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THE RELATIONSHIPS BETWEEN LEADER BEHAVIOR,  
FOLLOWER MOTIVATION, AND PERFORMANCE

by

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A dissertation submitted in partial fulfillment of the requirements  
for the degree of Doctor of Philosophy  
in the Department of Psychology  
in the College of Sciences  
at the University of Central Florida  
Orlando, Florida

Fall Term 2008

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## ABSTRACT

The primary goal of this study was to examine ways in which leaders can influence followers' motivation. Motivation is a key construct in industrial and organizational psychology due to its impact on employee performance. Modern motivation theories adapt a more sophisticated view of motivation in terms of definition, relationships, and operationalization. In particular, one new theory of motivation is the Pritchard and Ashwood Theory (2008). This theory proposes that motivation is comprised of four perceived relationships that, in combination, reflect the extent to which employees believe that their actions on the job will lead to need satisfaction. These four relationships are called connections.

The relationship between two leadership behaviors, initiating structure and consideration, and the Pritchard and Ashwood motivational connections was examined. It was hypothesized that the two leader behaviors would have differential relationships with the four motivational connections. These differential relationships should facilitate targeted behavioral feedback to leaders to improve each of the motivational connections. Additionally, motivation was hypothesized to mediate the relationship between the leader behaviors and employee outcomes.

The Pritchard and Ashwood Theory is operationalized by the Motivation Assessment Questionnaire (MAQ) (Pritchard, 2006a). A secondary goal of this study was to contribute to the validity evidence of the MAQ. This recently developed questionnaire has shown good psychometric properties and initial validity evidence has demonstrated moderate relationships between the MAQ and job performance. However, this is the first study of the relationship between the MAQ and employee outcomes with a large sample of full-time working adults. Further, this study expanded potential MAQ outcomes beyond employee performance to include organizational citizenship behaviors and turnover intentions.

A sample of 208 employees was recruited from two central Florida companies. These employees responded to the MAQ and other study measures via a secure, online survey. Participating employees provided contact information for their supervisors who were then invited to participate in the study by providing criteria ratings. A large number of the invited supervisors participated ( $n = 195$ ).

Results indicated robust support for one of the leadership behaviors: consideration. Consideration was related to performance and this relationship was partially mediated by motivation. On the other hand, initiating structure was not related to employee performance. Consideration and initiating structure were not differentially related as hypothesized to the four motivational connections. This was due in part to the strong correlation between the two leadership behaviors ( $r = .73$ ).

Results provided additional validation evidence for the MAQ. The overall effort scale was not related to performance as it had been in the two previous studies that used a student sample. However, the average of the motivation connections predicted performance. Additionally, the MAQ predicted both organizational citizenship behaviors and turnover intentions.

As mentioned previously, the sample was drawn from two central Florida companies. Although many of the study hypotheses were supported for the overall sample, the observed relationships were very different for the two subsamples. Similarly, findings in this study differ from previous studies using the MAQ with working students. Potential reasons for these differences are discussed.

## ACKNOWLEDGMENTS

I am thankful to each of my committee members for their work on this project. Drs. Kimberly Smith-Jentch, Ronald Piccolo, and Leslie DeChurch each provided a unique perspective and contribution. Their efforts resulted in considerable improvements to this dissertation. I would also like to thank my advisor and chair of my dissertation committee, Dr. Robert Pritchard for his invaluable input. In addition to his guidance on this dissertation, I am very appreciative to him for his support and advice throughout the doctoral program.

On a personal note, I would like to thank my family for cheering me on throughout this process. In particular, I would like to thank my sister, Brenda, for always understanding and helping me to see the bigger picture. I cannot possibly imagine how I would have gotten through graduate school without my husband, Alex. His belief, encouragement, and support were unwavering and because of him these past few years have been a lot of fun!

Last but not least, I am grateful to and in awe of the newest member of my family, my daughter Madeline Annabelle Harrell. Her nonnegotiable timeline kept me focused and ever motivated towards my goal! Every day she amazes me.

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## LIST OF ACRONYMS

A-R	Action-to-Results
E-O	Evaluations-to-Outcomes
IS&C	Initiating Structure and Consideration
LBDQ	Leader Behavior Description Questionnaire
MAQ	Motivation Assessment Questionnaire
OCB	Organizational Citizenship Behaviors
O-NS	Outcomes-to-Need Satisfaction
P-A Theory	Pritchard and Ashwood Theory of Motivation
R-E	Results-to-Evaluations

## CHAPTER 1: INTRODUCTION

At the most basic level, leadership theories propose that leaders can have a powerful impact on individual, group, and organizational outcomes. Further, follower motivation is thought to be a primary mechanism through which leaders exert their influence. Thus it follows that if leaders wish to improve outcomes, they should enhance the motivation of their followers. The purpose of this study is to more fully integrate leadership and motivation domains by considering the relationship between two leadership behaviors (i.e. initiating structure and consideration) and motivational facets as outlined by the Pritchard-Ashwood Theory of Motivation (Pritchard & Ashwood, 2008). Additionally, this study contributes to the validity evidence of the Motivation Assessment Questionnaire, a questionnaire designed to operationalize the Pritchard-Ashwood Theory.

This research will add to both the motivation and the leadership literatures. Motivation is typically believed to be influenced by a combination of individual and contextual factors. Leadership can be a powerful contextual factor. However, it is often not explicitly included in motivation theories (Zaccaro, Hildebrand, & Nelson, 2008) . For example, in the motivation theories described in the following section, only Path-Goal Theory focuses on leadership as a primary contributor to follower motivation.

Leadership theories, on the other hand, often include the concept on motivation; however, leadership research tends to operationalize motivation rather simplistically as an overall measure, rather than considering the components of motivation (Zaccaro et al., 2008) If individuals can achieve a high level of motivation through multiple ways, overall measures of motivation make it difficult to advise leaders and organizations how to improve their motivational climates. For instance, meta-analytic evidence suggests that transformational leadership and contingent reward

leadership have similar effects on followers' overall levels of motivation (Judge & Piccolo, 2004). While the overall effect of those two leadership styles on motivation is not significantly different, it is not clear *which components* of motivation either of the styles affects. Thus, which style should practitioners recommend to a leader who has diagnosed a specific motivational deficiency in one of his/her followers? This dilemma is not unique to the transformational leadership literature; viewing motivation globally rather than as a complex, multi-faceted construct is common throughout the leadership literature (Zaccaro et al., 2008). Therefore, a practical goal of this study is to assist practitioners in suggesting more targeted solutions to leaders whose followers have low motivational levels.

One exception to the lack of integration between leadership and motivation theories is the Path-Goal Theory of Leadership (House, 1971). This theory drew heavily on expectancy theories and suggested that leader behaviors affect the followers' motivational constructs of expectancy, instrumentality, and perceived valence. Additionally, this theory suggested a number of moderators of the leader behavior – follower motivation relationship. Despite the strong theoretical framework of Path-Goal Theory, results of primary empirical studies and a meta-analysis have demonstrated mixed support (Wofford & Liska, 1993). However, in a reformulation of the theory, House offered several plausible reasons for the lack of consistent support and provided encouragement that the effort to integrate the leadership and motivation research, while difficult, is a worthwhile undertaking (House, 1996); this is discussed in more detail in a later section. Thus, it seems there are fertile grounds for continued research in this direction.

In an attempt to integrate the motivation and leadership literatures, this paper will focus primarily on the Pritchard-Ashwood Theory of Motivation (Pritchard & Ashwood, 2008) and

leadership behaviors (i.e. Initiating Structure and Consideration). I will propose that leaders' behaviors influence followers' performance in part through followers' motivation. In the following sections, these constructs will be defined, the literatures will be reviewed, and predictions will be made concerning the relationships between motivation and performance and leadership and performance. Then, literature specifically linking leadership to motivation will be reviewed and hypotheses regarding the proposed relationships will be proposed.

### *The Pritchard-Ashwood Theory of Motivation*

The Pritchard and Ashwood Theory of Motivation (P-A Theory) is a refinement and addition to the motivation concepts originally laid out in the Naylor, Pritchard, and Ilgen theory (1980). While P-A Theory is an expectancy theory, it incorporates many of the constructs and relationships described in other motivation domains. Thus, it provides a holistic theory of motivation around which to base this work. In this section, I will provide an overview of P-A Theory, link the theory to other motivation literatures, review evidence regarding the relationship between the P-A Theory and performance, and discuss the question of how the components in P-A Theory can best be combined to represent the overall construct of motivation.

#### *Overview of the P-A Theory*

In this paper, motivation is defined as the process one uses to allocate his or her energy across tasks in an effort to meet needs (Pritchard & Ashwood, 2008). As stated above, P-A Theory is an expectancy theory of motivation and as such, at the most basic level, states that individuals are motivated towards actions based on their perceived relationship between their effort devoted to that action and the receipt of outcomes that will satisfy their needs. P-A Theory splits this overall expectation into a chain of four connections which must be strong in order for

an individual to be motivated: Action-to-Results Connections, Results-to-Evaluations Connections, Evaluations-to Outcomes Connections, and Outcomes-to-Need Satisfaction Connections. Each of these connections is described below.

The Action-to-Results Connections (A-R Connections) represent the degree to which individuals feel that effort on their part will lead to a result, or output, of some kind. For instance, the task of cleaning a room may have a strong A-R Connection. The more effort one puts in, the cleaner the room becomes. However, for other tasks, such as composing a musical script, the connection may be weaker. This is because more effort does not necessarily lead to a more finished script.

The Results-to-Evaluation Connections (R-E Connections) refer to the expected relationship between the level of results produced by individuals and the favorableness of the evaluation of those results. The evaluation could be formal or informal and could be from anyone (e.g. peers, supervisors, self, family members, etc.). From a work perspective, this connection reflects the fact that some behaviors, and the results that follow, are more valuable to the organization than others. For instance, the job of a professor may include research, teaching, and service. At a research university, the results of one's research will be more strongly tied to evaluations than the results of one's service; thus, the R-E Connection for research is stronger than that for service.

The third link is the Evaluation-to-Outcome Connections (E-O Connections). These connections refer to the extent to which organizational outcomes are tied to the evaluations one receives. Pay is one particularly tangible example of an outcome; however, other less obvious outcomes are important as well, such as office space, recognition, and promotions. For example,



jobs which provide salary increases based on one's performance have a stronger E-O Connection for salary than jobs in which everyone receives the same yearly cost-of-living salary increase.

Outcome-to-Need Satisfaction Connections (O-NS Connections) are the final connections specified by the theory. The O-NS Connections are expectations regarding the degree to which receiving the outcomes offered by the organization would satisfy one's needs. For instance, a \$500 bonus may be quite satisfying to an entry-level employee. However, this same bonus may do little to satisfy the needs of a successful, high-salaried employee. The extent to which outcomes are satisfying depends partially on the strength of the needs at the time.

The P-A Theory suggests that all individuals have needs and a finite source of energy available to meet their various needs. As such, individuals allocate their resources in such a way that anticipated need satisfaction is optimized. Thus the strength of the connections described above predicts how one will choose to allocate the finite energy resources.

### *Relationship between the P-A Theory and Other Theories of Motivation*

There is an enormous literature on work motivation. This section compares P-A Theory to some other theories of motivation to demonstrate the comprehensive nature of P-A theory. There are excellent, comprehensive recent reviews of the work-motivation literature available for the interested reader (Kanfer, 1992; Kanfer, Chen, & Pritchard, 2008, in press; Latham, 2007; Latham & Pinder, 2005; Mitchell & Daniels, 2003). The remainder of this section will discuss how P-A Theory includes key features of other theories of motivation. To do this, I will use the broad motivational categories identified by Mitchell and Daniels as the organizing framework: expectancy theory, self-efficacy, goal-setting, need theories, reinforcement, and justice. This section is not intended to suggest that P-A Theory is superior to other theories of motivation or

that other theories are unnecessary; it is simply intended to describe the comprehensive nature of the P-A Theory.

*Expectancy theory.* As noted previously, P-A Theory is an expectancy theory. As such, it shares much in common with other expectancy theories. Perhaps the most well-known expectancy theory is the VIE Theory developed by Vroom (1964). The three main constructs of the theory are expectancy, instrumentality, and valence. Expectancy is one's belief that his/her effort will result in performance; this relationship is reflected in the A-R and R-E Connections of P-A Theory. Instrumentality is the belief that performance will lead to an outcome: the E-O Connections in the language of P-A Theory. Valence is the subjective value of the outcomes available; stated differently, it is the degree to which one anticipates outcomes will satisfy his or her needs (i.e. the O-NS Connections).

Clearly there is considerable overlap between P-A Theory and other expectancy theories, which is expected given the developmental roots of P-A Theory. However, there are some areas in which P-A Theory differs from other expectancy theories. For instance, P-A Theory focuses on resource allocation rather than overall effort, it explicitly states that the connections are relationships and are often non-linear, and the theory identifies determinants of each connection (Pritchard & Ashwood, 2008; Pritchard, Harrell, DiazGranados, & Guzman, 2008).

*Self-efficacy.* Self-efficacy is one of the most popular constructs in psychology and has been linked to a variety of positive outcomes (Judge, Jackson, Shaw, Scott, & Rich, 2007). According to Baron, Byrne, and Branscombe (2006, p. 181), self-efficacy is "the belief that one can achieve a goal as a result of one's own actions." Bandura defined self-efficacy as being primarily situation or task specific; however, he also acknowledged that past successful experiences contributed to a generalized feeling of self-efficacy (Downey & McMurtrey, 2007).

The construct of task specific self-efficacy is quite similar to the A-R Connections. Both task specific self-efficacy and the A-R Connection refer to the degree to which an individual anticipates that effort on his/her part will lead to a result.

*Goal setting.* Goal setting is another popular and well researched area within motivation. Research consistently shows that difficult, specific, and achievable goals result in higher levels of performance than “do your best” goals (Locke & Latham, 2002). Setting specific goals can be thought of as clarifying the R-E Connections, in that specific goals inform employees how varying levels of results will be evaluated. Levels of output/results at or above the level of the goal will be evaluated positively; levels below the goal will be evaluated more negatively. Achievable goals strengthen the A-R Connection by making it clear to employees that their actions can bring about results. Locke and Latham point out an apparent contradiction between goal setting theory and expectancy theories: Difficult goals lead to better performance despite the fact that difficult goals should result in lower expectancy. However, as they point out, when one considers a goal at a given level of difficulty (i.e. with-in goal vs. between goal conditions), expectancy does predict higher performance. Furthermore, the P-A theory makes it explicit that expectancy should be considered a relationship, not the probability of reaching a given level of output. When expectancy is seen as a relationship, both goal setting and P-A Theory predict higher performance when expectancies, as conceptualized as A-R connections, are high.

*Need theories.* Need theories are another category of motivation theory that has received considerable attention. Although Maslow’s Need Hierarchy is often misunderstood and the validity of the theory has been questioned, the theory is one of the most enduring in psychology (Koltko-Rivera, 2006). Mitchell and Daniels (2003) described McClelland’s need theory as another popular needs based approach to motivation. This theory proposed that people were

motivated by three primary needs: need for achievement, need for power, and need for affiliation. This theory has been used to help explain why some people are drawn towards careers in leadership (Stewart & Roth, 2007).

At the most general level, need theories state that needs influence motivation, need strength varies across people, the strength of needs changes over time, and it is the need strength at a given time that influences motivation. Needs are also incorporated in P-A Theory. P-A Theory recognizes that needs are important to motivation, need strength varies across people and across time, and it is the need strength at the time that influences motivation. P-A theory goes beyond this by positing that needs are only motivating to the extent that variations in the amount of outcomes lead to variations in the amount of need satisfaction, i.e. O-NS Connections. Further P-A Theory states that the relationship is non-linear in that varying levels of the outcome do not result in uniform increases in anticipated need satisfaction.

