT1}}=1.25$; $t=12.75$, $p<.05$) than Project 1. Knowing that participants' regarded Project 2 as the risky option, I continued with my analysis of transformational leadership and risky choice.

Scale means, standard deviations, scale reliabilities, and correlations among the variables are presented in Table 3-1. Whereas previous studies suggested that men tend to be more risk seeking than women (Byrnes et al., 1999; Dunegan & Duchon, 1989), gender was not related to risky choice in the current study ($r=.05$, *ns*). The trait measure of risk aversion was negatively related to risky choice, in that those who were risk averse tended to choose the less risky assignment. This relationship approached

significance ($r=-.17, p=.07$). As expected, transformational leadership was positively related to risky choice ($r=.23, p<.05$) such that followers of the transformational project coordinator were more likely to choose the uncertain assignment (Project 2) than followers of the non-transformational coordinator.

Table 3-1. Scale Means, Reliabilities, and Intercorrelations among Variables

	m	SD	α	1	2	3
Transformational Leadership	3.06	.76	.91			
Risk Aversion	2.52	.51	.71	-.01		
Gender ^a	.54	.51	-	.11	.01	
Risky Choice ^b	1.64	.48	-	.23*	-.17	.05

Notes. $n=112$. * $p<.05$. ^a 1=male, 0=female. ^b 1=risky project, 0=safe project

Table 3-2 and Figure 3-1 show the distribution of project choices across the high and low transformational leadership groups. Of the 54 students who observed the high transformational project coordinator, 13 (24%) chose the safe assignment (Project 1), while 41 (76%) made the risky choice (Project 2). Of the 58 students who observed the non-transformational coordinator, the choice among assignments was nearly split – 27 chose Project 1 (47%), 31 chose Project 2 (53%). These results suggest that followers of the transformational leader were more likely to choose the project with uncertain demands.

To estimate the magnitude of the leadership treatment effect on choice, I used logistic regression analysis with risky choice and leadership as dependent and independent variables, respectively. Results are presented in Table 3-3. The deviance chi-square ($\chi^2=6.26, p<.05$) score indicates that a model containing the high versus low leadership predictor is significantly better than a model that consists of only the

Table 3-2. Cross Classification of Leadership and Risky Choice

Leadership Condition	Number of Choices		
	Project 1	Project 2	Total
High Transformational Leadership	13	41	54
Low Transformational Leadership	27	31	58
Total	40	72	

intercept. The model correctly predicted project choice in 64.3% of the observations, and the unstandardized logistic coefficient for leadership was significant ($b=.59$, $p<.05$), providing support for hypothesis 1. Those who observed a high transformational project coordinator were significantly more likely to choose the risky

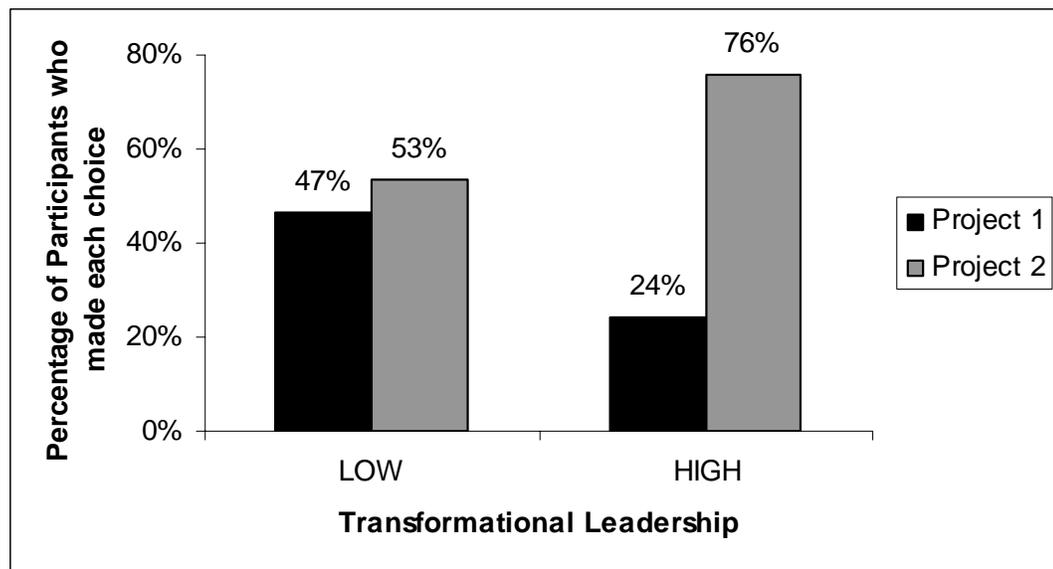


Figure 3-1. Distribution of Project Choices across Leadership Condition

assignment than those who observed a non-transformational coordinator. Further, the odds-ratio of high to low leadership indicates that participants in the high transformational group were two and three quarters (2.75) times more likely to choose the uncertain assignment than those in the non-transformational group.

Table 3-3. Logistic Regression of Risky Choice on Transformational Leadership

	B	SE	Odds Ratio
Intercept	.14	.26	
Leadership	1.01*	.41	2.75

Notes: The deviance χ^2 of the model was 6.26, $p < .05$. The percentage of correct predictions for the model was 64.3%.

To test hypothesis 2, I conducted a second logistic regression analysis to determine if leadership accounted for variance in project choice beyond a trait measure of risk aversion. Risky choice was entered as the dependent variable in a regression model with leadership and risk aversion as independent variables. The deviance chi-square statistic ($\chi^2 = 9.19, p < .05$) was significant and indicates that a model containing both leadership and risk aversion is better than a model that consists only of the intercept. The model correctly predicted participants' project choice in 69.6% of the observations. In support of hypothesis 2, the unstandardized regression coefficient for leadership was significant ($b=1.00, p < .05$), suggesting that transformational leadership predicts risky choice beyond a stable measure of risk aversion. With leadership included in the model, the unstandardized regression coefficient for risk aversion was non-significant ($b=-.68, ns$).

Discussion

The primary purpose of the current study was to estimate a main effect of transformational leadership on risky choice among followers. Drawing on assertions of transformational leadership theory (Bass, 1985; Burns, 1978) and on models of risk behavior among managers (Sitkin & Pablo, 1992; Wakker, 2004), I expected followers of a transformational project coordinator to pursue an assignment with uncertain requirements over an assignment with predictable outcomes. Using an experimental

manipulation of leadership and a personally relevant choice among participants, results of the study suggest that those who experience a high transformational leader are more likely to choose a risky assignment than those who experience a non-transformational leader. As hypothesized, there appears to be a positive main effect of transformational leadership on risk behavior.

Results in the current study also suggest that transformational leadership predicts risky choice beyond a trait measure of risk aversion. Consistent with a fundamental premise of the transformational approach, followers of the transformational leader were willing to forgo personal preferences regarding risk in favor of recommendations made by the leader. This result is consistent with aspects of transformational leadership (Bass, 1985; 1999), and consistent with attempts to assert that risk behavior has a dispositional source (Judge et al., 1999; Williams & Narendan, 1999). In sum, transformational leadership predicted risky choice among followers.

There may exist several explanations for the observed relationship between leadership and risk. For one, the high transformational leader may have motivated followers to assume personal risk in support of stated organization goals. In this respect, risk behavior among followers is explained through motivational mechanisms. Indeed, transformational leadership is related to motivation and extra effort among followers (Judge & Piccolo, 2004), and motivation appears to be related to risk seeking behavior (Atkinson, 1957). Drawing on fundamental concepts in achievement motivation (McClelland, 1953), transformational leaders may encourage followers to pursue otherwise risky alternatives in order to achieve desirable organizational results.

Second, transformational leaders tend to raise attention among followers from the self to the group. That is, followers of transformational leaders learn to assume the objectives and values of the organization, and to share individual successes (and failures) with other members of the group (Sosik et al., 1997). By fostering a group context, in which group members share responsibility for both positive and negative outcomes, transformational leaders may relieve some of the pressure otherwise associated with risk taking. Individual decision-making, particularly in a risky context, is protected by the character and culture of the group (Ilgen, Major, Hollenbeck, & Sego, 1995), and as Sitkin and Pablo (1992) noted, "...group contexts tend to influence individuals to take more extreme positions with regard to risk" (p. 13).

It may also be possible that the high transformational leader influenced the manner in which followers perceived important aspects of the extra credit assignment. By stimulating followers to consider alternatives or to imagine innovative solutions to existing research problems (intellectual stimulation), the transformational leader may have enhanced perceptions of core characteristics of each project. Indeed, transformational leadership appears to be related to task perceptions along each of the 5 core job characteristics (Piccolo & Colquitt, in press), and participants, perhaps, regarded the risky assignment as one of great significance, and one that required the use of diverse skills. As such, enhanced perceptions along key task characteristics influenced follower preferences for participation in the uncertain assignment.

In addition, transformational leaders encourage cognitive flexibility among followers (intellectual stimulation), and subsequently influence their subjective estimates of success. Transformational leaders tend to make optimistic predictions for

future outcomes, and articulate future aspirations with clarity and conviction (Bass, 1985; Conger, 1989). In doing so, leaders direct attention to the positive aspects of organizational problems and make salient the rewards associated with risky behavior.

Lastly, an observed relationship between leadership and risk behavior may result from the leader's influence on experienced emotions among followers. Leaders appear to have an influence on how followers experience emotion in the workplace (McCull-Kennedy & Anderson, 2002), and emotional experiences are central in the evaluation of organizational problems (Ginsberg & Venkatraman, 1992; Mittal & Ross, 1998) and subsequent cognitive processing (Isen, 1984a; 1984b; 1987). Indeed, there is a comprehensive literature on the relationship between positive affect and risk behavior (for a review, see Isen, 1987), and so a positive affective state may explain why followers of transformational leaders assume risk. In addition, especially effective leaders may enhance the impact of emotional experiences on organizational behavior (Weiss & Cropanzano, 1996), further supporting the suggestion that affective states serve as an explanatory mechanism of leadership on risk behavior.

Unlike previous approaches to examining risk-seeking behavior (e.g., Tversky & Kahneman, 1981; van Schie & van der Pligt, 1996), participants in the current study made a non-hypothetical, personally relevant choice. That is, student participants were asked to make a decision on how they would complete their extra credit assignments, and were expected to fulfill the expectations associated with their own decisions. As such, the experimental condition presented in this study addresses a limitation of previous laboratory examinations of hypothetical decision making.