*Reinforcement.* Reinforcement theory is closely related to modern motivation theories (Mitchell & Daniels, 2003). Research has shown repeatedly that people are more likely to repeat behaviors that are reinforced (Stajkovic & Luthans, 1997). P-A Theory recognizes this finding in the E-O and O-NS Connections by suggesting that in order for work outcomes to be motivating, they should be tied to the evaluations of one's results and lead to need satisfaction.

*Justice.* The final category of motivational theories discussed by Mitchell and Daniels (2003) is Organizational Justice. Distributive justice is concerned with rules regarding the distribution of outcomes (Colquitt, Conlon, Wesson, Porter, & Ng, 2001). The P-A Theory incorporates ideas of distributive justice. Tying outcomes to evaluations (high E-O Connections) and evaluations to results (high R-E Connections) is a distribution rule which should result in increased perceptions of distributive fairness. Additionally, the theory acknowledges that

outcomes will be more satisfying when they are perceived as fair. For this reason, justice perceptions are included as determinants of the O-NS Connections. The concept of procedural justice suggests that individuals may perceive a situation as fair if they have control or input in the process, regardless of the outcome (Colquitt et al., 2001). The A-R, R-E, and E-O Connections are related to procedural justice in that if these connections are strong, employees will have considerable control over the process.

As has been noted in the preceding paragraphs, P-A Theory incorporates many of the important constructs found in other motivation theories. Because a goal of this paper is to better understand how leaders influence follower's performance, it was important to base my hypotheses around a motivational theory that met two criteria. The theory must be robust enough to explain many views of motivation, and motivation, as defined in the theory, must be related to performance. Now that I have explained how the P-A Theory is related to other motivation theories, I will turn my attention to the second criteria, the relationship between P-A Theory and performance.

### *Relationship between Motivation and Performance*

The primary reason that researchers and practitioners are interested in motivation is because of the relationship between motivation and performance. Thus, useful motivation theories should explain variance in the performance of workers. Empirical tests of relationships between P-A Theory and performance are limited. This is in part due to the fact that until recently there were no measures operationalizing the theory. However, Pritchard and his colleagues have recently developed the Motivation Assessment Questionnaire (MAQ) that is designed to assess P-A Theory (Pritchard, 2006b). This study will contribute to the ongoing validation evidence of the theory and the questionnaire.

The MAQ includes five primary sections: a subscale for each of the four P-A Theory connections and an overall motivation scale. This newly developed questionnaire has shown good psychometric properties. More information about the questionnaire instrument, its development, and its psychometric properties is provided in the Method section. The current section reviews the literature surrounding empirical tests of the relationship between the P-A theory and performance.

Direct supporting evidence using the MAQ is available in the form of the two unpublished manuscripts: a thesis and a dissertation. Both of these projects examined the relationship between the MAQ and supervisor rated performance. The first paper examined the overall motivation scale of the MAQ (Botero, 2007) in a sample of police officers. Botero found the correlation between motivation and supervisor rated performance was .36. This correlation was marginally significant ( $p = .08$ ). However, the number of participants was quite small (Ns ranged from 24 to 28 respondents). As expected, when supervisors rated both motivation and job performance the correlation was considerably stronger,  $r = .81, p < .05$ ; this effect is likely due to both a genuine relationship between motivation and job performance as well as rater biases (e.g. halo error and performance cue bias).

A dissertation study using the MAQ found results of a similar magnitude (Cornejo, 2007). This study found that the MAQ measure of overall motivation was related to supervisor ratings of performance,  $r = .33, p < .05$ . Again, when supervisors rated both motivation and job performance, the correlation was considerably stronger,  $r = .85, p < .01$ . The author of the study questioned whether the magnitude of the correlations would generalize to other samples (Cornejo, 2007, p. 83). This study used undergraduate students who were working at least 10

hours a week. It is possible that the relationship between their motivation and performance is smaller than would typically be found among adults working full time.

The previous study hypothesized, but failed to support, significant relationships between P-A Theory connections and supervisor rated performance (Cornejo, 2007). The correlations between the motivation connections and supervisor rated performance were as follows: A-R Connection,  $r = .16$ ; R-E Connection,  $r = .21$ ; E-O Connection,  $r = .29$ ; and O-NS Connection,  $r = .07$ . One reason that the hypotheses were not supported is due to lack of statistical power ( $n = 37$ ). However, another reason for the lack of support for these hypotheses can be found in P-A Theory. The theory does not predict each connection should be related to performance. In fact, it predicts that level of motivation will be determined by the lowest connection, not by each connection separately (Pritchard & Ashwood, 2008).

The first hypothesis concerns the relationship between overall motivation and performance. The theoretical scaffolding for this hypothesis is strong and was explained in the previous section that linked the P-A Theory to a wide variety of motivational theories. Further, the preliminary empirical evidence that is available suggests that there is a moderate relationship between overall motivation and supervisor rated performance. The current study seeks to replicate that finding while improving on previous limitations (i.e. sample size and participant characteristics). Overall motivation will be indexed in three ways for the purpose of this study: mean score on the overall motivation scale, the average of the P-A connections, and the weakest of the P-A connections.

Hypothesis 1a: Motivation as measured by the Overall Motivation scale will be positively related to supervisor rated performance.

Hypothesis 1b: Motivation as measured by the average of the P-A connections will be positively related to supervisor rated performance.

Hypothesis 1c: Motivation as measured by the weakest of the P-A connections will be positively related to supervisor rated performance.

As stated previously, the P-A theory proposes that the weakest connection will be a better predictor of performance than the other connections (Pritchard & Ashwood, 2008). Stated differently, the theory posits that the connections are non-compensatory: Strength in some connections will not make up for weaknesses in others. As an example, imagine a case where the O-NS link is very high; for instance \$1,000,000 reward offered to a struggling single parent. Further imagine the task is to climb Mt. Everest this weekend and the individual has no previous climbing experience and does not believe she is capable of the task (i.e. low A-R connection). Despite the strong incentive of the reward, the weak A-R connection would prevent her from attempting the task. This is also in line with the learned helplessness literature that suggests that when organisms learn that outcomes are beyond their control, they are no longer motivated towards action, even when the outcome is extreme (e.g. dogs being exposed to electrical shock) (Maier & Seligman, 1976).

The dissertation study described previously examined the difference between indexing motivation as the overall scale, the average of the connections, or the minimum connection (Cornejo, 2007). However, results did not support the weakest link hypothesis. The weakest connection was not a significantly better predictor of performance ( $r = .27$ ) than was the score on the overall motivation scale ( $r = .33$ ) or the average of the connections ( $r = .22$ ). However, as stated previously this study used a small sample of college students who worked only part-time. It seems feasible that in this sample the relationship between the overall motivation scale (which



is a measure of effort) and performance would be stronger than in other samples because the work being done may have been simpler. However, unlike in part-time, presumably simple jobs, in more complex jobs, the weakest connection may be a stronger predictor of performance than the overall motivation scale (i.e. effort). For instance suppose two individuals in a complex job have very different A-R Connection scores but both put in the same amount of effort at their jobs overall. The one with the higher A-R Connection will likely perform better because he will direct his effort in more effective ways.

Another reason that the previous study may have failed to find an effect is because the relationship between the weakest connection and performance and the average connection and performance were contrasted. However, the weakest connection was included in the average of the connections; this resulted in a high correlation between the weakest connection and the average connection ( $r = .92$ ); with a correlation so strong, it is not surprising that a differential relationship was not found. Thus I retested this relationship in a different sample and I calculated the average connection excluding the weakest connection. I hypothesized that consistent with the P-A model, the weakest connection will be a stronger predictor of performance than the Overall Motivation scale or the average of the other three connections.

Hypothesis 1d: The relationship between the weakest connection and performance will be stronger than the relationship between the overall motivation scale and performance.

Hypothesis 1e: The relationship between the weakest connection and performance will be stronger than the relationship between the average of the other three connections and performance.

### *Relationship between Motivation and Other Outcomes*

A moderate relationship between motivation as measured by the MAQ and performance has been observed; however, it is unclear how the MAQ relates to other important employee outcomes. There has been a recent call in literature to expand the criterion domain to consider outcomes other than task performance (Borman & Motowidlo, 1993; Campbell, 1990). One outcome that has received a lot of empirical attention recently is organizational citizenship behaviors (OCB).

OCB is positive employee behavior that is above and beyond that which is required by the formal role (C. A. Smith, Organ, & Near, 1983). OCB was originally defined as having two dimensions: altruism and generalized compliance (C. A. Smith et al.). However, more recent models have included additional or different factors (Organ, 1988; Williams & Anderson, 1991). For the purposes of this paper OCB will be treated as one factor consistent with the recommendations of a recent meta-analysis on the factorial structure of OCB (Hoffman, Blair, Meriac, & Woehr, 2007).

I propose that those who have a high overall level of motivation are more likely to engage in OCB. The MAQ is not limited to motivation of tasks specifically included in one's formal role; rather it asks about one's motivational connections for the job in general. Further, although OCB and task performance are distinct, they are also very highly correlated (Hoffman et al., 2007). Thus, motivation as measured by the MAQ should predict OCB as well as task performance.

In regards to the specific motivational connections, a differential relationship for the A-R and O-NS motivational connections is expected. This is because factors dealing with ability tend to be more strongly related to task performance; meanwhile, attitudes are more strongly related

to OCB (Organ & Ryan, 1995). The A-R connection describes the perceived ability for actions to lead to work results; thus it should predict performance more strongly than it predicts OCB. On the other hand, the O-NS connection describes the extent to which employees believe they will be satisfied if they receive the outcomes offered by the job. Therefore, I expect that O-NS connection will be more strongly related to OCBs than performance.

Hypothesis 2a: Motivation will be positively related to OCB.

Hypothesis 2b: The A-R connection will be a better predictor of performance than of OCB.

Hypothesis 2c: The O-NS connection will be a better predictor of OCB than performance.

Another important job outcome is turnover intentions. Turnover costs American industry approximately \$11 Billion per year (Abbasi & Hollman, 2000). Hulin (1991) described the Progression-of-Withdrawal Model which suggests that individuals withdrawal from work in steps. Before leaving their jobs, employees first withdraw by doing less at work (e.g. daydreaming, taking breaks). Thus a decline in motivation may precede intentions to turn over. Meta-analytic results support this model (Griffeth, Hom, & Gaertner, 2000). Although this meta-analysis did not examine motivation, they did find that performance, promptness, and attendance were negatively correlated with turnover; thus suggesting that those who are more motivated are less likely to turnover.

Hypothesis 2d: Motivation will be negatively related to turnover intentions.

### *Initiating Structure and Consideration*

Although there is an abundance of leadership behaviors, styles, and theories available in the literature, Initiating Structure and Consideration (IS&C) are the focus of the current paper. There are several reasons why I chose to focus on IS&C. First, IS&C are foundational constructs

in many modern theories of leadership (Fleishman, 1998). Secondly, focusing on behaviors rather than styles or traits allows one to be more prescriptive in recommendations to practitioners which, as stated previously, is an applied goal for this paper. Third, Path-Goal Theory is an example of an attempt to integrate the leadership and motivation literatures. Though this study does not attempt to test Path-Goal Theory, the theory provides a theoretical and empirical background. Finally, a recent meta-analysis found sizable correlations between IS&C and important organizational outcomes; the authors suggested that these behaviors had been forgotten too soon and recommended renewed research in this area (Judge, Piccolo, & Ilies, 2004).

There are five primary goals for this section. First I will provide a historical overview of the development of IS&C and define the constructs. Next, I will relate IS&C to other leadership theories, styles, and behaviors. Then, I will review the literature regarding the effectiveness of IS&C in improving performance of subordinates. Next, I will discuss the potential non-linearities and a moderator of the relationship between IS&C and performance. Finally, I will move beyond task performance and discuss OCB as a possible outcome of IS&C.

### *History and Definition of Initiating Structure and Consideration*

Prior to the 1950s, leadership research focused primarily on the traits of leaders. The idea at the time was that leaders were born, not made, and thus the emphasis was on identifying the traits necessary for effective leadership so that good leaders could be selected (Bass, 1990; House & Podsakoff, 1994). This provides a historical context for the original IS&C research conducted in the early 1950s. At the time of development, IS&C represented a considerable shift in thinking.

In a historical account, Fleishman (1973) discussed the development of IS&C behaviors through the Ohio State studies. In an effort to refocus leadership research towards what leaders do rather than who leaders are, approximately 1800 leader behavior statements were written. Duplicates and overlapping items were deleted and an eventual list of 150 items was retained and became the original leader behavior questionnaire, a precursor to commonly used behavioral scales such as the Leader Behavior Description Questionnaire (LBDQ), Supervisor Behavior Description Questionnaire (SBDQ), and the revised Leader Behavior Description Questionnaire (LBDQ-Form XII); these scales are discussed in more detail in the Method Section. The orthogonal factors of IS&C were derived from a series of factor analyses of the questionnaire that each resulted in two factors that were named initiating structure and consideration. This developmental history is important because it underscores one of the common criticisms of research on IS&C: It tends to be atheoretical. In fact, that is one potential cause Fleishman cited of the mixed empirical findings concerning the antecedents and consequences of the behaviors.

Bass (1990, p. 512) provided a commonly cited definition for initiating structure: “such leadership behavior as insisting on maintaining standards and meeting deadlines and deciding in detail what will be done and how it should be done.” He went on to state that leaders high in initiating structure establish clear communications and patterns of work and are oriented towards the task at hand; this type of leader is directive. Similarly, House and Podsakoff (1994, p. 50) described leaders high in initiating structure as “those who structured the work for their subordinates, and provided clear messages regarding the roles they expected their subordinates to perform.” House (1971) pointed out that those high in initiating structure are similar to portrayals of leaders in classical management theories; they plan, organize, direct, and control.

Alternatively, consideration is “the extent to which a leader exhibits concern for the welfare of the other members of the group” (Bass, 1990, p. 511). In particular, Bass noted that considerate leaders are appreciative of good work, focus on job satisfaction of subordinates, treat others as equals, put subordinates at ease, take suggestions, and consult with subordinates on important decisions. House and Podsakoff (1994, p. 50) described leaders high in consideration as “those who demonstrated friendliness and a concern for the well-being of their subordinates. Thus, while initiating structure focuses on organizing tasks, consideration is more people-oriented.

#### *Relationship between IS&C and Other Theories, Styles, and Behaviors of Leadership*

As mentioned previously, IS&C emerged in several of the Ohio State factor analysis studies of leader behavior conducted in the 1950s. However, given that it has been half a century since those studies were conducted, it is fair to question the extent to which those two behaviors can currently account for a good deal of variability in leaders’ behaviors. In fact, one of the reasons that I choose to use the constructs of IS&C is because they are comprehensive and still relevant as is explained in the following paragraphs.

Bass provided a review of the theoretical and empirical literature linking IS&C to other leadership styles (1990). For instance, democratic and autocratic styles of leadership reflect the degree to which leaders retain power versus distribute power among their subordinates. Bass noted that the democratic style is conceptually similar to consideration, and the autocratic style is similar to initiating structure (p. 416). In reviewing the empirical findings linking the constructs, Bass reported moderate to high correlations between both IS&C and the two styles (p. 524). Similarly, task and relation orientations are also in-line conceptually with IS&C. However, Bass reported mixed empirical findings regarding their relationships. Given the high degree of

correlation between both IS&C with a variety of leadership styles, Bass noted that a strong general factor of leadership exists.