Worth noting, the leadership manipulations in the current study were done by broadcasting digital recordings of the leader on a secure internet website. Most previous laboratory examinations of charismatic or transformational leadership have been conducted with live confederates at experimental locations (e.g., Howell & Frost, 1989; Kirkpatrick & Locke, 1996). Despite the suggestion that expressions of emotional appeal are not as easily recognized on video (Harrigan, Wilson, & Rosenthal, 2004), the post hoc analyses suggest that aspects of the transformational approach can be manipulated successfully using a trained actor, a high quality digital recording, and broadband data transfer. In this respect, the current study provides a platform for future studies of leadership, charisma, and emotion using video transferred over the internet. Further, the current study indicates, by replicating the successful manipulations of emotional expression with video by Lewis (2000), that the relationships between leadership and emotion can be examined by using recorded leadership behavior.

While the current study provides evidence of a relationship between leadership and risky choice, and support for the notion that contextual factors shape risk preference among decision-makers, the extent and nature of a leader's effect remains unclear. In particular, the influence of prospect framing, a central element in the examination of decision making, has yet to be examined. The framing of decision scenarios as either a gain or loss certainly has an important effect on how options are evaluated and how risk preferences are ultimately revealed (Kühberger, 1998; Levin, Schneider, & Gaeth, 1998), but no study has specifically tested an interaction between leadership and framing. Considering the assertions of Kahneman and Tversky (1979), who showed that relatively minor adjustments in the way problems are described

enhance, suppress, or even reverse risk preferences, framing is central to the examination of risk behavior. Further, relevant to the relationship between leadership and project framing, a gain (opportunity) or loss (threat) framing manipulation may provide important information about the organizational context, information that will have an influence on the emergence and effectiveness of specific leadership behavior.

In Study 2, I introduce problem framing in an experimental scenario and examine the interaction of leadership behavior and problem framing on risky choice among followers. I also extend the decision scenario beyond student choice to one that involves managerial decision making.

CHAPTER 4 STUDY TWO: LEADERSHIP AND FRAMING

The results of study 1 confirmed a central assertion of transformational leadership theory by drawing a direct link between leader behavior and an otherwise untested criterion, namely risk behavior among followers. However, unlike other widely examined criterion variables, such as job satisfaction, motivation, or subordinate performance, the observed relationship between leadership and risk remains relatively unqualified. While study 1 provided evidence for a leadership effect on a student sample, it remains unclear whether or not this relationship will remain robust under different experimental conditions. As such, the purpose of study 2 is to evaluate the leadership – risk link with the introduction of prospect framing, a central concept in the examination of decision making under uncertainty and risk.

As described previously, both experimental and meta-analytic evidence exists to suggest that transformational leadership is effective across organizational settings (Den Hartog et al., 1999; Judge & Piccolo, 2004; Lowe et al., 1996). That said, there are valuable arguments that imply the emergence and effectiveness of transformational leadership depends on factors that shape the organization's context (Bass & Stogdill, 1990; Pawar & Eastman, 1997; Shamir & Howell, 1999). For example, it has been suggested that charismatic leaders are particularly effective during periods of organizational change (Eisenbach, Watson, & Pillai, 1999) or periods of uncertainty in the operating environment (Waldman, Ramirez, House, & Puranam, 2001). With their ability to articulate a compelling vision for the future and to develop commitment

among followers to that vision, transformational leaders emerge as especially effective in times of organizational transition (Shamir & Howell, 1991). Indeed, Bass (1985) specifically theorized that transformational leadership is most likely to emerge "...in times of distress and rapid change" (p. 154).

Further, charismatic leaders appear to be influential when the viability of an organization is threatened. As Conger (1989) argued, "...in a crisis situation, [followers] are more willing to submit to a strong individual – enter the charismatic leader with his clear vision and strength of conviction" (p. 173). Thus, despite arguments in favor of its universal appeal (Den Hartog et al., 1999), the observed effectiveness of transformational leadership may depend, at least in part, on the presence of environmental conditions that give rise to aspects of the transformational approach. As Flynn and Staw (2004) observed, "...the potency of charisma varies by the circumstances in which it is enacted" (p. 324).

Central in these arguments is the recognition among leadership scholars that the effects of transformational leadership behavior, though theorized as universal, may shift with changes in the operating environment. In their examination of organizational and contextual factors that shape the effectiveness of the charismatic approach, Shamir and Howell (1999) noted, "...the emergence and effectiveness of [leadership] may be facilitated by some contexts and inhibited by others" (p. 257). In particular, the transformational approach to leadership, including charisma, appears to most effective when the operating environment is shaped by uncertainty, change, or crisis.

These observations are consistent with models of complex leadership (e.g., Marion & Uhl-Bien, 2001) and assertions of the contingency approach (Fiedler, 1967),

which each emphasize the importance of characteristics that give rise to leader effectiveness and highlight the existence of situational contingencies in the leader emergence. Thus, as the external environment may have an important influence on leader effectiveness, the relationship between transformational leadership and risk may depend on the how aspects of the decision context are introduced, or on how features of the external environment are interpreted. In other words, transformational leaders may initiate risk seeking behavior in some circumstances, but not others.

In the decision literature, framing generally refers to direct attempts by experimenters to emphasize specific aspects of the decision context. Positively framed scenarios, for example, make salient the potential gains associated with a risky choice (i.e., gain frame), whereas negatively framed scenarios emphasize potential losses (i.e., loss frame). While there exist several approaches to categorizing otherwise distinct manipulations of framing (e.g., gain vs. loss, opportunity vs. threat), there is general consensus among scholars on the notion that framing has an influence on how facets of a decision scenario are processed (Kahneman & Tversky, 1979; Kühberger, 1995; 1998). By “shifting” the attention of decision makers to specific aspects of the problem (March & Shapira, 1987), framing shapes the way characteristics of the problem are evaluated, and ultimately how complex problems are resolved.

Beyond its contribution to the evaluation of specific organizational problems, prospect framing provides information about the environment in which decisions are made. Tversky and Kahneman (1986) and Levin et al. (1998), for example, each argued that the framing of alternatives within a complex decision scenario highlights the potential outcomes of various choices and emphasizes specific features of the decision

context. Although subtle, emphasis on the opportunities associated with a decision problem indicates that the organization is operating with effectiveness and is capable of successfully carrying out its strategic decisions. A positive frame, for example, where the likelihood of success is described, allows decision-makers to imagine favorable future states and anticipate operational support. In their description of how framing effects are realized, van Schie and van der Pligt (1995) argued, "...addressing positive aspects or outcomes of an issue (or decisional option) results in a more favorable attitude toward that issue (or option) compared to focusing on the negative aspects or outcomes" (p. 266).

In addition to providing valuable information, framing directs attention to specific environmental characteristics. By making salient the likelihood of success on upcoming decisions, a positive frame suggests that existing environmental conditions support innovative behavior (van Schie & van der Pligt, 1995). That is, a positive frame indicates that the context is right for pursuing important, strategic initiatives. As such, a framing manipulation that highlights the likelihood of favorable outcomes and fosters an efficacy for organizational achievement, may substitute for aspects of the transformational approach to leadership. Inspirational motivation, for example, is expected to facilitate positive expectancies among followers (Erez & Isen, 2002), a condition that might be achieved in a positive frame. In this way, conditions expressed in a positive frame may suppress, or even replace, the effectiveness of transformational leadership.

On the other hand, a framing manipulation that emphasizes the threats associated with a decision's outcome may indicate to members that the status quo is in jeopardy,

or that existing resources may be insufficient to achieve desired outcomes. As such, those who interpret a negative frame may come to regard the existing environment as one that is not in support of optimistic decision plans. Negative frames may communicate to decision makers that competitive threats are imminent and that organizational failure is a realistic possibility (MacCrimmon et al., 1986). Thus, a negative frame may serve to foster a sense of urgency among decision makers, or an expectation about the uncertainty in the current operating environment (Ho, Keller, & Keltia, 2002). The uncertainty and threat expressed in a negative frame, therefore, are conditions that are likely to enhance the effectiveness of transformational leadership (Bass, 1985; Shamir & Powell, 1999).

In light of these arguments, it is reasonable to believe that information provided by a problem's frame may facilitate, neutralize, or even suppress the effectiveness of transformational leadership. In a sense, prospect framing may emerge as a *substitute* for leadership, a concept introduced by Kerr and Jermier (1978), and later developed by Howell, Dorfman, and Kerr (1986). Indeed, "...framing provides a context that has both cognitive and motivational consequences" (Levin et al., 1998; p. 182), an outcome that is often associated with components of the transformational approach to leadership (Lord & Brown, 2001; Howell & Avolio, 1993). An emphasis on positive aspects of a decision scenario, therefore, may displace the inspirational motivation or idealized influence provided by a transformational leader. An emphasis on the negative, on the other hand, may indicate that the operating environment contains uncertainty and instability – a situation that is expected to enhance the effectiveness of transformational leadership.

As framing provides important information about the decision context, I hypothesized:

Hypothesis 3: The effect of transformational leadership on risky choice (investment in a new venture) is moderated by framing, such that leadership is unrelated to risk in the positive (opportunity) frame and positively related to risk in the negative (threat) frame.

Despite the suggestion that preference for risk is a stable individual trait (Judge et al., 1999), risk behavior tends to vary with even slight modifications to the decision frame. Prospect theory (Kahneman & Tversky, 1979), for example suggests that relatively minor changes in the wording of alternatives have a profound influence of how decision-makers perceive the scenario and ultimately make decisions. According to Tversky and Kahneman (1981; 1986), decision makers tend to be risk averse when problems are framed as potential gains and risk seeking when decision problems are framed as losses. These predictions were grounded in the notion that decision-makers consider their position relative to a reference point, a reference that shifts based on the nature of how a problem is introduced. Indeed prospect theory's primary contribution to understanding risk is the observation that organizational actors tend to be risk-seeking when operating below a target reference point and risk averse when operating above a target reference point (Bazerman, 1984).

Many of the early framing studies contrasted a positive (gain) to negative (loss) description of the same problem, a technique described as a *valence* frame in the Levin et al. (1998) typology. Using this technique, Kahneman and Tversky (1979) suggested that individuals tend to be risk averse when the decision problem is framed as a gain

and risk seeking when the decision is framed as a loss. According to Tversky and Kahneman's (1981), there appears to be a general tendency for risk aversion in positively framed problems and a general tendency for risk seeking in negatively framed problems. In their classic test of the Asian-disease scenario, Tversky and Kahneman (1981) reported that subjects were less willing to choose the risky scenario when the problem was framed in terms of possible gains, but more willing to choose the risky scenario when the problem was framed in terms of losses. A positive frame yielded risk aversion whereas a negative frame yielded risk seeking.

Although Kahneman and Tversky provided evidence that framing plays an important role in the evaluation and interpretation of decision scenarios, the cumulative effect of framing is not perfectly clear. According to results of Kühberger's (1998) meta-analysis of 136 framing studies, the overall impact of framing on risky choice was moderate ($d=0.329$). Beyond the modest main effect, Kühberger (1998) noted that framing effects were moderated by the nature of the decision problem such that framing had a significant effect when study participants were offered the Asian disease problem ($d=+.57$, $p<.05$), but a non-significant effect when participants were asked to evaluate consumer items ($d=-.08$, ns) or choose among common social dilemmas ($d=+.04$, ns). The magnitude of framing effects varied with the manipulation of risk, with positive effects for reference point manipulations ($d=+.50$, $p<.05$) and negative effects for outcome salience manipulations ($d=-.11$, $p<.05$). In sum, the framing effect seems to vary based on the type of decision problem used and the nature of the framing manipulation. Framing may affect risky choice, but the direction and magnitude of the effect remains in question.

Further, a number of studies have reported results that are in direct contrast to those predicted by Prospect Theory (e.g., Hollenbeck et al., 1994; Slattery & Ganster, 2002; Thaler & Johnson, 1990). Both Thaler and Johnson (1990) and Hollenbeck et al. (1994), for example, observed that prospect framing had little effect on risk-related decisions, results that were contrary to those promoted by Kahneman and Tversky (1979).

To explain these differences, Highhouse and Yuce (1996) separated the “gain vs. loss” framing manipulations used by Kahneman and Tversky (1979) from those that emphasize “opportunities vs. threats”. In the standard gain frame, for example, the framing manipulation emphasizes what can be gained (e.g. lives saved), whereas the loss frame emphasizes what can be lost (e.g., lives lost). In opportunity vs. threat manipulations, outcomes are described in similar fashion, but opportunity does not necessarily equate to gains nor does threat equate with loss. According to the authors, when a loss frame of the Asian disease problem is presented to decision makers, the risky option is regarded as an opportunity rather than a threat. As Highhouse and Yuce observed, decision makers in the loss frame regarded a “sure thing” choice as risky. In this way, the authors argue that an “opportunity” frame yields similar risk behavior to the “loss” frame predictions of prospect theory.

The assertions offered by Highhouse and Yuce (1996) were similar to those presented by van Schie and van der Pligt (1995), who carefully separated problem *framing* from *outcome salience*. According to van Schie and van der Pligt, framing usually refers to how a decision is described in terms of gains and losses, whereas outcome salience refers to selective emphasis on the probabilities of success or failure.

The authors explained results that were contrary to prospect theory predictions by suggesting that outcomes described in terms of their probabilities of success (i.e., opportunity) tend to encourage risk seeking behavior among decision makers.

In that vein, it is likely that the evaluation of risky alternatives and subsequent risk behavior will reflect a decision maker's interpretation of the opportunities or threats contained within a set of alternatives. Indeed, "...the degree to which people will engage in risk-taking behavior is related to the degree to which they perceive risk taking as an opportunity for something" (Highhouse & Yuce, 1996: p. 159). I therefore hypothesized:

Hypothesis 4: Framing will have a positive relationship with risky choice (investment in a new business venture).

Considerable evidence has accumulated on the effectiveness of transformational leadership in encouraging desirable behaviors and attitudes among followers. However, despite agreement among scholars regarding a transformational leader's ability to achieve positive outcomes, the mechanisms that underlie observed influence remain relatively untested. As Yukl (1999) noted, "...[while] there is considerable evidence that transformational leadership is effective, [the] underlying influence processes for transformational leadership are still vague" (pg. 287).

Only recently have experimental studies begun to isolate intervening processes that mediate a leader's effect. Podsakoff et al. (1996), for example, found that trust in the leader mediated the leader's influence on task and citizenship performance, while Jung and Avolio (2000) found that follower trust and value congruence mediated a leader's effect on both performance and satisfaction. Further, Pillai et al. (1999)

explained a transformational leader's influence on organizational commitment by perceptions of fairness and trust in the leader. In each of these studies, support was provided for the notion that leaders achieve their effects by facilitating trust in followers.

Beyond consideration of leader referenced variables (e.g., trust in the leader), additional research has explored a host of alternative mechanisms that appear to mediate the effect of leadership on important organizational outcomes. McColl-Kennedy and Anderson (2002), for example, explained leadership's influence as a function of followers' emotional response to leader behavior, while Lord and Brown (2001; 2004) suggested that leaders achieve results by altering the cognitive processes that followers use to evaluate themselves and their work. These studies suggest that especially effective leaders not only influence follower behaviors, but also arouse cognitive and emotional responses that alter the manner in which followers perceive their organizations, their jobs, and their task assignments. As such, it is possible that transformational leaders influence risk preferences by shaping judgments of expected success on future projects.

As theorized by Bass (1985), leaders who behave in a manner that is consistent with the transformational pattern tend to emphasize positive organizational results (George, 2000) and speak optimistically about the likelihood of future success ((McColl-Kennedy & Anderson, 2002). By expressing enthusiasm about the organization's future and articulating a clear and compelling vision (inspirational motivation), transformational leaders encourage optimistic forecasts among followers. Indeed, followers tend to assume the beliefs and preferences of their leaders (Lord &

Brown, 2001) and consider organizational goals as congruent with their own (Bono & Judge, 2003). Thus, consistent with their leader, followers may report high levels of expectancy for their organization's success.

Finally, transformational leaders may influence expectancy judgments by directing attention among followers to the reward aspect of risky decisions. Lord and colleagues (1999, 2001) suggested that leadership is realized in part by activating the cognitive processes that influence how followers interpret, perceive, categorize, and assess characteristics of their working environment. Central to their discussion was the notion that leaders direct the attention of followers to specific aspects of the work environment and influence how followers assess task requirements, an assertion that was empirically supported in a field study by Piccolo and Colquitt (in press). I therefore hypothesize:

Hypothesis 5: Transformational leadership will have a positive effect on expectancy judgments among followers.

A model of the hypothesized relationships is presented in Figure 4-1.

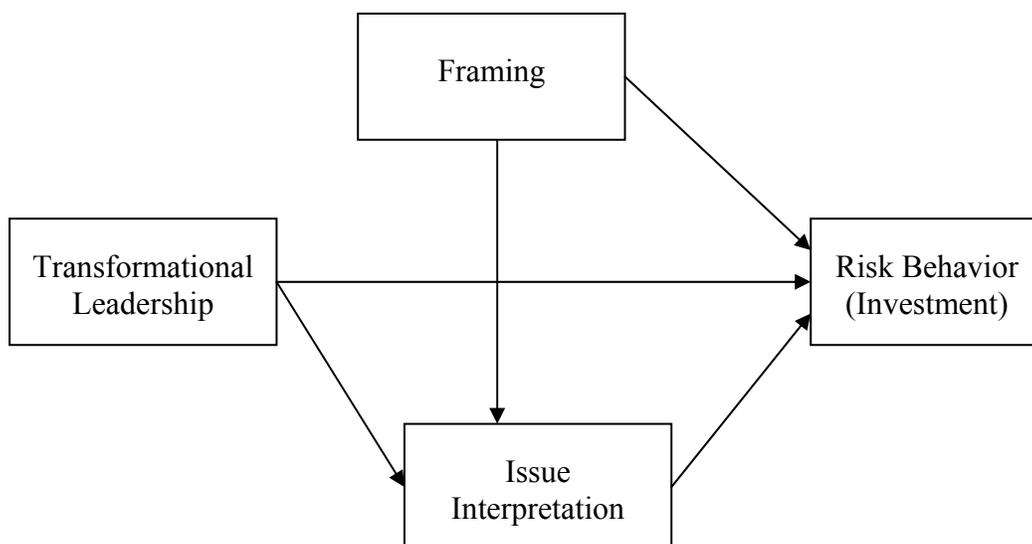


Figure 4-1. Model of Proposed Relationships among Variables

Method

Sample

Undergraduate students (49% male) enrolled in an upper-level management course at a southeastern university participated in the research study. Students were offered two extra credit points for their participation and were randomly assigned to a high or low leadership condition. Using original scripts and case studies, I manipulated transformational leadership (high transformational leadership vs. low transformational leadership) in a completely randomized between-subjects design. One hundred and forty-one students were in each condition (n=282).

Procedure

Laboratory sessions were conducted during a 3 week period and each session took about 1 hour to complete. Upon arriving for the assignment, students were told that the purpose of the study was to explore the ways in which managers make decisions during a normal workday. Students were then given an in-basket simulation (e.g., Kiker & Motowidlo, 1999; Mero & Motowidlo, 1995) where their duties included handling customer complaints, reviewing new organizational policies and procedures, and coordinating staff meetings to improve division performance. Participants were asked to assume the role of Leslie Wilder, a manager at Consolidated Federal Agency Contracting Office (CFACO), a large governmental contracting office. The in-basket exercise was designed to simulate a professional work context, and students were instructed to address as many items as possible.

Experimental Conditions

Upon arriving at the study's location, participants were randomly assigned to one of four experimental conditions formed by crossing two levels of transformational leadership (high vs. low) with two levels of framing (positive vs. negative). At the beginning of each session, I read a brief introduction to the study and instructions for completing the extra credit assignment. Participants were told that while working on their administrative tasks, they would be interrupted periodically by videotaped depictions of the company's CEO, who would himself be performing regular duties associated with his position. In each condition, participants were shown six videotaped vignettes. In one scene, for example, the CEO is leaving a voice mail for an employee and describing a problem with the company's computer system. In another scene, the CEO summarizes business results for the previous fiscal year.

An actor trained to exhibit aspects of high and low transformational leadership played the role of the company's CEO in both leadership conditions. Twelve separate scripts were written to provide information about the working context and to highlight the CEO's behavior during the course of a regular workday. Six of the scripts were written to portray the CEO as a high transformational leader, with language and behavior that is characteristic of the transformational pattern, and six parallel scripts were written to portray the CEO as a low transformational leader, with focus on specific aspects of the task and expression of self-relevant objectives. The six high and six low transformational scenes were recorded onto separate DVDs with 2 ½ minute intervals between each scene. Scripts for each scene are presented in Appendix B.

Investment Scenario and Framing Manipulation

During the last scene on each DVD, the CEO introduced a business venture in which the company could invest. The CEO described the potential for the company to develop its own software tool for grant administration, summarized the venture's likely implications for the company, and asked participants to read a third party consultant's assessment of the venture. The consultant's report was one page in length and constituted the framing manipulation for this study.