Dimensions of transformational and transactional leadership also share meaning with IS&C. Transformational leadership includes intellectual stimulation (e.g. encouraging divergent thinking, taking risks) and individualized consideration (e.g. attending to individuals' growth and development) (Bono & Anderson, 2005). These two dimensions, intellectual stimulation and individualized consideration, are conceptually similar to the definition provided earlier of consideration. Alternatively, transactional leadership includes contingent reward, which is support and resources in exchange for subordinates' efforts and performance (Bono & Judge, 2004). This type of leadership is task related and is conceptually similar to initiating structure. However, Bass (1990) reported that both IS&C correlate moderately to strong with all three dimensions (intellectual stimulation, individualized consideration, and contingent reward). The lack of differentiation between the relationships of transformational and contingent reward leadership with other leadership types and behaviors, including IS&C, is not particularly surprising given the meta-analytic correlation estimate of .80 between transformational leadership and contingent reward (Judge & Piccolo, 2004).

Nowhere is the foundational nature of IS&C more apparent than in a comprehensive review of leadership typologies conducted by Fleishman and his colleagues (Fleishman et al., 1991). These authors reviewed the literature from 1940-1986 and identified 65 different leadership classification systems. They concluded that "in nearly every classification system, dimensions are proposed focusing on (a) the facilitation of group social interaction, and (b) objective task accomplishment" (p. 253) which, as they pointed out is similar to the constructs of IS&C. More recently, this sentiment was echoed "after all the conceptualizations, factor

analyses, and theorizing are done, some form of Consideration and Structure generally emerge among the overarching constructs or as a significant part of the mix” (Fleishman, 1998, pp. 831-832).

### *Relationship between IS&C and Performance*

Prior to a recent meta-analysis, IS&C were widely recognized as important theoretical building blocks in the leadership literature, but no longer applicable for continued research (Judge et al., 2004). However, this meta-analysis found relationships between IS&C and a variety of outcomes including follower satisfaction, motivation, leader effectiveness, leader job performance, and group/organization performance, thereby suggesting that these behaviors deserve continued attention. Particularly relevant to this section are the estimated relationships between group/organization performance and initiating structure ( $p = .30$ ) and consideration ( $p = .28$ ) (Judge et al., 2004).

Since the 2004 meta-analysis, Keller (2006) found that initiating structure positively predicted team performance, particularly in certain types of projects (i.e. development projects that were more incremental and required more communication and less creativity than research projects). This finding is significant on its own. However, it is particularly encouraging for the field because Judge and his colleagues (2004) were unable to find any empirical studies of IS&C between the years of 1987 and 2004. Additionally, a search in the PsycINFO database returns three dissertations from 2007 dealing with IS&C. Perhaps IS&C are receiving more research attention following the 2004 meta-analysis.

Thus, based on the accumulated empirical evidence of 130 studies included in the recent meta-analysis (Judge et al., 2004), as well as the emerging literature, I hypothesize that IS&C will be related to performance. The theoretical explanation for this hypothesis is that IS&C



increase performance by increasing follower motivation. This theoretical proposal is fully explained in the later section: IS&C and the P-A Theory of Motivation.

Hypothesis 3a: Leader's initiating structure will be positively related to the subordinate's performance.

Hypothesis 3b: Leader's consideration will be positively related to the subordinate's performance.

### *Shape and moderators of the relationship between IS&C and Performance*

While the main, linear relationships between IS&C and performance are interesting, they are well-established in the literature and thus do not add considerably and are a minor focus of this project. In my opinion, what is more interesting is examining the shape of the relationship between IS&C and performance. For instance, is there a point of diminishing returns beyond which additional IS&C is unnecessary? Or is more always better? In addition to the issue of linearity, this section will examine a potential moderator of the relationship between initiating structure and performance: task ambiguity.

*Linearity.* Only one previous study has examined the issue of linearity in the effects of IS&C (Fleishman, 1998; Judge et al., 2004). In 1962, Fleishman and Harris published a study that became the most popularly cited article in Personnel Psychology in the 1960's (Fleishman, 1998). When asked to write some post hoc reflections, Fleishman noted that one of the most interesting findings in his study has received the least amount of attention: IS&C had a curvilinear relationship with both employee grievances and turnover. Although initiating structure tends to be positively related to performance, this study found negative relationships with grievances and turnover. Specifically, turnover and grievances increased most sharply at low levels of consideration and high levels of initiating structure. Fleishman pointed out that the

curvilinear relationships between IS&C and criteria may be one reason for inconsistent findings in the literature and highlighted the importance of range restriction.

Yukl (1981) also commented on the lack of replication of the nonlinearity finding. Additionally, he noted concern about the generalizability of the finding. In particular he was concerned about the sample being foremen and questioned whether other professions would show similar shapes. Additionally, he noted that the criteria in the study were grievances and turnover; he suggested that the shape may be different for different outcomes. Given that I have hypothesized positive relationships between IS&C and performance and the 1962 study found negative relationships between initiating structure and grievances and turnover, the findings of the 1962 may not generalize in terms of direction of effect. However, it seems reasonable that the nonlinear finding may generalize.

At the extreme, high levels of initiating structure and low levels of consideration resemble destructive leader behaviors. In a recent effort to create a taxonomy of ineffective leader behaviors, Rasch, Shen, Davies, and Bono (2008) identified nine categories of destructive behaviors. They found that these nine categories of behavior had an undesired effect on a myriad of employee outcomes: turnover intentions, self-reported job performance, motivation, satisfaction, and mood. Several of these ineffective leadership behavior categories are conceptually similar to extreme levels of IS&C.

An excessively high level of initiating structure (e.g. providing too much detail of what things should be done and how, insisting too strongly on standards and deadlines) resembles the behavior (Rasch et al., 2008) labeled “Over-Controlling”. Unlike initiating structure, over-controlling has a negative effect on employee outcomes (Rasch et al., 2008). Therefore, although

I am predicting that initiating structure will have a positive effect on performance, the relationship should become negative at a high enough level.

Extremely low levels of consideration are similar to the constructs that Rash et al. (2008) call “Failure to Consider Human Needs” and “Poor Emotional Control.” In the same study, the authors found that failing to consider human needs had a particularly strong effect on employee outcomes as compared to the other ineffective behaviors. Therefore, while I am predicting a positive relationship between consideration and performance, I predict that the relationship will be steepest at low levels of consideration.

Hypothesis 4a: The relationship between initiating structure and performance will be a nonlinear, quadratic, one such that it is positive for low and moderate levels of initiating structure but not for extremely high levels.

Hypothesis 4b: The relationship between consideration and performance will be a nonlinear, quadratic, one such that it is consistently positive but the slope is steepest for low levels of consideration.

*Task Ambiguity as a Moderator.* One of the things that authors often note when they review the literature on IS&C is that there are mixed results regarding their correlations with criteria. This is also reflected in the significant Q Statistics in the recent IS&C meta-analysis (Judge et al., 2004); this suggests that moderators are likely present. The lack of consistent findings is particularly true for initiating structure as opposed to consideration (Bass, 1990; House & Podsakoff, 1994; Yukl, 1981). Situational approaches to leadership suggest that the extent to which a leader’s behaviors are effective is contingent on variables in the situation (Yukl, 1981).

One situational approach to leadership is the Path-Goal Theory (House, 1971). This theory is discussed in detail in the following section. Although not the primary purpose of the current study, I will explore propositions one and three of House's revised theory (House, 1996). Specifically, House proposed that initiating structure will be effective when task demands are ambiguous and satisfying (Proposition 1), but that behavior will not be effective for unambiguous, dissatisfying tasks (Proposition 3) (p. 336). The logic is if the task is clear and straight-forward without the leader's influence, then additional effort on the leader's behalf to provide psychological structure is neither needed nor desired. This is also in line with the substitutes for leadership model which suggests that environmental characteristic can diminish the necessity and effectiveness of a leader's behavior (Kerr & Jermier, 1978).

Kahn and his colleagues defined task ambiguity as a type of role ambiguity in which individuals do not have the task related information to carry out their roles (Eys & Carron, 2001). One of the functions of a leader high in initiating structure is to clarify information about the task (House, 1996). However, for this hypothesis, I am interested in task ambiguity beyond the effects of the leader. Stated differently, I will consider task ambiguity as the extent to which a task would be unclear without the input of the leader.

Hypothesis 4c: The relationship between initiating structure and performance will be moderated by task ambiguity such that the relationship will be most positive when the task is ambiguous.

#### *Relationship between IS&C and Organizational Citizenship Behaviors*

I have already discussed the relationship between IS&C and task performance. However, it is also important to consider whether those leader behaviors are related to other types of

performance such as OCB. In particular, a relationship between consideration and OCB seems likely.

In their seminal work, Smith and colleagues (1983) proposed that consideration and leader supportiveness may be related to citizenship behaviors because considerate leaders demonstrate OCB and thus their followers may repeat OCB based on the leader's example. They also suggested that followers may engage in more OCB with a considerate leader out of a sense of reciprocity. A moderate relationship between OCB and consideration was confirmed in a meta-analysis (Organ & Ryan, 1995).

In addition to replicating this finding, I also propose that consideration will have a stronger relationship with OCB than initiating structure will. While both IS&C were hypothesized to positively affect performance, there is no reason to believe that initiating structure will be positively related to OCB. In fact, research indicates that when decisions are made hierarchically, as is the case with leaders high in initiating structure, employees may be less likely to engage in OCB. Another reason that consideration, as opposed to initiating structure, may have a stronger relationship with OCB is because consideration is more strongly related to satisfaction (Judge et al., 2004). In turn satisfaction is more strongly related to OCB than to task performance (Organ & Ryan, 1995). In other words, followers of considerate leaders are happier and happier people are more likely to engage in OCBs.

Hypothesis 5a: Consideration will be positively related to OCB.

Hypothesis 5b: The relationship between consideration and OCB will be stronger than the relationship between initiating structure and OCB.

### *IS&C and the P-A Theory of Motivation*

A primary goal of this paper is to integrate P-A Theory with the behaviors of IS&C. In particular, I propose that IS&C affects performance (see Hypotheses 2a-b) and that this effect is mediated by motivation as defined by P-A Theory. Now that P-A Theory and IS&C have been explained and linked to performance, this section focuses on the relationship between IS&C and motivation. First, I will review Path-Goal Theory because it is particularly relevant to this integration. Next, I will review previous findings linking IS&C to motivation. Then, I will develop specific hypotheses relating IS&C to the motivational connections of the P-A Theory.

#### *Path-Goal Theory of Leader Effectiveness*

As mentioned in the opening section, Path-Goal Theory is an example of the integration of the motivation and leadership literatures. Although this dissertation is not a direct test of the Path-Goal theory, the theory is discussed because of its theoretical relevance. Path-Goal Theory is based heavily on expectancy theory and IS&C (House, 1971). Relevant to this section, Path-Goal Theory proposes that leaders have their effects on distal outcomes such as performance and satisfaction through motivation. In his original theory, House made four propositions. The first was that leaders motivate employees by increasing the outcomes available from work goal-attainment and making the path to these outcomes easier. The second was that by clarifying the path-goal relationship, leader behavior will have a positive effect on motivation by reducing role ambiguity and allowing for external controls. The third was that these behaviors will be more appropriate in some cases than others. Specifically, if the path-goal relationship is already clear, then addition of controls will lead to decreased satisfaction. The final proposition was that leader behavior aimed at satisfying needs of subordinates would increase performance if need satisfaction was linked to goal-directed effort.

Unfortunately, tests of the theory yielded inconsistent results and ultimately, a meta-analysis failed to support many of the hypotheses (Wofford & Liska, 1993). The authors however noted a significant limitation is the failure to include motivational variables in the study of the Path-Goal Theory: “Although path instrumentalities are the dependent variables of the basic propositions of the original path-goal theory, most of the research on the theory has used measures of satisfactions, performance, role clarity, and organizational commitment as surrogates. Because many other variables may affect these surrogate measures, tests of the theories are weakened by their use” (p. 872). House (1996, p. 331) expressed a similar frustration in his reformulation of the theory: “To my knowledge there have been no tests of the effects of leader behaviors on follower valences. Further, the only test of the effects of leader behaviors on follower expectancies is that of House and Dessler (1974) which yielded rather strong support for the theory based on two independent samples.”

In addition to the measurement of motivational constructs, House (1996) proposed two other guidelines for future research that will be used in the current paper. The first is that researchers avoid using measures that contaminate the initiating structure construct by including punitive behaviors. In the past, the Supervisor Behavior Description Question (SBDQ) was used often and this measure includes items that are inconsistent with the construct of initiating structure. In fact, 19% of the studies in the IS&C meta-analysis measured initiating structure with the SBDQ (Judge et al., 2004). These studies had significantly, meaningfully smaller validities for initiating structure than studies using other measures (average  $r = .05$  versus .29, .27, .27, and .29). The second guideline concerns the test of moderators hypothesized by the theory. Rather than measuring constructs such as task ambiguity, researchers have often relied on surface surrogates such as job title. The current paper will attempt to overcome these previous

limitations. Despite the promising guidelines for future research, to date I am only aware of one study that tested the propositions in this reformulated theory, and it did not involve motivation (Schriesheim, Castro, Zhou, & DeChurch, 2006).

Thus the current study provides a retest of two of the original Path-Goal hypotheses (House, 1971) using the best practices for future research recommended by House (1996) and Wofford and Liska (1993). Because the Path-Goal Theory uses different terminology than P-A Theory, P-A Theory connections are listed in parentheses following similar or related constructs. First, House hypothesized that initiating structure would decrease role ambiguity (A-R and R-E Connections) for non-routine tasks. Secondly, he hypothesized that consideration could result in an increase in positive valences or a decrease in negative valences (O-NS Connections). These two hypotheses are retested in Hypothesis 7a, 7c, and 7g.

#### *Relationship between IS&C and Motivation*

The meta-analysis conducted by Judge and his colleagues (Judge et al., 2004) was discussed in the section on IS&C and performance. In addition to performance, these authors considered other criteria including follower motivation. They found overall estimated meta-analytic correlations of .50 and .40 with consideration and initiating structure, respectively. Thus, it appears that there is a strong relationship with these leadership behaviors and follower motivation.

The findings of the Judge et al. (2004) meta-analysis support the general proposition of this paper that IS&C is related to motivation and to performance; however, they did not test a mediation model. Further, this meta-analysis does not clarify to which motivational components IS&C are related. Because the meta-analysis is a summary of the relationship, it is not clear from the meta-analysis which measures of follower motivation were used or which motivational



constructs those measures tapped. Therefore, in the following paragraphs, I review the primary studies included in the estimation of these effect sizes to get more information about the motivational constructs represented.

I obtained a list of the ten studies included in the estimation of the 21 IS&C – follower motivation effect sizes from the second author, Ronald Piccolo. I reviewed each of the primary studies to see how motivation was operationalized. One of the things that was interesting was that not only were different measures used by different authors, but in many cases the measures were of different constructs. In order to simplify presentation and discussion, I translated the motivational constructs in the primary studies into P-A Theory terminology; while there were not exact matches of the constructs, I placed the constructs in the primary studies with the connection from P-A Theory that most closely matched the definition. Appendix A presents a summary of the motivation constructs from these primary studies. Readers may notice that the literature reviewed in the section is somewhat dated. However, as a reminder, there have been limited empirical studies done on the IS&C behaviors since 1987.

One of the things that I noted from this review is that researchers tended to look at motivation overall; five of the ten studies included an overall measure as the primary dependent variable(s). In some cases, the overall measures were based on extra effort (Ehrlich, Meindl, & Viellieu, 1990) or job related daily motivation (Schriesheim, 1979). Additionally, there were three studies that conceptualized motivation in accordance with expectancy theory, but computed overall motivation by combining expectancy, instrumentality, and valence mathematically using a variety of formulas (Evans, 1974; Matsui, Osawa, & Terai, 1975; Miles & Petty, 1977). This accurately reflects the thinking at the time of overall motivation as mathematical combination of its subcomponents. Unfortunately, results for relationships between the individual motivational

components and IS&C were not reported in these cases which makes it hard to generalize the findings from these studies to the current set of hypotheses.

This mathematical combination is particularly troubling because although the basic concepts of expectancy, instrumentality, and valence have been supported, the mathematical combination of the constructs to arrive at an individual's overall motivation has typically not been supported (Muchinsky, 2006). Another issue is in the way that many studies using these expectancy theory variables have operationalized the components. They did not actually ask about the relationship, they asked about specific points in the relationship. For example, asking what the likelihood is for high performance if effort is high is a common way of measuring expectancy. However, this does not get at the relationship; on an easy task, performance can be high with low or high effort.

I anticipate that in the present study IS&C will be related to overall motivation. IS&C were developed to represent leader behaviors that are effective and can lead to increased motivation and subsequent performance of subordinates. Theoretical rationale for how and why overall motivation is affected is presented in the next section. Empirical results of prior research largely confirm the relationship between IS&C and motivation as well. For instance, a study by Ehrlich and colleagues (1990) demonstrated that extra effort was correlated with initiating structure,  $r = .43$ , and with consideration,  $r = .40$ . Schriesheim (1979) found that typical daily motivation was related to consideration,  $r = .20$ , but not to initiating structure,  $r = .01$ . Evans (1974) examined the relationship between the product of expectancies and instrumentalities with consideration for a variety of specific behaviors; he found correlations ranging from .49 to .54. Miles and Petty (1977) calculated overall motivation from the expectancy components using two

different formulas. They found that the correlations with initiating structure were .05 or .23 and with consideration were .30 and .27 depending on how motivation was calculated.

Hypothesis 6a: Leader's initiating structure will be positively related to the subordinate's overall motivation.

Hypothesis 6b: Leader's consideration will be positively related to the subordinate's overall motivation.

In addition to the overall measures of motivation, there was one study that conceptualized motivation as persuasiveness (Stogdill, Goode, & Day, 1963), that was not relevant to the current study. The other studies, however, provided background for the next set of hypotheses, the relationships between IS&C and the motivation connections of P-A Theory. In the following paragraphs, rationale is explained for the hypotheses, the related empirical results are discussed, and hypotheses are presented.

*A-R and R-E Connections.* As a reminder, the A-R Connections refer to the perceived relationship between level of effort applied to actions and level of results/output obtained; the R-E Connections is the perceived relationship between level of results and the level of the evaluation one receives. Note that the actions, results, and evaluations components of the P-A Theory are very much task/performance oriented. On the other hand, the E-O and O-NS links deal with the outcomes received as a result of one's performance and how much those outcomes satisfy needs. I point this out because previous studies have demonstrated that initiating structure tends to be more strongly correlated with performance-based outcomes and consideration more strongly correlated with affective outcomes such as satisfaction (Bass, 1990; Judge et al., 2004; Yukl, 1981).

Recall from a previous section that leaders are classified as high in initiating structure when they decide what should be done and how, set performance standards, and communicate this information with their subordinates (Bass, 1990; House & Podsakoff, 1994). Thus, one of the roles of a leader high in initiating structure is to implement appropriate work strategies. Work strategies are an important component of motivation and are directly related to the A-R Connections. When good work strategies are known and used, employees should feel as though their actions will lead to work results. P-A Theory supports this proposition; one of the stated determinants of the A-R Connections is work strategies (Pritchard & Ashwood, 2008). Oldham (1976) examined the relationship between placing personnel and initiating structure. Placing personnel involves making sure that people are in positions where they are able to use their skills effectively to produce work results; thus this construct is related to the A-R Connections. The correlation between this construct and initiating structure was .43; the relationship with consideration was smaller,  $r = -.09$ .

Another key characteristic of leaders high in initiating structure is setting and communicating performance standards. Performance standards make it clear to employees what level of work result is acceptable and what is unacceptable. When this information is communicated to employees and work of a given quality/quantity is consistently evaluated in the same way, employees' R-E Connections should become quite clear. Two studies have compared initiating structure and expectancy (Miles & Petty, 1977; Szilagyi & Keller, 1976). Recall from a previous section that expectancy is similar to the combination of the A-R and R-E connections. The Miles and Petty study demonstrated support for the proposition that initiating structure is a more powerful behavior for strengthening the A-R and R-E connections than is consideration;  $r = .26$  versus  $.18$ ; results of the Szilagyi and Keller study revealed small effect sizes for each of

the behaviors ( $r = .07$  and  $.10$ ). Similarly, the Oldham study (1976) found that setting goals, a behavior that is closely in-line with the R-E Connection, was more positively related to initiating structure than to consideration ( $r = .44$  and  $-.18$ ).

Hypothesis 7a: Leader's initiating structure will be positively related to the A-R Connection.

Hypothesis 7b: Leader's initiating structure will have a stronger effect on the A-R Connection than will consideration.

Hypothesis 7c: Leader's initiating structure will be positively related to the R-E Connection.

Hypothesis 7d: Leader's initiating structure will have a stronger effect on the R-E Connection than will consideration.

*E-O and O-NS Connections.* The E-O and O-NS Connections involve an individual's anticipation of what will happen after the work results have been produced and evaluated. Specifically, they refer to whether the evaluation will lead to an outcome and whether that outcome will satisfy need(s). Thus rather than focusing on the actual work performance, these connections focus on the eventual anticipated satisfaction that will be received. Therefore, they should be related to consideration more strongly than they are related to initiating structure (Judge et al., 2004).

Considerate leaders show appreciation for good work. Recall from a previous section that work outcomes include not only the tangible (money, office space, etc.) but also the intangible. Thus appreciation can be thought of as an additional outcome, and when leaders express the appreciation based on good work (an evaluation), this will strengthen the E-O link. The E-O link is similar to the concept that has previously been related to IS&C, Expectancy II. Expectancy II

is the perceived link between performance and personal reward (Szilagyi & Keller, 1976). One study found that Expectancy II was related to initiating structure,  $r = .28$  or  $.21$  depending on the sample, but did not consider the relationship with consideration (Dessler & Valenzi, 1977). Another study found that Expectancy II was more strongly related to consideration than initiating structure; the difference was substantial depending on the measures used,  $r = .40$  versus  $.35$  or  $r = .46$  versus  $.07$  (Szilagyi & Keller, 1976).

Considerate leaders consult with subordinates to seek input before making decisions (House & Podsakoff, 1994). This is known as “voice” in the justice literature and has been shown to increase satisfaction with outcomes (Colquitt et al., 2001). Considerate leaders also demonstrate concern about the welfare and satisfaction of their subordinates (Bass, 1990). This also has a counter part in the justice literature, interpersonal justice. Interpersonal justice is related to perceptions of fairness overall and satisfaction with the outcomes (Colquitt et al., 2001). In P-A theory, the fairness of the outcome distribution process is a determinant of the strength of the O-NS connections. Thus, considerate leaders should increase the O-NS Connections of their subordinates. O-NS Connections are similar to the construct of valence in traditional expectancy theories. House (1996) reported that there were no studies examining the relationship between IS&C and valence. I was only able to find one study that measured valence; however, results were not reported for valence alone, but rather valence was combined with expectancy theory components to form overall motivation (Matsui et al., 1975).

Hypothesis 7e: Leader’s consideration will be positively related to the E-O Connection.

Hypothesis 7f: Leader’s consideration will have a stronger effect on the E-O Connection than will initiating structure.

Hypothesis 7g: Leader’s consideration will be positively related to the O-NS Connection.

Hypothesis 7h: Leader's consideration will have a stronger effect on the O-NS Connection than will initiating structure.

*Summary of Introduction*

In the proceeding sections, I made a number of hypotheses regarding the relationships between leadership, motivation, and performance. These hypotheses are reflected in the overall model presented in Figure 1. I have hypothesized that the leader behaviors of IS&C will be related to the motivation as measured by the P-A Theory and that motivation would be related to performance. Therefore my final hypothesis is one of mediation.

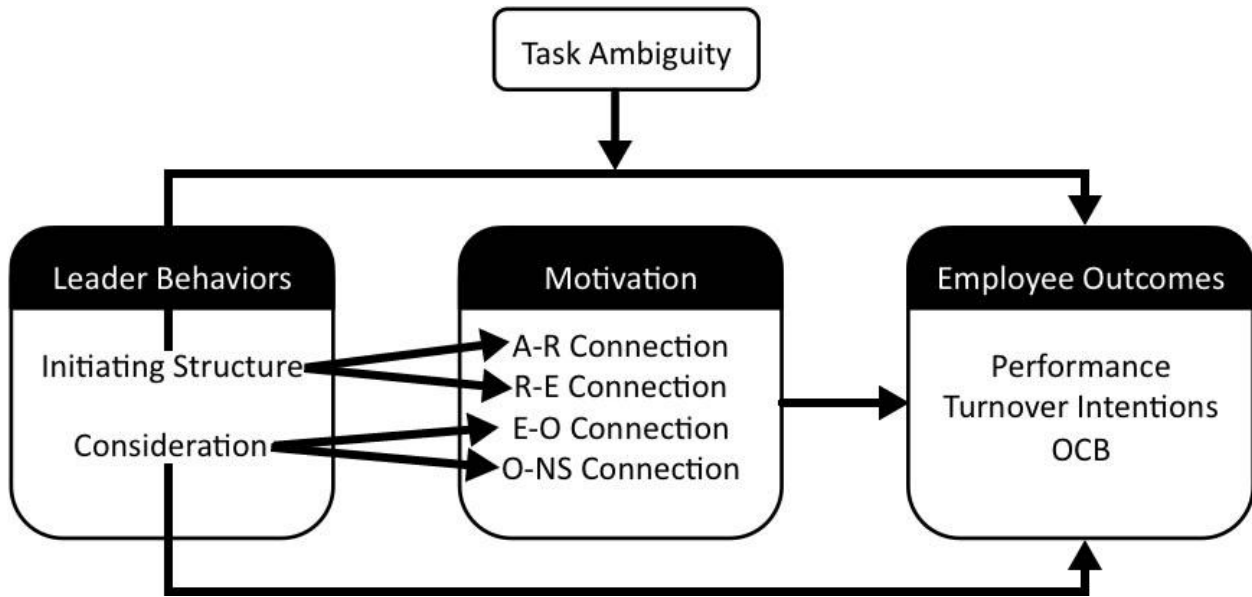


Figure 1. Theoretical Model

The proposal that motivation mediates the relationship between leader behaviors and performance as reflected in Path-Goal Theory (House, 1971, 1996). More broadly, the assumption that leaders have their influence on outcomes in part due to their effect on follower motivation is a common one in the leadership literature (Zaccaro et al., 2008). Additionally, motivation theories typically assert that motivation is caused by situational and individual factors

and that motivation in turn leads to performance (Kanfer, 1992). Leader behavior is one potential important situational factor (Zaccaro et al., 2008).

Despite the theoretical rationale that motivation mediates the relationship between leader behavior and performance, I am not hypothesizing full mediation. This decision was based primarily on the results of simulation studies demonstrating the power issues associated with typical tests for mediation. In particular larger sample sizes simultaneously make it easier to show that the independent variable and dependent variable are related, but harder to show that that relationship is no longer significant once the mediator is introduced; this makes complete mediation difficult to demonstrate (Stone-Romero & Rosopa, 2004). From a theoretical standpoint, it is also plausible that leaders' behaviors may influence performance, particularly as rated by the leader, through other variables in addition to motivation.

Hypothesis 8a: Motivation will partially mediate the relationship between initiating structure and performance.

Hypothesis 8b: Motivation will partially mediate the relationship between consideration and performance.



## CHAPTER 2: METHOD

### *Participants*

Participants were recruited from two central Florida companies. Organization 1 is a branch office of a telecommunications company. This company is preparing to introduce new products to the market including high speed internet access and high definition television. The employees at this branch office are preparing for this product expansion by updating databases with information about customer's telecommunication infrastructure. When updates to the infrastructure are needed, employees at this branch office read and interpret work orders and update this information in customer databases. Organization 2 is a sales and marketing organization. They promote the Central Florida area as a tourist and convention destination. Employees at this Organization hold a wide range of positions from sales and marketing to human resources to accounting.

A priori power analysis suggested that a total of 191 participants were needed for the study. Study invitations were sent to 287 employees; 215 responded (74.91% response rate). Supervisors of the 215 respondents were invited to complete the supervisor portion of the study; 195 supervisor surveys were completed resulting in a supervisor response rate of 90.70%. A total of seven incomplete responses were excluded from the analyses, providing a total of 208 responses maintained in the study.

Of the 208 respondents that were included in the study, 40 were male, 133 were female, and 35 did not indicate their gender. Age was reported by 164 of the respondents; of those respondents, the average age was 37.99 years old ( $SD = 11.16$ ). One hundred and seventy respondents indicated their race: 98 were Caucasian (57.65%), 29 were African-American (17.06%), 31 were Hispanic/Latino (18.24%), 7 were Asian & 4.12%), and 5 selected the "other"

category (2.94%). Tenure with the company was obtained for 163 respondents; of these, the average tenure with the company was 4.71 years ( $SD = 6.31$ ). Respondents had been in the workforce an average of 19.05 years ( $SD = 11.56$ ).

As noted before, the supervisors of the survey respondents were also invited to participate in the study by providing performance ratings. Each survey respondent provided the contact information for the supervisor to which he/she typically reports; thus these dyads represent intact working relationships. On average, the supervisors in the study provided ratings for 6 subordinates ( $SD = 6.32$ ). However, that varied widely from as few as one to as many as twenty-six. Supervisors were from a variety of levels of the organizations from front-line leaders to vice presidents.

### *Procedure*

All surveys were administered via a secure, online survey software: Survey Monkey with 128 bit SSL encryption. Survey links were e-mailed directly to the respondents from the researcher's e-mail address. After completing the survey, respondents were asked to provide their supervisor's e-mail address. At that time, the supervisor portion of the survey was automatically sent to the supervisor. All responses were saved to a secure online database.

### *Measures*

#### *Motivation*

Motivation was measured using the MAQ. The development and validation evidence of the MAQ is outlined in an unpublished document (Pritchard, 2006a) and the developmental history is summarized in the recent dissertation that used the MAQ (Cornejo, 2007). The measure was developed to operationalize P-A Theory and as such has five primary scales: A-R,

R-E, E-O, O-NS, and Overall Motivation. Each scale is averaged to arrive at a score. Internal consistency reliability estimates of the scales range from .76 to .89. Two week test-retest reliability estimates range from .55 to .89.