Drawing on the suggestions of Jackson and Dutton (1988) and the manipulation used by Mittal and Ross (1998), two versions of the consultant's report were drafted, one in which the venture was described as an opportunity (positive frame), and one in which the venture was described as a threat (negative frame). Each report contained similar information, but corresponding sentences in the two reports were phrased differently according to the intended manipulation. In the positive frame, for example, the consultant's report read, "One in 4 new software products offers a favorable return on investment." A parallel sentence in the negatively framed report read, "...nearly 3 of every 4 new [software] programs fail to offer a profitable return on investment." After reading the consultant's summary, participants selected their level of investment in the venture and responded to a questionnaire. The scripts for each framing manipulation are presented in Appendix C.

Measures

Transformational leadership. As in Study 1, the four dimensions of transformational leadership were measured with items from the Multifactor Leadership Questionnaire (MLQ; Bass & Avolio, 1995). Participants were asked to indicate on a 5-point Likert scale (1=Not at all, 5=Frequently, if not always) the frequency with which

the CEO exhibited leadership behaviors. Four items were used to measure intellectual stimulation (e.g., “My supervisor...seeks differing perspectives when solving problems”), inspirational motivation (e.g., “...articulates a compelling vision of the future”), and individualized consideration, (e.g., “...treats me as an individual rather than just a member of a group”). Eight items were used to measure idealized influence (e.g., “...instills pride in me for being associated with him/her” and “...talks about his/her most important values and beliefs”). The measure of transformational leadership is presented in Appendix D. From this point forward, *transformational leadership factor* is used to refer to the manipulated transformational leadership variable, and *transformational leadership* is used to refer to the measured transformational leadership variable.

Framing. Five items were used to evaluate the quality of the framing manipulations contained in the consultant’s report. On a 5-point Likert scale (1=strongly disagree, 5=agree), participants indicated the extent to which they agreed with statements about the new business venture such as, “CFACO could have positive gains by developing a software tool,” “The prospects for CFACO are positive,” and “The market for a software tool is uncertain” (reverse coded). High mean scales scores indicate the perception of the new venture as an opportunity, consistent with the approach used by Highhouse and Yüce (1996). The framing measure is presented in Appendix F. From this point forward, *framing factor* is used to refer to the manipulated framing variable, and *framing* is used to refer to the measured framing variable.

Issue interpretation. Issue interpretation was measured with a 5-item scale adopted from previous studies of decision-making and risk (e.g., Ginsberg &

Venkatraman, 1992; Mittal & Ross, 1998). Using a 5-point Likert scale (1=strongly disagree, 5=strongly agree), participants indicated their agreement with statements such as, “Development of a new software tool is a plus”, “The new trends in this business are a threat” (reverse coded), and “the future will be better because of a new software tool.” A high score on the issue interpretation scale represented a positive interpretation of the venture (i.e., opportunity) while a low score represented a negative interpretation (i.e., threat). The scale items used to measure issue interpretation are presented in Appendix G.

Expectancy. On a scale of 0 to 100, participants were asked to indicate their subjective probability that the company would successfully introduce a new software project as described in the decision scenario.

Investment. Participants were told that they each had a \$1 million annual budget for research and development, and were asked to indicate their level of investment in a new business venture.

Analysis

Analysis of Variance (ANOVA) was used to test for an interaction between leadership and framing. The study used four test conditions in a 2 (high/low transformational) X 2 (positive/negative framing) factorial design.

Results

To determine whether or not the experimental manipulations created the intended conditions, I conducted a two-way analysis of variance (ANOVA) for both leadership and framing. Results indicated that the manipulation of leadership had a significant effect on participants' ratings on the MLQ ($F(1, 282)=201.30, p<.01$), non-significant effects on the framing scale, $F(1, 282)=3.50, p=.063$, and no significant interaction

with the framing factor on ratings on the MLQ ($F(1,282)=1.91, p=.17$). The framing manipulation had a significant effect on participants' ratings on the framing scale ($F(1, 282) = 82.54, p < .01$), non-significant effects on the MLQ ($F(1,282)=.07, p=.79$), and no significant interaction with the leadership factor on rating of framing ($F(1,282)=.66, p=.42$). As such, each of the experimental manipulations achieved its intended effect, and the leadership and framing manipulations were not confounded.

Hypothesis 3 suggested that leadership and framing would interact to influence risky choice. To determine whether or not the interaction between leadership and framing was significant, I conducted a two-way ANOVA with investment value as the dependent variable. As expected, the interaction term was significant, $F(1, 280) = 4.56, p < .05, \eta^2 = .06$, providing support for hypothesis 3.

Table 4-1. Mean Level of Investment for Leadership and Framing

	Framing		
	Positive	Negative	Total
TF Leadership Factor	m (SD)	m (SD)	m (SD)
High	468.40 (206.80) ^{a,c}	465.19 (270.91) ^{a,d}	466.84 (239.21)
Low	511.92 (267.11) ^{b,c}	376.97 (281.00) ^{b,d}	439.18 (281.92)
Total	489.05 (237.44)	418.63 (278.84)	

Note. Significance of differences between means: ^a *ns*; ^b $p < .05$; ^c *ns*. ^d $p = .06$

The distribution of investment means across each of the four experimental conditions is presented in Table 4-1 and Figure 4-1. As information in the table indicates, the effect of leadership on investment was moderated by the framing of the decision scenario. Followers in the high transformational group invested at a similar level in the positive frame ($m=468.40$) as in the negative frame ($m=465.19$), and the

difference was non-significant ($F=.01, p=.94$). Thus, high transformational leaders tended to offset the influence of negative framing. On the other hand, framing effects were evident in the low transformational group, as a significant difference existed between the low transformational, positive frame ($m=511.92$) and the low transformational, negative frame ($m=376.97; F=8.46, p<.05$). This result suggests that followers of non-transformational leaders are influenced by the manner in which information about an investment opportunity is framed.

To further estimate the influence of framing on the effectiveness of transformational leadership, I estimated the difference between the high and low leadership groups in each framing condition. In the positive frame, those who observed a high transformational leader invested at a similar level ($m=468.40$) to those who observed a low transformational leader ($m=511.92; F=1.15, p>.05$). Thus, leadership did not appear to influence investment level in the positive frame. For those who read the negatively framed report, followers of the high transformational level invested, on average, significantly more ($m=465.19$) than followers of the low transformational leader ($m=376.97; F=3.66, p=.058$).

Table 4-2 contains the means, standard deviations, and intercorrelations among the study's variables, including expectancy judgments for the venture's success. As expected, the relationship between framing and investment was positive and significant ($r=.56, p<.05$), suggesting that those who regarded the venture as an opportunity invested at a higher rate than those who regarded the venture as a threat. Using two-way ANOVA, I tested the effect of framing on investment and as expected, the average level of investment for those in the positive frame ($m=489.0, SD=237.4$) was

significantly higher than those in the negative frame ($m=418.6$, $SD=278.8$; $F=5.17$, $p<.05$). Taken together, these results provide support for hypothesis 4.

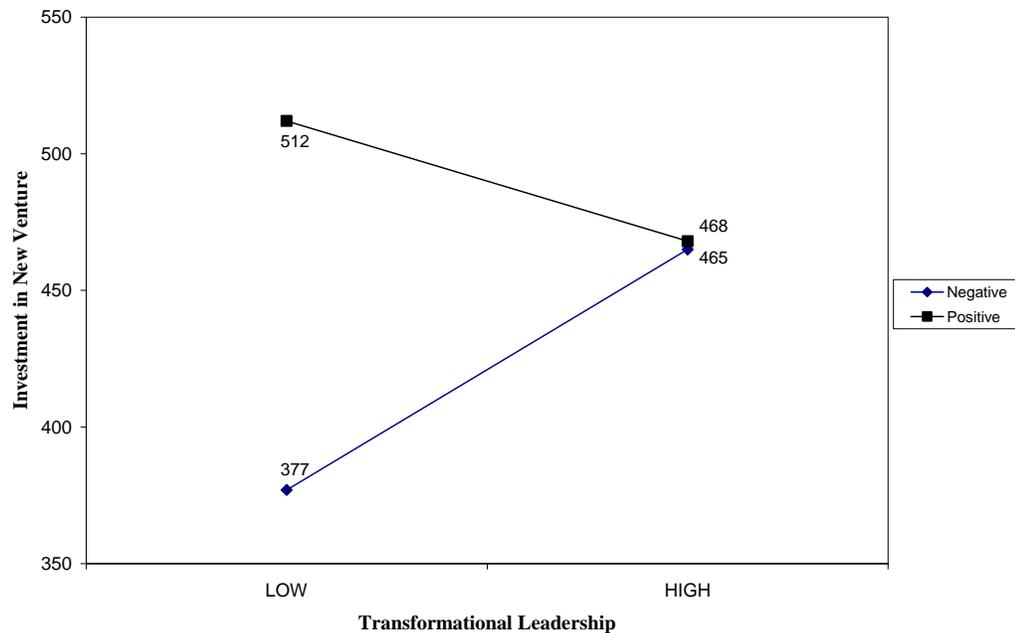


Figure 4-2. Pattern of Investment by Leadership and Framing

In support of hypothesis 5, transformational leadership was positively related to expectancy ($r=.23$, $p<.05$), suggesting that followers of transformational leaders tend to maintain a positive outlook for the company's success. Worth noting, the strongest relationship was between expectancy and investment ($r=.67$, $p<.05$).

Table 4-2. Scale Means, Reliabilities, and Intercorrelations among Variables.

	m	SD	α	1	2	3	4
1. Transformational Leadership	3.19	.71	.91				
2. Framing	3.18	.56	.72	.18*			
3. Gender	.49	.50	-	-.00	-.03		
4. Expectancy	63.73	20.88	-	.23*	.67*	-.05	
5. Investment	452.96	261.41	-	.04	.56*	.03	.67*

Notes. $n = 282$. * $p < .05$.

Discussion

The current study set out to examine the manner in which leadership interacts with framing to influence risky choice. Results suggest that the relationship between leadership and risky choice depends in part, on how decision scenarios are framed. In the positively framed condition, manipulated leadership did not influence investment choice or expectancy for the new venture's success. In this way, characteristics of the positive frame may have substituted for aspects of the transformational pattern. On the other hand, leadership had a significant influence on both expectancy and investment in the negative frame, suggesting that the framing manipulation provided information relevant to the effectiveness of transformational leadership. As hypothesized, framing moderated the relationship between leadership and risk.

Consistent with the suggestion that transformational leaders shape follower perceptions of the working context (Piccolo & Colquitt, in press; Salancik & Pfeffer, 1978; Smircich & Morgan, 1982), transformational leadership was related to issue interpretation and expectancy judgments among participants. By expressing confidence in the organization's collective talent and vividly describing a worthy new venture, the transformational leader shaped the manner in which followers judged the organization's potential for success in a new venture. As results suggest, it appears that a transformational leader influences the manner in which followers interpret information in the working context.

There exist several explanations for the observed interaction between leadership and framing. For one, framing may provide information about the decision context that is relevant to the emergence and effectiveness of transformational leadership (Shamir & Howell, 1999). Transformational leaders tend to be most effective in times of stress,

uncertainty, or organizational change, conditions that might be reflected in the negative frame. As such, consistent with studies that have reported situational contingencies in the effectiveness of transformational leadership (e.g., Tosi et al., 2004), the ability of a leader to encourage risk behavior depends on a follower's perception of the organization's operating environment. As such, while aspects of the positive frame may have inspired favorable perceptions of the operating environment, the negative frame may have made salient the contextual conditions that give rise to the effectiveness of transformational leadership.

Second, aspects of the positive framing manipulation (e.g., optimism for future success, attention to positive outcomes) may have substituted for components of the transformational approach. The positively framed report, for example, with its expression of optimism and emphasis on valuable opportunities, neutralized the idealized influence or inspirational aspects of the transformational leader. On the other hand, the negatively framed report, with emphasis on potential loss or fierce competition, may have activated the impact of transformational leadership.

Results of the current study suggest that transformational leaders influence the manner in which followers interpret information in the workplace, and the manner in which followers assign subjective probabilities to future outcomes. In this way, the study draws a link between a leader's behavior and followers' cognitive patterns, an observation that could have meaningful impact on modern leadership research. For one, follower cognitions may serve as valuable mediating mechanisms between leadership and follower behaviors. It is possible, for example, that part of the effect of leadership on organizational citizenship behavior is explained by how followers come to think of

their group members and the environment in which they work. It is also possible that leadership effects on job attitudes (e.g., satisfaction and commitment) can be explained by how followers of effective leaders come to think about their jobs and their organization, in terms of job characteristics. While the notion that leaders influence follower thinking patterns is not completely new (Burns, 1978; Gouldner, 1960), the implications of successful research in this area is worth hearty exploration.

Beyond the observed interaction of leadership and framing, the manner in which leadership was manipulated in the current study may be, in itself, a worthy contribution. A trained actor portrayed a fictional company's CEO during the course of a normal workday. The manipulation of leadership included portrayals of the kind of things that managers do on a regular basis. There were no fancy speeches, no exaggerated pep talks, and no ideological statements of the company's values or history. Instead, participants in the study observed the CEO carrying out his regular responsibilities, which is more likely the manner in which aspects of the transformational approach are revealed. That is, in a natural work environment, a leader's values and expectations are often revealed in short, simple, everyday encounters, rather than in fabulous speeches about results, mission, plans, or vision.

In two of the scenes, for example, the CEO leaves voicemail messages for employees, and participants observe leader behavior that is not directed at them. This is in itself an example of a subtle yet realistic manipulation of leadership, in which aspects of the transformational approach are revealed in otherwise routine interactions.

The current study relies on a cognitive explanation for the relationship between leadership and risk. That is, results of this study provide a platform for the assertion that

followers of transformational leaders interpret decision scenarios as having optimistic future outcomes, and as such, are willing to engage in otherwise risky behavior. While this observation is consistent with many previous examinations of risky choice (e.g., Nygren et al., 1996), there is little question that mood and emotions influence the manner in which people make decisions. As Schwarz and Bless (1991) remarked, "...[an] individual's cognitive performance on a wide variety of tasks may be profoundly influenced by the affective state they are in" (p. 55).

Future studies might examine the role of follower emotions in shaping interpretations of organizational stimuli, and in facilitating the emergence of and effectiveness of transformational behavior. Isen (1993; 2001) noted that the role of affect in cognitive processes and decision-making is now widely accepted in the social sciences literature, as evidenced by the inclusion of an affective component in most modern studies of decision making and choice (Ciarrochi & Forgas, 2000; Forgas & Ciarrochi, 2001; Nygren, Isen, Taylor, & Dulin, 1996). There is, therefore, adequate evidence for the role of mood and emotions in cognitive processing.

CHAPTER 5 GENERAL DISCUSSION

The purpose of the current set of studies was to examine the relationship between transformational leadership and risk behavior among followers. By observing a main effect of leadership on risky choice (Study 1) and then identifying a condition in which this effect remained robust – negative framing (Study 2), the current research provides an early insight into the relationship between leadership and risk. While there exist several conceptual models that introduce situational antecedents to risk-seeking behavior (e.g., March & Shapira, 1987; Williams & Narendran, 1999), no study has explicitly examined the impact of leader behavior on follower judgments of risk and their subsequent willingness to engage in risky behavior. Further, whereas transformational leadership theory specifically asserts that followers of effective leaders are willing to assume risky positions (Bass, 1985), studies of that assertion are rare.

The current studies add to our understanding of the situational factors that influence decision-making under uncertainty and risk. Despite attempts to find evidence of dispositional sources of risk preference, aspects of the decision context, including organizational leadership, appear to be most relevant. That is, transformational leadership behavior, with its inspirational motivation, modeling of courageous behavior, and intellectual stimulation, has an important influence on how risky decisions are evaluated and ultimately resolved.

By estimating a link between leadership and risk, the current studies add to the growing body of leadership research and make a contribution to the continued

development of transformational leadership theory. For one, results of the current studies suggest that followers of transformational leaders are willing to forgo personal preferences and to risk security for the leader's stated objectives. In this way, a central assertion of the transformational approach is tested, and a relative unique outcome, namely risk behavior, is examined.

Second, study 2 reported an interaction between leadership and framing in the explanation of risky choice, suggesting that the effects of transformational leadership on risk depend, at least in part, on aspects of the decision context. The framing manipulations, which were presented in expert, third-party reports, provided information about the stability of the operating environment, some of which facilitated the impact of leadership on risk. This observation supports the assertion that the leader effectiveness is shaped by the organizational context (Shamir & Howell, 1999), and is consistent with the notion that the transformational approach is most effective in times of uncertainty, crisis, and organizational change (Bass, 1985; Flynn & Staw, 2004; Pawar et al., 1997).

Lastly, the observed relationship between leadership and risk was explained through a cognitive mechanism (issue interpretation). Whereas many studies of leadership have focused primarily on first order constructs (e.g., leadership → behavior) little consideration has been given to intermediating processes (e.g., follower cognition) by which observed effects are realized. As such, the current studies contribute to transformational leadership theory by providing further support for the notion that leadership is realized through shifts in cognitive patterns among followers (Brown & Lord, 2001). Some of the variance in follower behavior, therefore, can be explained by

the leader's influence on how aspects of the work environment are perceived (Piccolo & Colquitt, in press).

It is worth noting an interesting difference between the two studies. In study 1, transformational leadership appeared to have a direct main effect on risk behavior. Followers of high transformational leaders were more likely to choose a project with uncertain demands. However, when prospect framing was introduced in study 2, the main effect of leadership was attenuated. Indeed leadership had a significant main effect in the negative frame, but no influence on risk behavior was observed in the positive frame. In the presence of framing, which provided information about the operating environment and the context in which decisions were made, the main effect of leadership was non-significant. That said, the interaction between leadership and framing was of particular interest in study 2, and none of the 4 experimental conditions in that study tested leadership without a manipulation of the problem's frame.

Future Research. Given the relative novelty of a leadership – risk link, further study is warranted. The existing literatures on leadership and on risk provide a valuable framework for evaluating both concepts, such that future studies should consider a host of moderating and mediating mechanisms, and utilize several alternative research designs. The literature on affect and risk, for example, has identified a number of moderators of the relationship between positive affect and risky choice, including the nature of the decision task (Mittal & Ross, 1998), the perceived criticality of the decision (Dunegan, Duchon, & Barton, 1992; Mano, 1994; Nygren, 1998), and the personal relevance of likely outcomes (Isen & Patrick, 1983; Isen & Geva, 1987; Williams & Voon, 1999). By

manipulating aspects of the decision assignment (e.g., personal relevance), a similar program of research can be developed for the relationship between leadership and risk.

Moderators. Future experimental studies should manipulate the complexity and nature of the decision scenario. The current studies, for example, asked participants to make a single, isolated decision with only one possible loss for the decision-maker – a phenomenon that is common in the decision literature. However, in a complex, managerial setting, managers may experience several possible losses from a single decision (March & Shapira, 1987). If a manager chooses to invest in a project that ultimately fails, he or she not only loses the real, monetary, initial investment (e.g., dollars from a fixed budget), but could also compromise her own credibility among staff members and decision-making authority for future projects (Yates & Stone, 1992). Thus, experimental research designs should employ multiple decision scenarios in a dynamic operating environment (e.g., Hollenbeck et al., 1994), and manipulate the nature and frequency of feedback.

The results of Study 2 provide support for the notion that the effectiveness of transformational leadership depends, in part, on factors that shape the decision context. As such, there is reason to believe that the relationship between leadership, issue interpretation, and risk will be moderated by the context in which decisions are made. Future experimental studies should manipulate the decision context to determine which aspects – environmental or organizational – shape leadership's effect on risk behavior among followers. Studies conducted in the lab, for example, could introduce hypothetical start-up companies in a fast moving technology sector, stable blue chip companies who deliver popular commodities, and companies who are attempting to establish new

products and new markets. A manipulation of this kind corresponds to the recommendations of Pawar et al. (1997), who suggested that innovation, creativity, and risk-taking may be rewarded in some organizations (e.g., high tech start-up) but discouraged in others (e.g., manufacturing).

In addition, the role of the follower in leader effectiveness should be examined. It has been theorized that charismatic leadership is revealed only at the submission of followers (Conger & Kanungo, 1989) and that charisma is best understood as an individual relationship between a leader and his or her followers (Howell & Shamir, 2005). Further, as Erhardt and Klein (2001) observed, the disposition of followers, in the form of personality and values, appears to have a meaningful impact on the charismatic leadership process. Thus, future studies should examine follower personality traits to determine if specific traits enhance or neutralize the impact of transformational leadership behavior.

Mediating mechanisms. Consistent with previous examinations of decision making under uncertainty (e.g., Slatter & Ganster, 2002), study 2 relied on a cognitive explanation for observed effects. While expectancy and issue interpretation are certainly valuable mediating process, future studies might further examine the process by which transformational effects are realized, including the transient emotional states of followers. Indeed, a great deal of research on choice under risk or uncertainty has relied on cognitive, rational explanations, but affect, mood, and emotion each appear to play critical roles (Loewenstein, Weber, Hsee, & Welch, 2001). It may be possible, for example, that observed effects of leader behavior on risk are realized through follower

emotional reactions in the organizational context, such as optimism (McColl-Kennedy & Anderson, 2002) or positive affect (Erez et al., unpublished).