One change was made to the instrument from the way it is typically administered. This was done to reduce the length of the scale to maximize response rate. As discussed previously, under the concept of “evaluations,” P-A Theory includes all types of evaluations (i.e. formal, informal, and self). Thus, in the survey, the connections dealing with evaluations, the R-E and E-O Connections, each include three subparts: formal, informal, and self. This results in six scales for these connections rather than two. Due to survey length constraints, the three types of evaluations were collapsed to form two scales: one each for the R-E and E-O Connections. As such, the instructions for these scales were changed to indicate that respondents should consider all types of evaluations (formal, informal, and self) when making ratings on the R-E and E-O Connections. Additionally, slight wording changes were made to reflect the changes in instructions. For instance, rather than asking “If the quantity and quality of my work went up a lot, my formal evaluations would:” I will ask “If the quantity and quality of my work went up a lot, the evaluations of my work would:” The MAQ with this change is presented in Appendix C. Reliability estimates remained sufficiently high in this administration (A-R:  $\alpha = .78$ , R-E:  $\alpha = .83$ , E-O:  $\alpha = .77$ , ONS:  $\alpha = .71$ , and Overall motivation scale,  $\alpha = .85$ ).

### *Performance*

Performance was assessed using the five item scale previously developed for use with the MAQ validation. Prior researchers have found this scale to have moderate to high internal consistency reliability,  $\alpha = .88$  (Cornejo, 2007) and .62 (Botero, 2007). An example item is “How often does this person perform his/her job effectively?” with response options ranging

from “never” to “always.” One of the items in the scale was excluded from the composite in order to maximize internal consistency. The item was “In how many areas does this person's performance need to improve?” After the item was reverse-coded, the internal consistency of the scale was .52 with this item and .90 without it. The complete scale is presented in Appendix D.

### *Turnover*

Turnover was measured as the average of three items developed for research with the MAQ. These three items create an internally consistent scale ( $\alpha = .84$ ). An example item is “I have started to look around for another job.” The complete scale is presented in Appendix F.

### *Organizational Citizenship Behavior*

OCB was measured as the average of five items from one of the most commonly used OCB scales (Podsakoff, MacKenzie, Moorman, & Fetter, 1990). One item was used from each of the five dimensions on which the scale was built; items were selected to maximize domain coverage by selecting items with high factor loadings while also considering conceptual overlap to the domain. This abbreviated scale demonstrated sufficient internal consistency reliability ( $\alpha = .75$ ). The scale is presented in Appendix E.

### *Leadership*

Several measures have been developed to operationalize the constructs of IS&C: The Leader Behavior Description Questionnaire (LBDQ), Leader Behavior Description Questionnaire Form XII (LBDQ XII), Leader Opinion Questionnaire (LOQ), and the Supervisor Behavior Description Questionnaire (SBDQ) (Bass, 1990). This study used the IS&C scales of the Leader Behavior Description Questionnaire Form XII (Stogdill, 1962). Theoretical considerations reveal several benefits to this scale as opposed to others. As mentioned

previously, one common criticism of the SBDQ is the inclusion of punitive items in the initiating structure scale; one such example is that the supervisor “needles subordinates for greater effort” (Bass, 1990, p. 513). House argued that the SBDQ and the LBDQ were not valid instruments to test Path-Goal Theory and instead preferred the LBDQ XII (House, 1996) because the earlier scales were inconsistent with the constructs. The LOQ is not appropriate for the current study because it is not a measure of subordinates’ perceptions of leaders’ behaviors, but is rather designed to measure leader attitudes towards the behaviors of IS&C (Fleishman, 1973).

In addition to the theoretical considerations, empirical results also support the use of the LBDQ XII. Bass reported that the internal consistency estimates for the scales were in the .80 to .90 range. Additionally, meta-analytic results (Judge et al., 2004) indicated that LBDQ Form XII consideration scale had a large effect size when predicting criteria ( $p = .54$ ; for the other scales,  $p = .51, .34, \text{ and } .54$ ). The effect size for the initiating structure scale was moderate ( $p = .32$ ; for the other scales,  $p = .37, .40, \text{ and } .07$ ). The LBDQ Form XII is presented in Appendix G. In this study, internal consistency was high for both scales ( $\alpha = .90$  for both).

### *Task ambiguity*

Task ambiguity was measured using five items derived from the Rizzo, House, and Lirtzman (1970) role ambiguity scale, a commonly used measure. Reliability estimates of .78 to .81 were found in the original validation studies of the scale (Rizzo et al., 1970). Smith, Tisak, and Schmieder (1993) reviewed the literature surrounding the psychometric properties of the scale and extended the research using confirmatory factor analysis. They determined that the scale was psychometrically sound and recommended its continued use. Specifically, they found that the ambiguity scale was distinct from the role conflict scale, a proposition that had been questioned in previous literature. Additionally, they found that the scale and item statistics of the

measure were acceptable. One conceptual limitation that they noted about the role ambiguity scale is that it only operationalizes task ambiguity, not socioemotional ambiguity, the other type of role ambiguity discussed by Kahn and his colleagues. However, given that this study is interested in task ambiguity that is actually an advantage.

The original scale by Rizzo and colleagues (1970) was altered in two ways. The original scale was six items. However, I dropped one of the items as recommended in the literature because of its low factor loading and item reliability (C. S. Smith et al., 1993). The second change was made in order to reflect the conceptual definition of task ambiguity used in the current study. Recall from above that I am interested in task ambiguity as the extent to which a task would be unclear without the input of the leader. For this reason, the following stem was added to each question: “Without any input or advice from my supervisor...” Additional, wording of the items were changed slightly to follow the new question stem. For example, an original item read “I know what my responsibilities are” but the revised item will read “Without any input or advice from my supervisor I would know what my responsibilities are.” Both the original and altered wordings are presented in Appendix H. For this sample, internal consistency was high ( $\alpha = .94$ ).

## CHAPTER 3: RESULTS

### *Overall*

Means, standard deviations, reliability estimates, and correlations of study variables are presented in Table 1. For consistency, all significance values are based on two-tailed tests unless otherwise noted. As mentioned in the methods section, participants were drawn from two companies. The number of respondents for the two organizations was very close:  $n = 101$  for organization 1 and  $n = 107$  for organization 2. Preliminary analyses revealed some important demographic differences in the two samples. Particularly, respondents from organization 2 were older ( $t(162) = -2.56, p = .011$ ), had a higher level of education ( $t(173) = -4.82, p = .00$ ), and worked more hours per week ( $t(173) = -3.88, p = .00$ ) than those at organization 1. Due to possible differences in the relationship between the study variables for the two samples, each analysis was conducted three times: once for the full sample, once for organization 1, and once for organization 2. The means, standard deviations, reliability estimates, and correlations of study variables are broken down by organization in Tables 2 and 3. A summary of study hypotheses and findings is presented in Appendix B.

Table 1. Correlation Matrix (Overall)

Variable	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. A-R	4.05	.64	(.78)	.47**	.33**	.26**	.24**	.70**	.51**	.72**	-.01	-.03	-.03	-.06	.07	.06
2. R-E	3.70	.68		(.83)	.54**	.40**	.25**	.83**	.70**	.81**	.19**	.23**	.01	-.13	.13	.15*
3. E-O	3.43	.71			(.77)	.38**	.20**	.78**	.88**	.66**	.16*	.14	.07	-.17*	.18*	.15*
4. O-NS	4.24	.52				(.71)	.31**	.64**	.42**	.70**	.14	.15*	.02	-.17*	.20**	.14
5. Ovr. Mot.	4.39	.52					(.85)	.33**	.20**	.36**	.15*	.19**	-.14	-.41**	.03	.06
6. Avg. Mot.	3.86	.48						(.88)	.86**	.97**	.15*	.16*	.03	-.17*	.17*	.17*
7. Min. Mot.	3.23	.68							--	.71**	.16*	.14*	.08	-.19*	.20**	.19**
8. Avg. Mot.	4.06	.46								(.73)	.14*	.15*	-.01	-.16*	.17*	.14*
9. Consid.	3.90	.74									(.90)	.73**	-.15*	-.33**	.17*	.30**
10. IS	3.95	.73										(.90)	-.25**	-.25**	.08	.22**
11. Task Amb.	2.49	1.51											(.94)	.19*	-.06	-.06
12. Turnover	1.93	.95												(.84)	.06	-.04
13. Perf.	3.91	.60													(.90)	.68**
14. OCB	3.78	.55														(.75)

*Note.* Coefficient Alpha reported in the diagonal. Ovr. Mot. = Overall Motivation Scale; Avg. Mot. = Average of the Motivation Connections; Min. Mot. = Minimum of the Motivation Connections; Avg. Mot. = Corrected Average of the Motivation Connections; Consid. = Consideration; Task Amb. = Task Ambiguity; Perf. = Performance.  $N = 160 - 206$ . \* $p < .05$ . \*\* $p < .01$ .



Table 2. Correlation Matrix (Organization 1)

Variable	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. A-R	4.02	0.69	(.80)	.54**	.39**	.29**	.21*	.73**	.56**	.74**	-.02	-.06	-.03	.11	-.03	-.02
2. R-E	3.77	0.73		(.85)	.53**	.54**	.26**	.85**	.69**	.86**	.07	.14	-.02	-.06	.03	.00
3. E-O	3.33	0.76			(.78)	.43**	.15	.78**	.90**	.65**	.10	.09	.02	-.16	.07	-.01
4. O-NS	4.17	0.57				(.72)	.33**	.70**	.46**	.75**	.09	.17	.03	-.10	.12	.02
5. Ovr. Mot.	4.35	0.53					(.85)	.30**	.15	.34**	.19	.25*	-.10	-.31**	.09	.09
6. Avg. Mot.	3.82	0.53						(.89)	.87**	.97**	.08	.11	.00	-.07	.06	-.01
7. Min. Mot.	3.14	0.72							--	.73**	.06	.05	.05	-.11	.04	-.04
8. Avg. Mot.	4.04	0.52								(.78)	.08	.12	-.02	-.04	.06	.01
9. Consid.	3.93	0.77									(.89)	.76**	-.19	-.35**	.20*	.32**
10. IS	4.05	0.78										(.92)	-.32**	-.23*	.17	.24*
11. Task Amb.	2.52	1.62											(.93)	.08	-.06	-.01
12. Turnover	1.96	0.87												(.76)	.11	.10
13. Perf.	3.82	0.55													(.89)	.77**
14. OCB	3.69	0.46														(.73)

*Note.* Coefficient Alpha reported in the diagonal. Ovr. Mot. = Overall Motivation Scale; Avg. Mot. = Average of the Motivation Connections; Min. Mot. = Minimum of the Motivation Connections; Avg. Mot. = Corrected Average of the Motivation Connections; Consid. = Consideration; Task Amb. = Task Ambiguity; Perf. = Performance. *N* = 77- 101. \**p* < .05. \*\**p* < .01.

Table 3. Correlation Matrix (Organization 2)

Variable	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. A-R	4.08	0.59	(.77)	.40**	.25*	.21*	.27**	.66**	.43**	.70**	.01	.02	-.03	-.20	.16	.11
2. R-E	3.63	0.62		(.81)	.62**	.23*	.26**	.83**	.77**	.76**	.33**	.34**	.05	-.20*	.30**	.35**
3. E-O	3.52	0.65			(.75)	.27**	.25*	.79**	.85**	.67**	.24*	.24*	.14	-.18	.26*	.26*
4. O-NS	4.31	0.45				(.70)	.28**	.54**	.33**	.61**	.21*	.16	.00	-.22*	.26*	.24*
5. Ovr. Mot.	4.43	0.51					(.86)	.36**	.24*	.39**	.11	.16	-.18	-.50**	-.04	.03
6. Avg. Mot.	3.89	0.43						(.86)	.86**	.96**	.26**	.26**	.07	-.27*	.28**	.30**
7. Min. Mot.	3.31	0.63							--	.70**	.29**	.30**	.14	-.24*	.33**	.36**
8. Avg. Mot.	4.07	0.39								(.65)	.24*	.23*	.00	-.27**	.29**	.28*
9. Consid.	3.87	0.72									(.92)	.69**	-.10	-.32**	.17	.31**
10. IS	3.86	0.67										(.89)	-.15	-.29**	.03	.28**
11. Task Amb.	2.47	1.40											(.95)	.27**	-.06	-.10
12. Turnover	1.90	1.02												(.90)	.03	-.11
13. Perf.	4.01	0.64													(.91)	.61**
14. OCB	3.87	0.61														(.75)

*Note.* Coefficient Alpha reported in the diagonal. Ovr. Mot. = Overall Motivation Scale; Avg. Mot. = Average of the Motivation Connections; Min. Mot. = Minimum of the Motivation Connections; Avg. Mot. = Corrected Average of the Motivation Connections; Consid. = Consideration; Task Amb. = Task Ambiguity; Perf. = Performance.  $N = 83 - 106$ . \* $p < .05$ . \*\* $p < .01$ .

### *Relationship between Motivation and Performance*

The first set of hypotheses concerned the relationship between the scales on the MAQ and supervisor rated performance. Hypothesis 1a stated that the overall motivation scale would be related to performance. This hypothesis was not supported for the overall sample ( $r = .03, p = .71$ ); nor was it supported for Organization 1 or 2 ( $r = .09, p = .73$  and  $r = -.04, p = .68$ ). Hypothesis 1b stated that the average of the P-A connections would be positively related to performance. This hypothesis was supported overall ( $r = .17, p = .02$ ). However, the relationship was considerably stronger in organization 2 than in organization 1 where the relationship was not significant ( $r = .28, p = .01$  and  $r = .06, p = .58$  respectively). Hypothesis 1c stated that the weakest of the P-A connections would be positively related to performance. Similar to hypothesis 1b, this hypothesis was supported overall ( $r = .20, p = .01$ ); but the effect was only significant in organization 2, not in organization 1 ( $r = .33, p = .00$  and  $r = .04, p = .70$  respectively).

Hypotheses 1d and 1e proposed that the weakest connection would be a stronger predictor of performance than the overall motivation scale (1d) and the average of the other three connections (1e). These hypotheses were tested using the t-test for the difference between correlation coefficients drawn from the same sample (Cohen & Cohen, 1983, p. 57) using syntax for SPSS ("General FAQ #28: How to compare sample correlation coefficients drawn from the same sample," nd). Results from these analyses are presented in Table 4. Hypothesis 1d was partially supported. The relationship between the weakest connection and performance was stronger than the relationship between overall motivation scale and performance for the total sample and for organization 2 but not for organization 1. Hypothesis 1e was that the weakest connection would have a stronger relationship with performance than the average of the other

three connections would have with performance. This hypothesis was not supported; although the difference was in the expected direction for the overall sample and for organization 2, the difference was small and not significant.

Table 4. Hypotheses 1d and 1e

Sample	$r_1$	$r_2$	$T$	$df$	$P$
Weakest connection and performance vs. overall motivation scale and performance					
Overall	.20**	-.03	2.03*	184	.04
Org. 1	.04	.09	-0.37	92	.71
Org. 2	.33**	-.04	3.07**	92	.00
Weakest connection and performance vs. average of other connections and performance					
Overall	.20**	.17*	0.55	184	.59
Org. 1	.04	.06	-0.26	92	.79
Org. 2	.33**	.29**	0.52	89	.61

\* $p < .05$ . \*\* $p < .01$ .

For the remainder of the analyses, overall motivation was indexed as the average of the four motivation connections. This index is the most complete operationalization of the theory. The weakest connection is the next best possibility, but does not include all the connections and it is highly correlated with the average connection ( $r = .86$ ) so results from either would be similar.

### *Relationship between Motivation and Other Outcomes*

The second set of hypotheses dealt with the relationship between motivation and other employee outcomes: OCB and turnover intentions. Hypotheses 2a and 2d predicted that motivation would be positively related to OCB and negatively related to turnover intentions respectively. Both hypotheses were supported in the overall sample ( $r = .17, p = .02$  and  $r = -.17, p = .02$  respectively). As with the relationships with performance, the relationships between motivation with OCB and turnover intentions were stronger and significant in organization 2 ( $r = .30, p = .00$  and  $r = -.27, p = .00$  for OCB and turnover intentions respectively) but weaker and insignificant in organization 1 ( $r = -.01, p = .95$  and  $r = -.07, p = .53$  for OCB and turnover intentions respectively).

Hypothesis 2b proposed that the A-R connection would be related to performance stronger than it was related to OCB. This hypothesis was not tested or supported because the A-R connection was not significantly related to performance or OCB for the total sample or either of the two subsamples. Hypothesis 2c was that the O-NS connection would be a better predictor of OCB than performance. This hypothesis was not supported for the overall sample or for organization 1 or organization 2 separately (see Table 5).

Table 5. Hypotheses 2b and 2c

Sample	$r_1$	$r_2$	$T$	$Df$	$P$
A-R connection and performance vs.					
A-R connection and OCB					
Overall	.07	.06	--	--	--
Org. 1	-.03	-.02	--	--	--
Org. 2	.16	.11	--	--	--
O-NS connection and OCB vs.					
O-NS connection and performance					
Overall	.14	.20**	-0.92	184	.36
Org. 1	.02	.12	-1.43	92	.16
Org. 2	.24*	.26*	-0.22	89	.82

\* $p < .05$ . \*\* $p < .01$ .

#### *Examination of the Unique Variance of the Motivational Connections*

In addition to examining the bivariate relationships between the motivational connections and the outcome variables, multiple regression analyses were also conducted in which each of the four motivational connections were entered as predictors. Results indicated that the motivational connections largely did not account for unique variance in employee outcomes.

The overall regression model predicting performance was significant [ $R = .23$ ,  $F(4, 180) = 2.46$ ,  $p = .47$ ]. However, none of the individual beta weights were significant. The models predicting organization citizenship behavior and turnover intentions were not significant ( $R =$

.18,  $F(4, 180) = 1.50$ ,  $p = .21$  and  $R = .20$ ,  $F(4, 168) = 1.83$ ,  $p = .13$ ). The pattern of results was similar for the two companies.

#### *Relationship between IS&C and Performance*

Hypotheses 3a and 3b proposed that initiating structure and consideration (respectively) would be positively related to performance. Hypothesis 3a was not supported for the full sample ( $r = .08$ ,  $p = .28$ ); the relationships were the same for organizations 1 and 2 ( $r = .17$ ,  $p = .10$  and  $r = .03$ ,  $p = .28$  respectively). Hypothesis 3b was supported for the overall sample and organization 1 ( $r = .17$ ,  $p = .02$  and  $r = .20$ ,  $p = .77$ ) but was not supported for organization 2 ( $r = .17$ ,  $p = .11$ ).

#### *Shape and Moderators of the relationship between IS&C and Performance*

Hypotheses 4a and 4b concerned the shape of the relationships between IS&C and performance. Hypothesis 4a was that initiating structure would be positively related to performance at low and moderate levels of initiating structure, but not at high levels of initiating structure. To test hypothesis 4a, first a bivariate scatterplot of the relationship between initiating structure and performance was examined (see Figure 2). Although no curvilinear relationship was apparent, I next examined the scatterplot of the residual values of performance after the linear trend in initiating structure was accounted for (see Figure 3) as recommend (Cohen, Cohen, West, & Aiken, 2003). The shape of the scatterplots is almost identical because the linear relationship between initiating structure and performance was very small ( $r = .08$ ). The residual scatterplot also produced no apparent curvilinear relationship. Thus the hypothesis was not supported. The finding was confirmed with curve estimation using the regression equation of Y

$= b_0 + b_1X + b_2X^2$ . The overall model was not significant ( $F(2, 184) = 1.28, p = .28$ ). A similar pattern of results was obtained for each organization individually.

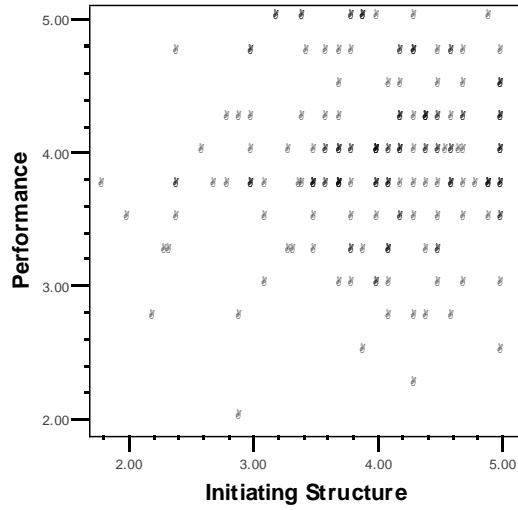


Figure 2: Initiating Structure and Performance

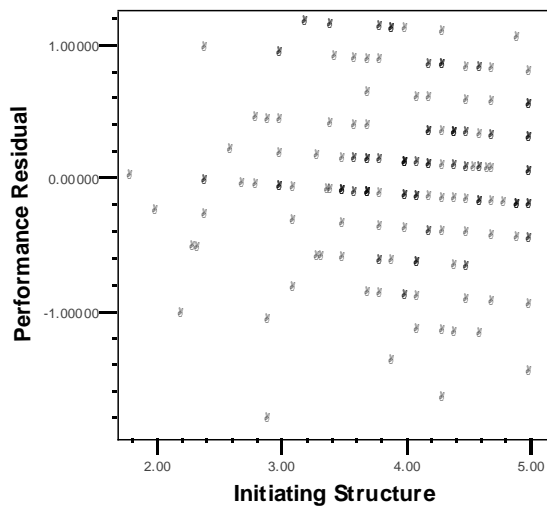




Figure 3: Initiating Structure and Performance Residuals

Hypothesis 4b was that the positive relationship between consideration and performance would be steepest at low levels of consideration. This hypothesis was tested in the same manner as Hypothesis 4a. First the bivariate scatter plot was examined (see Figure 4), then the residual scatter plot was examined (see Figure 5). No curvilinear relationships were identified and the hypothesis was not supported. Curve estimation confirmed the results. Although the overall model was significant ( $F(2, 183) = 3.72, p = .03$ ), the regression coefficient of the squared term was not significant ( $b = -.77, p = .20$ ). A similar pattern of results was obtained for each organization individually.

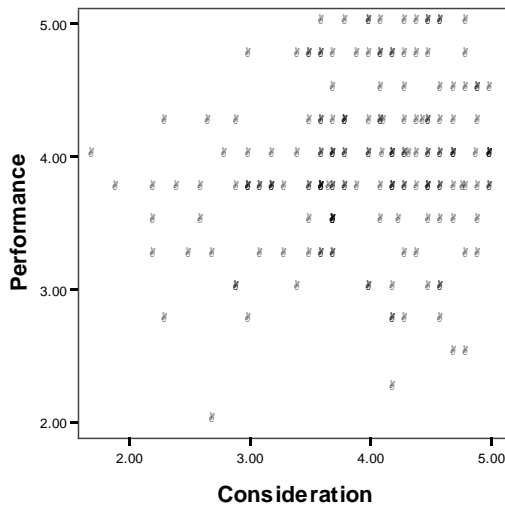


Figure 4: Consideration and Performance

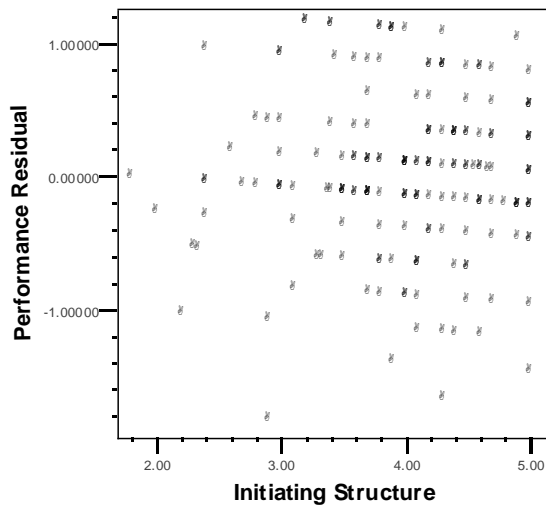


Figure 5: Consideration and Performance Residuals

Hypotheses 4c proposed that task ambiguity moderates the relationship between initiating structure and performance. This hypothesis was tested using moderated multiple regression in which initiating structure and task ambiguity were centered before being entered into the regression equation and the product of the centered variables was calculated to form the interaction term as recommended by Cohen, Cohen, West, and Aiken (2003). This hypothesis was not supported. The overall model including initiating structure, task ambiguity, and the interaction term was not significant ( $F(3, 181) = .62, p = .60$ ); therefore the effects of the individual predictors and the interaction term could not be tested. The same pattern of results was observed for organization 1 and 2 individually ( $F(3, 91) = 1.48, p = .23$  and  $F(3, 86) = .38, p = .78$  respectively).

*Relationship between IS&C and Organizational Citizenship Behaviors*

Hypothesis 5a and 5b concerned the relationship between consideration and OCB. Hypothesis 5a was supported; there was a positive correlation between consideration and OCB ( $r$

= .30,  $p = .00$ ). The same direction and magnitude of results was observed for both organization 1 and organization 2 ( $r = .32, p = .00$  and  $r = .31, p = .00$  respectively). Hypothesis 5b was that consideration would predict OCB ( $r = .30, p = .00$ ) more strongly than it predicts performance ( $r = .17, p = .02$ ). This hypothesis was supported for the overall sample and for each of the individual organizations (see Table 6).

Table 6. Hypothesis 5b

Sample	$r_1$	$r_2$	$T$	$Df$	$P$
Consideration and OCB vs. Consideration and Performance					
Overall	.30**	.17*	2.31	183	.02
Org. 1	.32**	.20*	1.80	92	.04 <sup>a</sup>
Org. 2	.31**	.17	1.79	88	.04 <sup>a</sup>

Notes. <sup>a</sup>one-tailed. \* $p < .05$ . \*\* $p < .01$ .

#### *Relationship between IS&C and Motivation*

Hypothesis 6a was that initiating structure would be positively related to motivation. This hypothesis was supported ( $r = .16, p = .02$ ). However, the relationship varied by organizations. Similar to the findings for the relationships between motivation and performance and motivation and OCB, the relationship between initiating structure and motivation was stronger and significant for organization 2 and weak and insignificant for organization 1 ( $r = .26, p = .01$  and  $r = .11, p = .27$  respectively). Hypothesis 6b was that consideration would be positively related to motivation. This hypothesis was supported ( $r = .15, p = .03$ ). The pattern of results for the

organizations individually again showed a stronger relationship for organization 2 and a weak, insignificant relationship for organization 1 ( $r = .26, p = .01$  and  $r = .08, p = .40$  respectively).

Hypotheses 7a-d concerned the relationships between initiating structure and the P-A Connections. These findings are summarized in Table 7. Hypothesis 7a was not supported. The relationship between initiating structure and the A-R connection was not significant ( $r = -.03, p = .69$ ); the same result was found for both of the organizations ( $r = -.06, p = .57$  and  $r = .02, p = .83$ ). Hypothesis 7b was that the correlation between the A-R connection and initiating structure would be stronger than the correlation between the A-R connection and consideration. Because the A-R connection was not significantly related to either initiating structure or consideration, this hypothesis could not be tested.

Hypothesis 7c was that initiating structure would be positively related to the R-E Connection. This hypothesis was supported; the correlation between initiating structure and the R-E Connection was significant ( $r = .23, p = .00$ ). Consistent with other results, this relationship was found only in organization 2 ( $r = .34, p = .00$ ) but not in organization 1 ( $r = .14, p = .17$ ). Hypothesis 7d was that initiating structure would have a stronger effect on the R-E Connection than would consideration. Although the difference in correlation coefficients was in the expected direction, this hypothesis was not significant because the difference was not significant; the same pattern of results was observed for each organization (see Table 7)

Table 7. Hypotheses 7b and 7d

Sample	$r_1$	$r_2$	$T$	$Df$	$P$
A-R connection and Initiating Structure vs. A-R connection and Consideration					
Overall	-.03	-.01	--	--	--
Org. 1	-.06	-.02	--	--	--
Org. 2	.02	.01	--	--	--
R-E connection and Initiating Structure vs. R-E connection and Consideration					
Overall	.23**	.19**	.79	197	.43
Org. 1	.14	.07	1.01	97	.32
Org. 2	.34**	.33**	.13	97	.89

\* $p < .05$ . \*\* $p < .01$ .

Hypothesis 7e was that consideration would be positively related to the E-O Connection. This hypothesis was supported ( $r = .16, p = .02$ ). As with previous results dealing with motivation, the relationship was stronger and significant for organization 2 ( $r = .24, p = .01$ ) but weaker and insignificant for organization 1 ( $r = .10, p = .30$ ). Hypothesis 7f was that consideration, as opposed to initiating structure, would be more positively related to the E-O Connection. The hypothesis was not supported. The difference between the correlations was very small and was not significant. These results held for the overall sample and for both organizations (see Table 8).

Hypothesis 7g stated consideration would be positively related to the O-NS Connection. This hypothesis was supported ( $r = .14, p = .05$ ). As with previous results dealing with motivation, the relationship was stronger and significant for organization 2 ( $r = .21, p = .03$ ) but weaker and insignificant for organization 1 ( $r = .09, p = .35$ ). Hypothesis 7h was that consideration, as opposed to initiating structure, would be more positively related to the O-NS connection. This hypothesis was not supported overall or for either organization (see Table 8).

Table 8. Hypotheses 7f and 7h

Sample	$r_1$	$r_2$	$T$	$df$	$P$
E-O connection and Consideration vs. E-O connection and Initiating Structure					
Overall	.16*	.14	0.39	199	.70
Org. 1	.10	.09	0.14	98	.89
Org. 2	.24*	.24*	0.00	98	1.00
O-NS connection and Consideration vs. O-NS connection and Initiating Structure					
Overall	.14*	.15*	-0.19	200	.85
Org. 1	.09	.17	-1.17	99	.25
Org. 2	.21*	.16	0.65	99	.52

\* $p < .05$ . \*\* $p < .01$ .

### *Mediation Model*

Hypotheses 8a and 8b proposed that motivation mediated the relationship between initiating structure and performance and consideration and performance respectively. These hypotheses were tested using the Baron and Kenny method of mediation analysis (1986). This method states that in order to demonstrate mediation you have to fulfill three requirements: The independent variable (initiating structure or consideration) must be related to the mediator (motivation) (Condition 1). The independent variable (initiating structure or consideration) must be related to the dependent variable (performance) (Condition 2). When the independent variable (initiating structure or consideration) and the mediator (motivation) are both entered, the effect of the independent variable on the dependent variable must be smaller than in the previous step (Condition 3). Based on this approach, hypothesis 8a could not be tested because condition two of the Baron and Kenny method was not met: as discussed in Hypothesis 3a initiating structure was not related to performance.

Hypothesis 8b was that motivation would partially mediate the relationship between consideration and performance. This hypothesis was supported. Consideration was related to motivation (Condition 1;  $F(1, 202) = 4.97, p = .02$ ). Consideration was related to performance (Condition 2;  $F(1, 184) = 5.78, p = .02$ ). And when consideration and motivation were entered simultaneously, the effect of consideration on performance ( $\beta = .15$ ) was smaller than when consideration alone predicted performance ( $\beta = .18$ ) (Condition 3). Because the effect of consideration remained significant in the final regression equation ( $\beta = .15, t = 1.99, p = .048$ ), motivation partially mediated the relationship between consideration and performance.