The notion that transformational leaders influence affective states is not completely new. Bono and Judge (2003), for example, noted that, "...transformational and charismatic theories have been framed to recognize the affective and emotional needs and responses to follower" (p. 554), and George (2002) argued that leaders, in many ways, have the ability to influence the emotional reactions of followers. Further, Weiss and Cropanzano (1996) suggested that positive affective states might be initiated by positive work experiences, leaving open the possibility that transformational leaders have the potential to stimulate positive affective responses. Whereas the relationship between positive affect and choice remains unclear (see Isen, 2001), there is little debate that affective states have an important role in the assimilation of information (Estrada, Isen, & Young, 1997) and the evaluation of complex decision problems (Mittal & Ross, 1998; Williams & Voon, 1999).

The examination of affective experience in explaining leadership's relationship with risk could be framed as part of the broad evaluation of emotion in cognitive processing. Consistent with classic theorizing on emotion and cognition (e.g., Kogan & Wallach, 1964), research on positive affect suggests that emotional arousal is essential in decision making and choice (Isen & Means, 1983; Isen, 1984b; 2001). Yet, while a considerable body of research addresses the relationship between affect, social judgment, and risk-taking, little is known about the interaction of leadership and follower emotion, or the influence that leader behavior has on the intensity with which followers experience positive emotions. Further, emotional arousal, which could be facilitated by leader

behavior, also appears to be critical in the formation of many social judgments (Forgas, 1992; 1995). Thus, the interaction of leadership and positive affect is worthy of future exploration.

Alternative research design. The current set of studies used video taped recordings of a leader who exhibited behaviors that characterize the transformational pattern. Beyond highlighting high and low expressions of the transformational approach, the videos introduced the decision scenarios in each study and provided important information that decision-makers used when evaluating alternatives. An introduction by video, in this case, is in direct contrast to more popular approaches in the decision-making literature, which tend to rely on written vignettes (e.g., Ho, Keller, & Keltyka, 2002). In that respect, it is possible that the method of introducing the problem and manipulating leadership influenced the process by which effects took place. Indeed decision scenarios are most often introduced in written vignettes, but as Taggar and Neubert suggested, "...video scenario methodology [is] more likely to generate an affective reaction than written vignettes" (p. 936). Therefore, by manipulating the manner in which decision problems are introduced (video vs. written vignette), future studies could attempt to isolate the emotional response that decision makers may have to the video taped introductions.

Limitations. Although the current studies make a valuable contribution to transformational leadership theory and to the explanation of risk behavior among organizational members, several limitations must be acknowledged. For one, both studies utilized an undergraduate student sample in an experimental setting. Certainly, research conducted in a lab allows for close control of experimental conditions, but results may

generalize outside the lab. Further, study 2 asked students to play the role of a division manager in a hypothetical government contracting office. Despite the information provided to participants and my introduction of the company, it is unlikely that students have the experience to understand fully the organizational context and the role of a corporate manager. As such, future studies should utilize a sample of practicing managers who are required to make critical decisions during the course of their work.

APPENDIX A
SCRIPTS FOR LEADERSHIP MANIPULATION – STUDY 1

High Transformational

Hi, my name is Chris Aruffo, and I am the project coordinator for a research project in the Warrington College of Business. I am so excited that you have agreed to participate in research at the University of Florida. UF is one of the nation's leading research institutions, and as you probably know, the University has had a long history of research excellence. With your assistance, I am optimistic that our research will be successful in the future.

Did you know that researchers at UF have discovered a treatment for glaucoma that is being hailed as a major breakthrough in treating the disease? Or that researchers at UF invented *Sentricon*, the state's most popular termite baiting system? Of course, you're familiar with *Gatorade* – the University's contribution to athletic performance around the world. These are just a few examples of Florida's rich and robust research history. Today, you have the opportunity to be part of this great tradition. I am confident that our future research goals can be achieved.

By signing up for one of these projects and fully committing to the research process, you are contributing to the University's mission. Imagine the future – a national University with global recognition for research and teaching excellence. This is our collective mission – to advance our understanding of factors that shape the world in which we live, and to lift the University to national prestige.

The faculty and staff in the business school are truly outstanding, and we are so confident in our students. Students at UF regularly consider the University's goals as their own, and are willing to make sacrifices for UF's comprehensive and innovative research program.

Thank you for your enthusiasm and for your participation.

For this particular assignment, there are two projects in which you can enroll. Project 1 will be conducted at Stuzin Hall and take about 1 hour to finish. The assignment will be interesting in that you will be asked to make a series of management decisions based on information provided to you in a business case scenario. You will be asked to consider hiring choices, investment decisions, and personnel selection, and will work in a computer lab with other students.

The second option for this extra credit project is a bit more uncertain, a bit risky – some even say a bit mysterious! You will not know your specific assignment until you arrive at the project's location, which is also unknown. You might be asked to meet at Stuzin Hall, or you might be asked to meet with other students and members of the research team at another location on campus. In project 2, the tasks vary from student to student and there are no standard time limits for your participation – you could be finished in 15 minutes, or be given a task that demands nearly two hours. You won't know until the day of the assignment. This assignment could be a lot of fun, with excitement and mystery, but, it could also be long and quite embarrassing. You just won't know until you arrive.

Now, I realize that Project 2 is a bit risky in that you do not know what is required. In Project 1, assignments and time lines are clearly defined. But I encourage you to give serious consideration to Project 2. For the success of this project, and for the success of our research program in general, we need people to make a personal sacrifice and sign-up

for Project 2. This is not necessarily the easy choice, not a choice that is straightforward, but one that will really advance our work.

You know, this entire extra credit assignment is unique in that students have a choice. In a way, we are breaking from time honored research norms. We are giving students the chance to choose their own path, to shape their own destiny, to have a great story to tell friends about their participation in this project. Personally, I regard this is an important value of our research program. By giving students a choice, we are considering not only the unique individual needs and aspirations of each student, but also doing the right thing. I believe strongly in treating students as individuals, and think conducting our research in this manner will have constructive consequences.

Maybe this approach is unusual. But should progressive researchers continue to conduct experiments in the same old traditional ways? Sure, it's assumed that participants in research projects should know what they're in for, but is that the most effective way to do things? Does that system really work? Are there better ways to approach research in the University setting? Maybe it's time to challenge previous assumptions about working with students.

Thanks again for your willingness to participate in the research process at UF. It really makes a difference. Choose now – Project 1 in Stuzin Hall; Project 2 – location unknown.

Low Transformational

Hi, my name is Chris Aruffo, and I am the coordinator for a research project in the Warrington College of Business. You have signed-up for extra credit, and so you have to come to campus soon to complete your assignment. In order to earn your point, you have to execute the task. Now that you have finished the online survey, you'll need to finish

your assignment on campus. Then your student ID will be recorded in our database, and you will get 1 extra credit point in MAN 3025.

I have done a lot of research at the University of Florida, and students are often a part of the research process. When students do what they are asked to do, they are rewarded with extra credit points in their classes. When students fail to complete their assignments, they do not earn the extra credit points they desire. This is a simple give-and-take procedure. I have a job to do here, and so do you.

You might have unusual circumstances that make this assignment and this course tricky, but I am unable to take those things into consideration. Every one tends to think that their own situation is unique, but for this assignment, all students will be treated the same way. As a researcher, I have had mixed results with my research in the past – some times it works, some times it doesn't. This particular program is complex, and I am just not sure that we can get it right this time. I will try my best, but I can't say that I am completely confident. Time will tell.

Now, I will give a brief description of two projects, and you will make your choice.

For this particular assignment, there are two projects in which you can enroll. One project will be conducted at Stuzin Hall and take about 1 hour to finish. The assignment will be interesting in that you will be asked to make a series of management decisions based on information provided to you in a business case scenario. You will be asked to consider hiring choices, investment decisions, and personnel selection, and will work in a computer lab with other students.

The second option for this extra credit project is a bit more uncertain, a bit risky – some even say a bit mysterious! You will not know your specific assignment until you arrive at

the project's location, which is also unknown. You might be asked to meet at Stuzin Hall, or you might be asked to meet with other students and members of the research team at another location on campus. In project 2, the tasks vary from student to student and there are no standard time limits for your participation – you could be finished in 15 minutes, or be given a task that demands nearly two hours. You won't know until the day of the assignment. This assignment could be a lot of fun, with excitement and mystery, but, it could also be long and quite embarrassing. You just won't know until you arrive.

Now, I realize that Project 2 is a bit risky in that you do not know what is required. In Project 1, assignments and time lines are clearly defined. But I need to make sure that at least *some* people sign-up for Project 2. So that I can adequately attend to my research objectives, I need to have people participate in both studies, even if some students are put at risk. I realize that the choice is not straightforward, but if you're able, consider Project 2.

We have already tested each assignment, and some students have said they actually enjoyed the mystery associated with Project 2; some said they had fun. But, others have said they did not appreciate the uncertainty. Some were even embarrassed. They would have rather known what they were getting into and how long it would take. I guess it's up to you.

Others have suggested trying innovative ways to encourage support from students, but I have used this approach to the extra credit assignment many times before. You might think having a choice is unusual, but in fact, this is really a very standard way of operating. I do it this way all the time. The research program in the business school has

been successful, and so I am going to rely on my previous method for collecting data. I know how to get things done, and I not going to try anything different at this point.

Please make your choice, and please come to your assigned location, on-time. You have made a commitment to be a part of this project, and you are required to complete the second part of this assignment. Thank you for your participation. Choose now – Project 1 in Stuzin Hall; Project 2 – location unknown.

APPENDIX B
SCRIPTS FOR LEADERSHIP MANIPULATION – STUDY 2

Scene 1: Introduction

High Transformational

Leslie...Congratulations on your new assignment and welcome to Consolidated Federal. I am so pleased that you decided to join our great team. We have wonderful people on staff, with so much experience and talent. You will find that our services really make a difference for many small, minority-owned, and disadvantaged businesses. Indeed, we have plans and projections for our level of business each year, but our mission is to assist small businesses in the procurement of government grants and contracts. Our business is competitive, but we always work with integrity to help local businesses achieve their dreams. We always consider the expectations and initiatives of our clients. In fact, our clients' objectives often become our own.

I realize that you have a busy schedule; you have a lot to learn in a short amount of time. I am considerate of your needs and of the pressures on your time, and so I appreciate your attention this morning. Let me just briefly describe our results in the last year, and then we can discuss these issues in more detail this afternoon.

Fiscal year 2003 was a very good year. Together we faced difficult challenges, competed against skilled rivals, and collaborated to execute creative solutions. We had an interesting, challenging, and exciting year. Collectively, we shared a great experience.

At last year's annual meeting, we agreed on the level of business to pursue, and used breakout sessions to develop innovative ways to maintain our leadership position in

the market. We were aggressive in our annual projections, with forecasts for revenue growth at 20%. The market for our products was expected to grow just 10%, and so it was risky to make such a bold prediction. Nevertheless, we knew we had the collective talent to surpass expectations. We knew that our people had the energy and resources needed to succeed, and we knew that our managers were motivated.

Well...I am happy to report that our efforts paid off. Although we did not meet our specific goals for revenue or profit, we did grow by nearly 15%. The market for our services was competitive, and we found ourselves making difficult decisions on which customer projects to pursue. We were aggressive, took measured risks with several of our largest customers, and in the end, we achieved respectable results. I am proud of the company's performance.

Please, take your time to get to know the company, and the wonderful people who each make a difference for so many small, minority-owned, and disadvantage businesses. You are now part of a wonderful tradition – and I look forward to getting to know you as an individual, as a leader. Welcome aboard!

Low Transformational

Leslie...Congratulations on your assignment and welcome to Consolidated Federal. You have made a good decision to join this company. The leaders of this company are very experienced and have been successful for many years. Our company provides valuable service to our clients, who pay a fair, often times favorable rate. Fortunately, we earn above average profit margins, and I have personally been rewarded by the company's success.

As with any profit-seeking corporation, there exist specific financial projections to meet each year. Our business is competitive, and the principals of this corporation have labored for many years to maintain a solid position in the market.

I know that you are new, but you have a lot of work to do. There is little time to waste before we move on with the business of conducting business. You need to focus on the important tasks at hand and be as efficient as possible. Lest we forget, the company's principal objective is to meet revenue goals while controlling operating expenses. I know, from experience that control of expenses will be the key to reaching profitability, especially in light of the current economic environment. We'll meet at lunch to discuss your immediate priorities, but for now, I want to review the company's past performance and remind you of your assigned objectives for the coming year.

The company's performance in 2003 was fair. As usual, there were competitors, some of whom were able to win business from our most important clients. It was a year in which we fell short of our planned targets. We expected to grow at 20%, twice the industry pace. Unfortunately, the Florida division did not achieve its target level of revenue or profit. As a result, our company's stock price suffered, and several managers failed to earn at their expected levels of compensation. Sure, we set an aggressive target, but once that target was set, it should have been achieved. The analysts expected strong performance from us. I know that when we satisfy those expectations, we all earn the rewards we desire. As I have stressed in the past, it is the duty of the organization's management to achieve objectives. If this is done, the organization will be a leader in this industry. If this is not done, it threatens the company's existence in such a competitive market.

Please take the next hour or so to catch up on your work. Since Bob left this position, many tasks have been ignored. You now have the obligation to address all of these issues in a timely manner. See you this afternoon so that we can discuss other plans.

Scene 2: CEO visits Leslie Wilder's office

High Transformational

Leslie, I have become aware of issues with our MIS links at several of our Eastern agency offices. I am looking at a memo dated May 19 from Bill Jensen. The memo was addressed to you and David Fredericks. Although Bill's memo does not specifically highlight the potential consequences, I expect the issues to which he refers will compromise our internet and email access.

I realize that you are new to the issue, but have you begun to consider creative ways to handle it? Do you suppose there is a means to get temporary high speed access to the web outside of our normal service? Does UNICOM have a contingency plan? If so, how soon will it be implemented? Are there other communication companies that can provide the same service? What else can we do if the links are not restored? What are our alternatives?

Perhaps you could contact another local provider, one who could offer a different perspective. Let's not rely strictly on UNICOM for all of our information. We need to look at these problems from several different angles.

We have assumed for years that our business can operate without high speed communication channels, but those assumptions are no longer valid. We have also assumed that customers will adjust to our way of doing business. That assumption is not valid either. We have to be creative, to be assertive, and find innovative ways to overcome these issues.

In the next few minutes, jot down any questions, and your ideas for how this problem can be addressed.

Low Transformational

Leslie, I have become aware of issues with our MIS links at several of our Eastern agency offices. I am looking at a memo dated May 19 from Bill Jensen. The memo was addressed to you and David Fredericks. Although Bill's memo does not specifically highlight the potential consequences, I expect the issues to which he refers will compromise our internet and email access.

I suspected this might happen. I told Bill long ago that we should not rely on one supplier for our communications network. Now we have no alternatives. We have to communicate with customers and suppliers using antiquated methods. I have an important job to do, and so do you. We have complex tasks to execute, and clients expect that we perform those tasks in a professional and expert manner. Now, I have to try to conduct business without an essential aspect of basic communication.

UNICOM is our supplier, but I am *not* confident that they will get us back online in an efficient way. We need suppliers who are consistent, focused on the task, and reliable. No surprises. I recommend that you address this issue immediately and get back to me.

Scene 3: CEO encourages employee to participate in 360-degree feedback

High Transformational

Jim, our company has a commitment to employee development. It is one of our most closely held priorities. We value our employees and recognize that each has his or her own unique talents. In fact, I personally believe that every employee brings something different to the table, and that we can all learn from each other. Even the entry

level clerk can make a valuable contribution, with an idea for how we can improve operation or for how we can express ourselves to customers.

In that spirit, I nominated you to participate in the next 360-degree employee development plan. This is the company's way of investing in your future; It's our way of expressing appreciation for your good work, and contributing to your continued success. With a comprehensive battery of tests and exercises, you will be evaluated by me, by your peers, and by a few of your clients. In this way, we are getting an assessment of your performance and your potential from several different angles. I expect that you'll learn something new about yourself and about how you are perceived by your colleagues. You will likely discover strengths you never knew you had, and weaknesses you didn't know existed.

I encourage you to attend the program with an open mind. I personally value continuing education, and you are an important employee. Do your best, and know that the company has your long term needs in mind.

Low Transformational

Jim, I have to send someone from our division to this training program. We are being told by corporate that every division has to send somebody. I don't think you've been to one of these "brainwashing" seminars yet, so you get to go this time.

Here's what's going to happen – you'll sit in a room, you'll take a few surveys, and then people who've never worked in our business will tell you need to start doing better. It'll probably be simple advice like, "be a better listener" or "follow through on your commitments." Real rocket science, if you ask me.

Anyway, I could care less about these things, but you gotta go. And you have to pick a few of your fellow employees and a few of your clients to fill out surveys as well. I say pick your best friends and most favorable clients. You don't want to get bad marks on one of these reviews. It could be a career killer.

Let's see what this thing is called, "360 degree Employee Development Program." Which translates to, "We'll keep track of how we can fire you at a moment's notice in the future." There are also a few sentences about long term commitment, investment in our employees, etc. You and I both know – make profit for the company and you'll be fine. Miss your budget numbers? Fall short of profit projections? And you're on the street.

Scene 4: CEO makes personal phone call to employee

High Transformational

Janet, this is Art Bollinger, and I am calling to express my appreciation for your good work with the IRS. I received a letter from James Dillon, who praised your effort in solving a delivery problem with King Industries.

I am so pleased that you were able to assist Mr. Dillon the way that you did. Our company has a long tradition of providing exceptional service, and there are many stories of heroic effort on the part of our employees in addressing customer concerns. You are now an important and valuable part of that continuing tradition. I personally hold honest communication with clients as a non-negotiable value. Further, I believe that persistent, diligent, and principled effort on behalf of clients is our company's most critical value added service. Your effort exemplified the values we hold dear, and our company deep beliefs were revealed in your work.

It is not always easy to satisfy customer demands. Each client is different, and each interaction is different. And so, I commend you on your ability to adjust your approach to

meet Mr. Dillon's individual needs. I am sure you had to be flexible and creative. Your work is an inspiration.

Thank you. I appreciate your effort, and the attention you gave to the needs of Mr. Dillon and the IRS.

Low Transformational

Janet, this is Art Bollinger, and I am calling to let you know that I received a copy of a letter written from James Dillon. Mr. Dillon described your work with King Industries. As you know, customers have high expectations of us, and it's good that you were able to execute your assignments to the customer's satisfaction. Good that you got the job done.

It's a competitive market and customers can choose to do business with or without us. Sometimes, I'm not sure that we have the right people in the right jobs. In the future, I expect that you'll draw on this experience and focus on the tasks we need to execute. For now, I'd like you to call Mr. Dillon and ask if he'll renew our service contract for next year. If he was happy with your work on the last project, I expect you can convince him to renew for next year and to pay a higher fee for our service. We must always remember our main priority in mind – to maintain a profitable business model. Despite what others may say, there is only one formula for success in this business – good decisions and execute your assignments as efficiently as possible.

Think about our next move with Mr. Dillon and the IRS.

Scene 5: CEO makes another personal phone call to employee

High Transformational

John, this is Art Bollinger. I was recently copied on a letter from Alfred Haight at Big Brothers of America. Mr. Haight highlighted your support of Big Brothers, and

mentioned your contribution to the chapter's annual fundraising campaign. This is great, and I am very proud of you. On behalf of the executive staff, I want to personally thank you for your work.

Beyond our commitment to clients, and our deep interest in conducting business in an honest and principled way, we have also wanted to be good corporate citizens. That is, we want to give back to the communities in which we work – not just financially, but with the kind of personal service that you are providing for this worthwhile organization. You are an excellent representative of the company, and your effort exemplifies the traditions that we have treasured over the years.

Congratulations on your work with Big Brothers. Your community support is truly commendable. I would personally like to make a contribution to your effort, so please call me when you get a few moments.

Low Transformational

John, this is Art Bollinger. I was recently copied on a letter from Alfred Haight at Big Brothers of America. Mr. Haight described your support of Big Brothers, and mentioned your contribution to the chapter's annual fundraising campaign.

It is good that you are involved in local social service, but I think it goes without saying that we have an important job to do. I am hopeful that your time spent with this organization will provide a few good leads for business, or at the least, some exposure to important decision-makers in the community. These kinds of groups can be great places to do business; Great places to meet influential people.

If you ever have the chance to meet with a city commissioner, perhaps at a luncheon or something, let me know. We need to get in front of elected officials as often as

possible. That's good business. Plus, I would personally like to meet Rep. Andy Wasserman. If he is on the agenda at an upcoming meeting, give me some advanced notice.