## CHAPTER 4: DISCUSSION

Before getting to the substantive findings for the hypotheses, it is important to deal with the issue of different findings in the two organizations.

### *Differential Relationships between Organization*

One of the more intriguing findings in this study was the unexpected differential relationships between the study variables in organization 1 versus organization 2. In almost every case, hypothesized relationships were stronger in organization 2 than they were in organization 1. Several possible explanations for this finding were explored and presented. The first set of explanations deals with statistical artifacts of the data: reliability, variance, and range restriction. The second set of explanations discusses mean differences between the organizations in terms of study variables and demographics.

### *Statistical Explanations*

Given the nearly uniform lower correlations in hypothesized relationships for organization 1, I first examined statistical artifacts that could be attenuating true relationships. Reliability is one such factor; thus internal consistency reliability estimates were calculated for each sample separately for all major study variables. However, as can be seen in Table 9, the estimates for organization 1 and organization 2 are largely similar and are sufficiently high for all variables in both organizations. Another possible factor that can obscure relationships is limited variability in the predictor or the criterion. Therefore, the standard deviation of each study variable was computed for both samples. As can be seen in Table 9, the standard deviations for the variables are similar across organizations, and in cases where there is a difference, organization 1 tends to have a larger standard deviation. The exception to that



observation is the criteria variables; this issue will be discussed in the next section. A third possible statistical factor that could reduce correlations is range restriction. However, as can be seen in Table 9, the minimums and maximums for each variable are similar across both organizations. Again, an exception to this is with the criteria variables which are discussed in the next section.

Table 9. Statistical Explanations for Differences in Relationships by Organization

Variable	Alpha			SD			Minimum			Maximum		
	Total	Org 1	Org 2	Total	Org 1	Org 2	Total	Org 1	Org 2	Total	Org 1	Org 2
1. A-R	.78	.80	.77	0.64	0.69	0.59	1.60	2.00	1.60	5.00	5.00	5.00
2. R-E	.83	.85	.81	0.68	0.73	0.62	1.83	1.83	1.83	5.00	5.00	5.00
3. E-O	.77	.78	.75	0.71	0.76	0.65	1.60	1.60	2.00	5.00	5.00	5.00
4. O-NS	.71	.72	.70	0.52	0.57	0.45	2.00	2.00	3.20	5.00	5.00	5.00
5. Ovr. Mot.	.85	.85	.86	0.52	0.53	0.51	2.83	3.00	2.83	5.00	5.00	5.00
6. Avg. Mot.	.88	.89	.86	0.48	0.53	0.43	2.54	2.54	2.78	5.00	4.85	5.00
7. Min. Mot.	--	--	--	0.68	0.72	0.63	1.60	1.60	1.60	4.80	4.50	4.80
8. Avg. Mot. <sup>?</sup>	.73	.78	.65	0.46	0.52	0.39	2.72	2.72	3.07	5.00	5.00	5.00
9. Consid.	.90	.89	.92	0.74	0.77	0.72	1.70	1.80	1.70	5.00	5.00	5.00
10. IS	.90	.92	.89	0.73	0.78	0.67	1.80	1.80	2.11	5.00	5.00	5.00
11. Task Amb.	.94	.93	.95	1.51	1.62	1.40	1.00	1.00	1.00	7.00	7.00	7.00
12. Turnover	.84	.76	.90	0.95	0.87	1.02	1.00	1.00	1.00	5.00	5.00	5.00
13. Perf.	.90	.89	.91	0.60	0.55	0.64	2.00	2.50	2.00	5.00	5.00	5.00
14. OCB	.75	.73	.75	0.55	0.46	0.61	2.00	2.60	2.00	4.80	4.60	4.80

*Note.* Ovr. Mot. = Overall Motivation Scale; Avg. Mot. = Average of the Motivation

Connections; Min. Mot. = Minimum of the Motivation Connections; Avg. Mot.<sup>?</sup> = Corrected

Average of the Motivation Connections; Consid. = Consideration; Task Amb. = Task

Ambiguity; Perf. = Performance.

### *Substantive Differences between the Organizations*

Given the similarity of the statistics presented for each organization in Table 9, it seems unlikely that statistical artifacts alone are causing the differential observed relationships. Thus I examined possible differences between the two organizations that could be creating these differential relationships. These relationships are shown in Table 10. As can be seen, several of the relationships are significant. Organization 2 reported higher E-R and O-NS Connections. The supervisors at Organization 2 were rated lower in initiating structure. Employees at Organization 2 were older, had more education, and worked more hours per week than those at Organization 1; they were also rated higher on performance on OCB than employees at Organization 1.

Table 10. Substantive Differences Between Organizations

	$M_1$	$M_2$	$SE_{diff}$	$t$	$df$	$p$
A-R	4.02	4.08	0.09	-0.73	204	.47
R-E	3.77	3.63	0.09	1.50	201	.13
E-O	3.33	3.52	0.10	-1.93*	203	.06
O-NS	4.17	4.31	0.07	-1.97*	203	.05
Ovr. Mot.	4.35	4.43	0.07	-1.15	204	.25
Avg. Mot.	3.82	3.89	0.07	-1.08	205	.28
Consid.	3.93	3.87	0.10	0.57	203	.57
IS	4.05	3.86	0.10	1.95*	202	.05
Task Amb.	2.52	2.47	0.21	0.23	203	.82
Turnover	1.96	1.90	0.14	0.46	174	.65
Perf.	3.82	4.01	0.09	-2.22**	187	.03
OCB	3.69	3.87	0.08	-2.28**	187	.02
Age	35.60	40.00	1.72	-2.56**	162	.01
Tenure	3.86	5.37	0.99	-1.53	161	.13
Yrs. in WF	17.94	20.02	1.79	-1.17	166	.24
Education	2.15	2.72	0.12	-4.82***	173	.00
Hours/wk	38.83	42.57	0.97	-3.88***	173	.00

Note. \* $p < .10$ . \*\* $p < .05$ . \*\*\* $p < .01$ . Ovr. Mot. = Overall Motivation Scale; Avg. Mot. =

Average of the Motivation Connections; Consid. = Consideration; Task Amb. = Task

Ambiguity; Perf. = Performance; Yrs. in WF = Number of Years in the Workforce; Hours/wk. = Number of Hours Worked Per Week.

In addition to the relationships observed in the data, I obtained qualitative information from the leaders of the organizations about an additional difference between the companies that could affect the outcomes. Employees at Organization 1 are in term limited positions. They were hired to work at a temporary site that will likely close in two years. Thus on average those employees have not been with the company as long as employees in Organization 2. This should be reflected in the correlation between organization and tenure but it is not due to a shortcoming in the research design. Responses to the item “how many years have you worked for the organization” could only be entered in whole numbers. This was problematic for those who had been at the company for less than a year as evidenced by the fact that 29 individuals at Organization 1 skipped that item as compared to the 16 who skipped the item at Organization 2. Further, several employees at Organization 1 had previously worked for the organization in a different capacity before accepting this temporary position. These two factors prevent the difference in tenure from being reflected in the data. In actuality, of the employees at Organization 1 to whom the survey was sent, the average tenure in their current capacity was six months ( $M = 185$  days). All employees that were invited to participate in the study had been with the company for at least one and a half months.

To put all of the information together, the workforce at Organization 1 has lower E-O and O-NS Connections, is younger and less educated, work in temporary positions, have more oversight in terms of initiating structure, work less per week, have been in their roles for a shorter period of time, do not have long term commitment to/from the organization, and have lower levels of performance and OCB.

Lower performance and OCB of temporary staff has been observed in literature (Moorman & Harland, 2002). Further, it is not surprising from a psychological contract perspective (Rousseau, 1995). However, the reason for the lack of relationship between motivation and supervisor's initiating structure and performance is not as clear. One possible reason is that temporary workers may require a different type of leadership than traditional workers. For example, Liu, Lepak, Takeuchi, and Sims (2003) proposed that a directive leadership style is more appropriate for contract workers because the performance requirements tend to be well specified and contract workers are less involved in the organization. This idea is reflected in the current data. The relationship between initiating structure and performance was stronger in the organization comprised of temporary workers ( $r = .17$  versus  $.03$ ). Another possible reason for this is that at Organization 1 many of the job outcomes that people are motivated towards (e.g. promotions, raises, and bonuses) are not applicable and thus retaining one's position is the primary external motivator. That combined with the possibility that the work is less demanding (as evidenced by less educated workforce and fewer hours worked per week) may produce a situation in which motivation would not be related to performance because everyone who is retained with the organization is doing sufficiently well regardless of their level on the motivation connections. If this were the case, one would expect to see a lower overall level of performance, limited variability in the performance criteria, and a higher level of minimum performance. In fact, Organization 1 does have a lower mean level of performance (3.82 versus 4.01), lower standard deviation for performance (.55 versus .64) and a higher level of minimum performance (2.50 compared to 2.00).

Similarly, this would explain the smaller relationships between leader behavior and the average motivation connections. If the process is straightforward and well established, leaders

are limited in the outcomes they can offer employees, and many of the outcomes typically valued by employees are not available, then there may be less a leader can do to influence the P-A connections.

### *Strong Correlation between IS&C*

The correlation between IS&C was much stronger than expected. The recent IS&C meta-analysis found IS&C to be correlated at  $r = .14$ ; the correlation using the LBDQ XII measure as was used in this study was higher ( $r = .46$ ) (Judge et al., 2004). However, both estimates are considerably lower than the observed correlation in the current study ( $r = .73$ ). The questions about supervisor behavior were near the end of the survey; perhaps respondent fatigue contributed to rating error. Hypotheses 7b, 7d, 7f, and 7h proposed differential relationships between IS&C and the motivational connections. It is possible that these hypotheses could have been supported if respondents had differentiated more between IS&C.

To explore this possibility, I conducted a post hoc analysis in which I reexamined the pattern of correlations for only those individuals who differentiated between IS&C. First, for each respondent I calculated difference scores as the absolute value of initiating structure minus consideration. The mean difference between IS&C was  $.43$  ( $SD = .33$ ) on a five point scale. The histogram in Figure 6 presents the distribution of difference scores. The difference scores were not correlated with any of the demographic variables measured in the study nor did the two organizations differ by difference score.

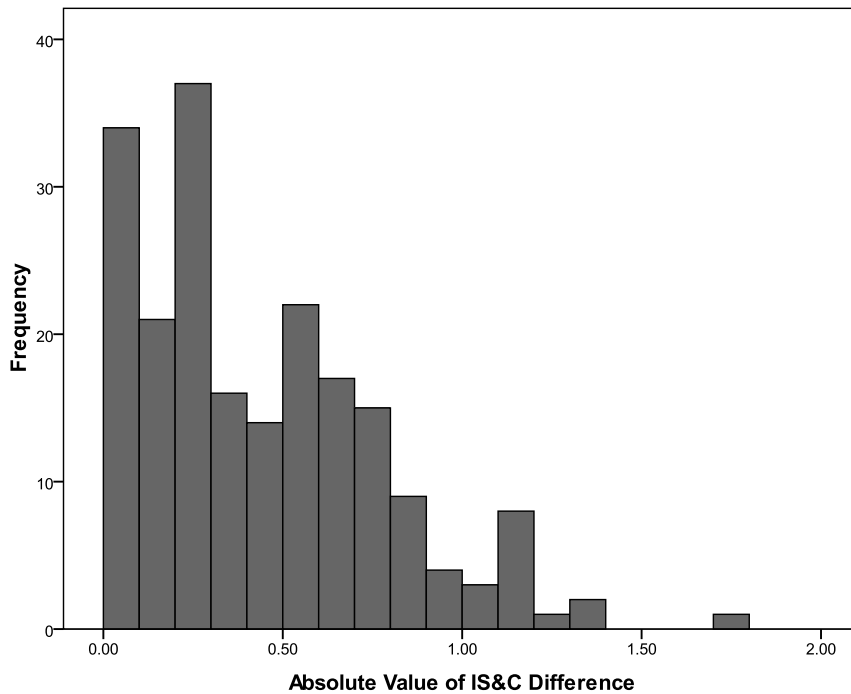


Figure 6: Distribution of IS&C Difference Scores

Next, I recalculated the correlation table for only those respondents who differentiated between IS&C at or above the average level of the overall sample (i.e. difference scores greater than .43). This information is presented in Table 11. This yielded a data set in which IS&C were correlated with each other more moderately ( $r = .45$ ) and was more consistent with prior research.

The pattern and magnitude of results was similar to results using the overall sample. For example, the differential relationships between IS&C and motivational connections were not observed in this smaller sample either. The relationships between IS&C and employee outcomes were similar in direction and magnitude. Additionally, because of the decrease in power caused by the smaller sample sizes ( $Ns = 67 - 83$ ), the correlations between IS&C and motivation connections were no longer significant. Accordingly, reducing the correlation between IS&C in this way did not increase the ability to observe the proposed differential effects.



Table 11: Correlation Matrix for Respondents who Differentiated between IS&C

Variable	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. A-R	4.01	.64	--	.53**	.53**	.38**	.18	.76**	.62**	.78**	.05	-.04	.09	.03	.06	.08
2. R-E	3.66	.70		--	.63**	.49**	.23*	.84**	.778**	.82**	.11	.20	-.08	-.03	-.01	.04
3. E-O	3.46	.70			--	.56**	.28**	.86**	.91**	.79**	.20	.19	.02	-.06	.15	.08
4. O-NS	4.27	.54				--	.32**	.73**	.56**	.77**	.09	.07	.12	-.16	.03	-.01
5. Ovr. Mot.	4.46	.55					--	.31**	.25*	.32**	.18	.23*	-.18	-.48**	.13	.12
6. Avg. Mot.	3.85	.52						--	.91**	.98**	.14	.14	.04	-.06	.07	.06
7. Min. Mot.	3.27	.66							--	.82**	.15	.15	-.01	-.08	.10	.10
8. Avg. Mot.	4.04	.50								--	.13	.13	.06	-.05	.06	.04
9. Consid.	3.80	.78									--	.45**	-.25*	-.39**	.11	.33**
10. IS	3.88	.74										--	-.50**	-.28*	-.07	.13
11. Task Amb.	2.40	1.28											--	.25*	.08	-.10
12. Turnover	1.96	1.06												--	.18	-.06
13. Perf.	3.95	.58													--	.68**
14. OCB	3.79	.52														--

*Note.* Ovr. Mot. = Overall Motivation Scale; Avg. Mot. = Average of the Motivation Connections; Min. Mot. = Minimum of the Motivation Connections; Avg. Mot. = Corrected Average of the Motivation Connections; Consid. = Consideration; Task Amb. = Task Ambiguity; Perf. = Performance.  $N = 160 - 206$ . \* $p < .05$ . \*\* $p < .01$ .

### *Summary of Findings and Contributions*

In all cases except one, the results were the same in the Overall Sample and in Organization 2 in terms of significance; they varied only in magnitude of result. In this section, I will discuss the findings in the Overall Sample and in Organization 2. Discussion of findings for Organization 1 is excluded given the differences between the organizations described above and the general lack of findings for Organization 1.