Scene 6: CEO introduces new business venture

High Transformational

Leslie, we need to make a decision about a potential new venture. During the last 6 months, a third party consulting team explored our potential to expand our product offering. They recommended that we develop a software package to assist in the grant application process.

Now we have not done this kind of thing in the past, but I wonder...Are we doing all that we can to develop our business? Is our current way of doing business what's really best for the future? Do our existing products provide a strategic competitive advantage? I wonder if we should consider alternatives. I wonder if it should try something new. Perhaps this is our time to truly take the lead in our industry.

You should have a package delivered to you shortly by interoffice mail. The package will include a summary of the consultants' report. Please look it over and decide how much of your department's budget you are willing to invest in the development of a new software package.

You know, going in this new direction will not be easy, and it will not be cheap. There will be serious start-up costs for engineering, development, production, and marketing. As the consultants suggested, there is a chance a tool like this will not be adapted, will not sell at expected levels. There is a chance that customers will choose to buy similar products from existing suppliers, and our product will be overlooked.

If the product fails, you will not lose your job, but your compensation and your division's performance will be below standard. Short term profitability could suffer.

If it succeeds, however, we would revolutionize the way our industry operates. We would emerge as the clear leader in our business, and you would stand to earn a substantial bonus.

Now I know that a project of this magnitude is risky - we could make a big investment and get no tangible return. On the other hand, the project could be quite rewarding, with high margins and a way to improve our customer service.

Think it over. I strongly encourage you to give the new project your sincerest consideration. I know there is risk and a bit of uncertainty, but I am confident in our people. I believe there is great potential here and hope that you will too.

Before I go, let me point out that this idea, though novel, is consistent with our company's history and its strategic vision. In the past, we were the first in our business to introduce a computerized system for tracking grant requests. It cost a lot of money at the start; we suffered in the short term, but the system ultimately improved our efficiency and profitability. Developing our own software tool is also risky. There exist strong competitors and difficult approval guidelines. Plus, we are attempting to move our business beyond existing boundaries – to assert ourselves as the innovator leader in our market. Yet in spite of all that, I'm optimistic.

Read over the consultant's report and decide how much you'll invest.

Low Transformational

Leslie, we need to make a decision about a potential new venture.

During the last 6 months, a third party consulting team explored our potential to expand our product offering. They recommended that we develop a software package to assist in the grant application process.

In the past, we did not develop our own products, but instead relied on systems and software developed by other companies. Our existing business model has been good for us, in that we have the systems to execute effectively. We have been able to maintain a leadership position in the market for several years. The profit margins in our current business, though modest, are stable.

Every so often, someone recommends that our business model needs to change. That the method of business we've used for many years will no longer be valid in the future. "More technology will equal more efficiency," they say, "and more efficiency means more profit." The consultant's recommendations are interesting, but they're also very risky. I wonder if we can afford to take such a risk when the competition is so fierce.

You should have a package delivered to you by interoffice mail. The package will include a summary of the consultants' report. Please look it over and decide how much of your department's budget you are willing to invest in the development of a new software package. Developing a new software package will not be easy, and it will not be cheap. There will be serious start-up costs for engineering, development, production, and marketing. As the consultants suggested, a product like this is untested in the market, and there is a chance it will not sell at expected levels. There is a chance that customers will choose to buy similar products from existing suppliers, and our product will be overlooked. If that were the case, you run the risk of losing the your initial investment. We also run the risk that short term profitability for your division will suffer. If the

product fails, you will not lose your job, but your compensation and your division's performance will be below standard. If it succeeds, however, you stand to earn a substantial bonus.

I know that a project of this magnitude is risky - we could make a big investment and get no tangible return. On the other hand, I suppose the project might be successful. If all goes well, the consultants say, "your division will earn high profit margins levels, and you will be rewarded accordingly." You will be able to shut-out several of your strongest competitors, and earn higher levels of business from the most demanding customers.

Take a look at the latest recommendation. Think it over, carefully choose a level of investment that is consistent with your expectation for the project's success. I can't say that I'm completely confident, but you make your own evaluation.

Before I go, let me remind you of our company's main priority – to maintain a stable, profitable business model. The managers who achieve the goals I set for profit and growth are compensated adequately. Our company has been successful for many years, and we've done so by sticking to core business fundamentals. Outsides will always ways for us to improve our operations. Some are good, some are just plain hogwash. There are some benefits to the consultant's idea, but there are serious risks as well. Risks that we must take seriously.

Read over the consultant's report and decide how much you'll invest.

APPENDIX C FRAMING MANIPULATIONS

Summary of Consultant's Report: Positive Frame

Based on an extensive analysis, our consultants believe that a fair market may exist for the company that can develop and market a grant proposal and administration software tool. A new software tool might provide users with an electronic system to review grant requirements and submit proposals electronically.

This could be a very positive opportunity for the company that successfully brings a software tool to market. CFACO, for example, could revolutionize the grant application process, not only in the government contracting business, but also in every industry that requires an application for government funding. CFACO could re-shape the contracting market, and might eventually move the industry towards a paperless application and review process.

There are great opportunities for the company willing to bear the burden of new software development. Now that the federal government has improved its capability of administering service electronically, the potential for full electronic grant submission is real. Further, there do not appear to be strict approval procedures and burdensome administrative obstacles to overcome.

There are, however, several risks. *GeneralSoft*, a leader in software development and marketing, has looked at the feasibility of such a tool but has not yet pursued one. If *GeneralSoft* were to get to market early, CFACO would essentially be shut out of the market for selling electronic administration tools.

That said, the outlook for CFACO on this issue is pretty positive. One in 4 new software products offers a favorable return on investment, and CFACO seems to have the talent on staff to make some real gains. Although there are heavy start-up costs, if successful, CFACO would stand to make high profit margins and take control of a large portion of the federal contracting business.

Summary of Consultant's Report: Negative Frame

Based on an extensive analysis, our consultants believe that a fair market may exist for the company that can develop and market a grant proposal and administration software tool. A new software tool might provide users with an electronic system to review grant requirements and submit proposals electronically.

However, while this seems like a good idea, the market for this kind of product is untested. As such, CFACO would stand to lose a great deal of its original investment if the product is not adapted quickly. The rewards could be substantial if the product sells well, but the losses could be equally substantial if the product fails.

It is possible to imagine scenarios in which CFACO's products are overlooked by clients, or a scenario in which competitors introduce competing tools with similar capabilities. Further, we know that the government has begun to accommodate electronic administration, but it is hard to say how a tool like this would be accepted.

In sum, there are several risks in pursuing this project. Very few software packages are successful in the market – nearly 3 of every 4 new programs fail to offer a profitable return on investment. Further, *GeneralSoft*, a leader in software marketing, has considered the feasibility of such a tool but not yet pursued one. If *GeneralSoft* were to

get to market early, CFACO would essentially be shut out of the market for selling electronic administration tools.

The outlook for CFACO on this issue is a bit unknown. There are high probabilities for falling short on the software issues, and while CFACO seems to have the talent on staff to make gains, some of the approval requirements may be out of CFACO's control. If unsuccessful, the company would stand to compromise profitability and lose access to a large portion of the contracting business.

APPENDIX D
MEASURE OF TRANSFORMATIONAL LEADERSHIP

Indicate the frequency of with which the project coordinator exhibited these behaviors.

1=Not at All, 2=Once in a while, 3=Sometimes, 4=Fairly Often, 5=Frequently, if not Always

- 1 _____ Re-examines critical assumptions to question whether they are appropriate
- 2 _____ Talks about his/her most important values and beliefs
- 3 _____ Seeks differing perspectives when solving problems
- 4 _____ Talks optimistically about the future
- 5 _____ Instills pride in me for being associated with him/her
- 6 _____ Talks enthusiastically about what needs to be accomplished
- 7 _____ Specifies the importance of having a strong sense of purpose
- 8 _____ Spends time teaching and coaching
- 9 _____ Goes beyond self-interest for the good of the group
- 10 _____ Treats me as an individual rather than just as a member of a group
- 11 _____ Acts in ways that build my respect
- 12 _____ Considers the moral and ethical consequences of decisions
- 13 _____ Displays a sense of power and confidence
- 14 _____ Articulates a compelling vision of the future
- 15 _____ Considers me as having different needs, abilities and aspirations from others
- 16 _____ Gets me to look at problems from many different angles
- 17 _____ Helps me to develop my strengths
- 18 _____ Suggests new ways of looking at how to complete assignments
- 19 _____ Emphasizes the importance of having a collective sense of mission
- 20 _____ Expresses confidence that goals will be achieved

APPENDIX E
MEASURE OF RISK AVERSION

Indicate the extent to which you agree with each of the following statements.

1=Strongly Disagree, 2=Disagree, 3=Neither Agree nor Disagree, 4=Agree, 5=Strongly Agree

- 1 _____ I am a cautious person who generally avoids risks.
- 2 _____ People must take risks in their careers to be successful.
- 3 _____ I always play it safe, even if it means occasionally losing out on a good opportunity.
- 4 _____ I view risk on a job as a situation to be avoided at all costs.
- 5 _____ I am not willing to take risks when choosing a job or a company to work for.
I prefer to remain on a job that has problems that I know about rather than take the risk of a new job with unknown problems even if the new job offers greater rewards.
- 6 _____
- 7 _____ I prefer a high security job with a steady salary over one offering high risks and high rewards.
- 8 _____ I think a low risk career strategy is wise even if it means losing out on making it big.

APPENDIX F
MEASURE OF FRAMING

Drawing only on what's written in the consultant's marketing report, indicate the extent to which you agree with each of the following statements.

1=Strongly Disagree, 2=Disagree, 3=Neither Agree or Disagree, 4=Agree, 5=Strongly Agree

1 ___ CFACO could have positive gains by developing a software tool.

2 ___ The development of a software tool is within CFACO's control.
3 ___ The market for a software tool in government contracting is
 uncertain.

4 ___ According to consultants, CFACO could suffer sizeable losses they
 introduce a new software package.

5 ___ The prospects for CFACO are positive.

Note. CFACO is the acronym for Consolidated Federal Agency Contracting Office, the hypothetical company name used during the in-basket exercise

APPENDIX G
MEASURE OF ISSUE INTERPRETATION

Indicate the extent to which you agree with each of the following statements about the new venture.

1=Strongly Disagree, 2=Disagree, 3=Neither Agree or Disagree, 4=Agree,
5=Strongly Agree

- 1 ____ Development of a new software tool is a plus.
- 2 ____ The new trends in this business are a threat.
- 3 ____ The future will be better because of a new software tool.
- 4 ____ The new software tool represents a potential loss.
- 5 ____ The consultants presented opportunities.

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BIOGRAPHICAL SKETCH

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