### *Relationship between Motivation and Performance*

In general, motivation predicted performance as expected by the motivation literature (Kanfer, 1992; Kanfer et al., 2008; Latham & Pinder, 2005; Mitchell & Daniels, 2003; Pritchard & Ashwood, 2008). The relationship between motivation and performance was observed when motivation was indexed as an average of the Pritchard-Ashwood Connections and the weakest of the Connections. While not hypothesized, with the exception of the A-R Connection, the individual connections were also related to performance. Surprisingly, the overall motivation scale was not related to performance. In hindsight, this may be because the overall motivation scale is primarily an index of effort or intensity. Overall motivation consists of intensity, direction, and persistence (Kanfer et al., 2008). Previous studies found a significant, moderate relationship between the overall motivation (intensity) and performance (Botero, 2007; Cornejo, 2007). One of the purposes of the study was to attempt to replicate that finding with a non-student, full time employee sample. Perhaps students are employed on average in more menial, simple positions in which working harder (intensity) is a better predictor of performance. Perhaps for the positions under study, it is not intensity that affects performance but rather direction or persistence.

In terms of how to index overall motivation so as to best predict performance, the overall scale, the weakest connection, and the average connection were tested. As stated in the previous paragraph, the overall scale did not predict performance. Thus the weakest connection and the average connection were clearly superior for this purpose. The weakest connection predicted performance better than the average connection, though not significantly. Even when the average was corrected by removing the weakest connection and averaging the other three, the difference between the corrected average and weakest connection remained insignificant.

One reason that the weakest connection was not a better predictor of performance was that it was comprised of fewer items than the average of all of the items and therefore one would expect a lower reliability. Indeed, that was the case with this data; coefficient alpha was .88 for a scale of all of the items while the average coefficient alpha for any of the subscales was .77. It is also possible that the weakest link was not the best predictor for theoretical reasons. An alternative theoretical proposition would be that proximal motivational constructs would show a stronger effect than more distal ones. For example, the A-R connection is more within the control of the individual than are any of the other connections. However, the data do not support this alternative explanation; in fact of the connections, the A-R connection is the only one that does not significantly predict employee outcomes.

The question of how to combine motivational components to arrive at an overall measure of motivation is not a new one for Expectancy Theories of Motivation. Vroom originally suggested that the motivational components (i.e. expectancy, instrumentality, and valance) combined mathematically to produce force. However, a meta-analysis of Expectancy Theory found that the motivational components themselves, rather than mathematically derived models, have higher effect sizes (Van Eerde & Thierry, 1996). Thus for the remaining hypotheses, the

individual connections are used for connection-level hypotheses. Overall motivation was indexed as the average of the four connections.

### *Relationship between Motivation and Other Outcomes*

To extend the validity evidence of the MAQ, motivation was compared to two additional outcomes: OCB and turnover intentions. The average of the motivation connections was related to both. Interestingly, although the overall motivation scale was not related to performance or OCBs, there was a strong relationship between the overall scale and turnover intentions ( $r = -.41$ ,  $p = .00$ ). This is in-line with the Progression-of-Withdrawal Model, in that it appears that individuals put forth less effort on the job concurrent with thinking about leaving the organization (Hulin, 1991).

Support was not found for the hypotheses that proposed differential relationships between the P-A Connections and OCB versus performance. The A-R Connection was not more strongly related to performance than to OCB because it was not significantly related to either. The O-NS Connection was not more strongly related to OCB than to performance; in fact the opposite was true though the difference was not significant.

### *Examination of the Uniqueness of the Motivational Connections*

The P-A Theory proposes that the four connections are unique, yet correlated, constructs. The pattern of correlation coefficients among the motivational connections suggests that this is true. The average correlation among the connections was .40, which is a sizable relationship, but not so large as to suggest that the connections are redundant. However, the connections did not account for unique variance in employee outcomes. This suggests that although the connections are unique conceptually, their effects are not distinct.

However, it is important to note that the outcomes examined in the current study were very broad. Thus one reason that the individual connections do not predict unique variance in performance is because of the mismatch in the level of generality between the connections and the outcomes. For instance, the performance items asked the supervisor to rate the employees' performance overall. Thus, perhaps the connections do not explain unique variance in overall performance, but would explain unique variance if performance were measured at the competency level, consistent with the Great Eight competency framework (Bartram, 2005).

#### *Relationship between IS&C and Employee Outcomes*

Initiating structure was not related to performance. This was surprising given the culmination of previous studies regarding initiating structure and performance (Judge et al., 2004). However, it is well established in research that there are moderators to this relationship (Bass, 1990; House & Podsakoff, 1994; Yukl, 1981); thus, it is possible that is the reason the effect was obscured. Unfortunately, the moderator included in the study, task ambiguity, failed to moderate the relationship between initiating structure and performance. One possible reason for this is insufficient statistical power. Although an a priori power analysis dictated my sample size, given the fact that there were differential relationships between the two organizations, effect sizes were attenuated in the overall sample. The sample size was halved in the Organization 2 sample; in both cases, the result is a reduction in power from what was anticipated.

Another reason that task ambiguity may have failed to moderate the relationship between initiating structure and performance is the way it was operationalized. Recall that the task ambiguity items asked the extent to which the task would be ambiguous "without any input or advice from my supervisor." The correlation between task ambiguity and initiating structure was -.25. If the task ambiguity items were interpreted as intended, this finding would indicate that

supervisors provided more initiating structure for tasks that were naturally less ambiguous. The more likely explanation is that respondents did not rate the items from a “without any input or advice from my supervisor” perspective, but rather just rated overall task ambiguity including supervisor input.

More support was found for the hypotheses regarding consideration. Consideration predicted performance and OCB better than initiating structure did. It is also interesting to note that of the three findings that were significant in Organization 1, they all dealt with the consideration variable. Consistent with the IS&C meta-analysis (Judge et al., 2004), consideration was the more robust predictor.

#### *Relationship between IS&C and Motivation*

As expected, both IS&C predicted motivation overall. One of the more interesting aspects of this project was to examine the relationships between IS&C and the individual motivation connections. Unfortunately, the hypothesized differential relationships between IS&C and the motivation connections were not observed. This is in part due to the strong correlation between IS&C ( $r = .68$ ); this lack of discriminant validity between the two predictors made it difficult to find differential relationships. The problem was further compounded by the fact that the P-A Connections share an average correlation of .40. However, most of the hypotheses regarding the relationships between IS&C and the Connections were supported. Initiating structure was not related to the A-R Connection; however, it was related to the R-E Connection. While not hypothesized, it was also related to the E-O and O-NS Connections. Consideration was related to the E-O and O-NS Connections as hypothesized. While not hypothesized, it was also related to the R-E Connections.

The differential effects for the leadership – motivation relationships indicate that there are organizational level moderators that affect this relationship. It is impossible to tell which variables are driving this difference as data were only collected in two organizations. The use of a temporary workforce is one, particularly salient, variable that may be causing this difference, However, the companies also differed in other ways that were discussed in a previous section. This illustrates the importance of considering organizational differences in leadership research as well as in organizational research more generally: individual level findings from one organization may not generalize to others. Additionally this supports the foundational claim of contingency theories of leadership that the most appropriate leadership style or behavior depends on the situation (Yukl, 1981). That said, consideration was a more robust predictor than initiating structure across outcomes and organization.

#### *Mediation Model*

Motivation was expected to mediate the relationships between IS&C and performance. Because of lack of relationship between initiating structure and performance, that hypothesis could not be tested. However, support was found for the consideration mediation model: Results support the hypothesis that subordinates of considerate leaders perform better in part because their motivational connections are stronger.

#### *Practical Implications*

The primary contribution of this study was to further integrate the leadership and motivation literatures. Examining the connections between IS&C and the motivational connections worked toward the applied goal: to be able to make clear recommendations regarding which behaviors supervisors should adopt to improve a diagnosed deficiency in one of

the motivation connections. However, rather than supporting targeted suggestions depending on the motivation connection that is low, results suggest that overall consideration behaviors have the stronger effect on performance and an equal, if not stronger, effect on all of the P-A motivation connections. Thus if there is room for improvement on consideration behaviors, leaders wishing to improve followers motivation and subsequent performance should first focus on displaying more consideration.

Additionally, the results provide guidance to leaders wishing to influence follower motivation. Data suggest that the R-E connection has the strongest relationship with the two leader behaviors. Thus leaders wishing to influence the other connections will have to be more strategic in those efforts and perhaps use skills and behaviors above and beyond those that typify a leader strong in IS&C.

### *Limitations*

One limitation of this study is the use of non-experimental survey data. Many of the relationships discussed are assumed to be causal. Of course causality cannot be assessed with the research method employed. On the positive side, however, the research design enabled me to collect data from working adults in their natural setting so may be more generalizable.

This study limited the measure of leadership to only IS&C. Other leadership constructs may show differential relationships with the motivation connections as expected. One of the reasons that IS&C were used is because they are robust constructs that overlap with many leadership styles, behaviors, and profiles. However, this presents a limitation: Perhaps these behaviors are too broad to relate with criteria in a targeted, differential way.

Criteria ratings of performance and OCB were collected from supervisors and predictor ratings of IS&C were collected from incumbents. OCB and performance ( $r = .68$ ) and IS&C ( $r =$



.73) were highly correlated making it difficult to observe differential relationships. One possible reason for this is that the raters did not receive any rater training. Additionally, supervisors may not be the optimal source from which to collect OCB ratings; they may not have ample opportunity to observe OCBs. For this reason as well as psychometric reasons, Allen, Barnard, Rush, and Russell (2000) suggested that OCB ratings be taken from multiple individuals with different perspectives.

The two data irregularities already discussed (i.e. different findings between the two organizations and abnormally strong correlation between IS&C) present an additional limitation of the study. Both of these abnormalities decreased my ability to test the hypotheses in the study and limit the ability to draw conclusions from the results. However, it should be noted that even though the correlation between IS&C was abnormally high, the pattern of relationships with consideration being a more robust predictor of outcomes is consistent with the leadership literature.

#### *Future Directions*

The P-A theory states that the four connections are distinct, related constructs. However, in this study the individual connections failed to explain unique variance in the outcome variables. Additionally, the P-A theory states that the weakest connection should be the best predictor of performance and that was also not supported. One can question the extent to which this study should serve as a test of these hypotheses given the limitations with the data described previously. Future research should reexamine these questions. One suggestion is to examine performance on a more granular level as discussed above.

One contribution of this study was to further expand the validation efforts of the new MAQ. As expected, the MAQ shows a positive relationship with OCB and a negative

relationship with turnover intentions. Additionally, this study suggests some future directions for further research with the MAQ. Because the overall motivation scale is a measure of intensity, the motivational constructs of direction and persistence should also be considered in order to fully cover the construct; indeed, work in this area is underway by Pritchard and his colleagues.

The drastically different effect sizes of the overall scale in predicting performance as compared to the previous two studies (Botero, 2007; Cornejo, 2007)( $r = .03$  versus  $.36$  and  $.33$ ) suggests that there may be moderators to the extent that effort (i.e. intensity) predicts performance. Further, the differential relationships between motivation connections and performance for the two organizations suggest that there may be moderators for those relationships as well. Some potential reasons for these differences were discussed in the previous section. Future research should assess the extent to which the relationships generalize across jobs and organizations or are moderated by other variables.

## APPENDIX A: MOTIVATION AND IS&C

Study	Overall Motivation	A-R	R-E	E-O	O-NS	Other
Dessler and Valenzi, 1977				Expectancy II scale (Dessler, 1973): The perceived extent to which performance is believed to lead to personal reward.		
Ehrlich, Meindl, and Viellieu, 1990	Extra Effort scale (Bass, 1985): The ability of the leader to heighten subordinates motivation beyond normal levels.					
Evans, 1974	Results were presented for the product of expectancies and instrumentalities (PEI).	Path-goal expectancies: The extent to which effort leads to performance. Results not reported.		Path-goal instrumentalities: The extent to which performance results in rewards. Results not reported.		

Study	Overall Motivation	A-R	R-E	E-O	O-NS	Other
Matsui, Osawa, and Terai, 1975	Results were presented for the sum of the products of the expectancies times the valences.	Expectancy: The belief that efforts will lead to a given outcome. Results not reported.			Valence: The desirability of the outcome. Results not reported.	
Miles and Petty, 1977	Sum of instrumentality times valence and the product of expectancy with the sum of instrumentality times valence.	Expectancy (Arvey & Mussio, 1973): The probability that effort will lead to effective performance.		Instrumentality (Arvey & Mussio, 1973): The probability that performance will lead to outcomes. Results not reported	Valence (Arvey & Mussio, 1973): The anticipated value of outcomes. Results not reported.	
Oldham, 1976		Placing Personnel: Assigns to jobs or tasks on which subordinate is challenged to perform.	Setting Goals: Sets goals or quotas to achieve. Designing Feedback Systems: Provides information about how well I am performing.	Personally Rewarding: Rewards for producing good work. Personally Punishing: Punishes for producing poor work.		Designing Job Systems: Changes or develops job so that it becomes more challenging or demanding.

Study	Overall Motivation	A-R	R-E	E-O	O-NS	Other
Schriesheim, 1979	Motivation (Patchen, 1965): Typical daily job related motivation					
Sheridan and Vredenburg, 1978				Performance/Reward Dependency (Pritchard & Karasick, 1973): The degree that administrators reward employees based on individual performance.		
Stogdill, Goode, and Day, 1963						Persuasiveness: The extent to which leader presents point of view with conviction and influences by convincing argument.
Szilagyi and Keller, 1976		Expectancy I (House & Dessler, 1973): The effort to performance link.		Expectancy II (House & Dessler, 1973): The performance to reward link.		

## APPENDIX B: HYPOTHESES AND FINDINGS

<b>Full Sample</b>	<b>Org 1</b>	<b>Org 2</b>	<b>Hypotheses</b>
NS	NS	NS	Hypothesis 1a: Motivation as measured by the Overall Motivation scale will be positively related to supervisor rated performance.
S	NS	S	Hypothesis 1b: Motivation as measured by the average of the P-A connections will be positively related to supervisor rated performance.
S	NS	S	Hypothesis 1c: Motivation as measured by the weakest of the P-A connections will be positively related to supervisor rated performance.
S	NS	S	Hypothesis 1d: The relationship between the weakest connection and performance will be stronger than the relationship between the overall motivation scale and performance.
NS	NS	NS	Hypothesis 1e: The relationship between the weakest connection and performance will be stronger than the relationship between the average of the other three connections and performance.
S	NS	S	Hypothesis 2a: Motivation will be positively related to OCB.
NS	NS	NS	Hypothesis 2b: The A-R connection will be a better predictor of performance than of OCB.
NS	NS	NS	Hypothesis 2c: The O-NS connection will be a better predictor of OCB than performance.
S	NS	S	Hypothesis 2d: Motivation will be negatively related to turnover intentions.
NS	NS	NS	Hypothesis 3a: Leader's initiating structure will be positively related to the subordinate's performance.
S	S	NS	Hypothesis 3b: Leader's consideration will be positively related to the subordinate's performance.
NS	NS	NS	Hypothesis 4a: The relationship between initiating structure and performance will be a nonlinear, quadratic, one such that it is positive for low and moderate levels of initiating structure but not for extremely high levels.
NS	NS	NS	Hypothesis 4b: The relationship between consideration and performance will be a nonlinear, quadratic, one such that it is consistently positive but the slope is steepest for low levels of consideration.
NS	NS	NS	Hypothesis 4c: The relationship between initiating structure and performance will be moderated by task ambiguity such that the relationship will be most positive when the task is ambiguous.
S	S	S	Hypothesis 5a: Consideration will be positively related to OCB.



S	S	S	Hypothesis 5b: The relationship between consideration and OCB will be stronger than the relationship between initiating structure and OCB.
S	NS	S	Hypothesis 6a: Leader's initiating structure will be positively related to the subordinate's overall motivation.
S	NS	S	Hypothesis 6b: Leader's consideration will be positively related to the subordinate's overall motivation.
NS	NS	NS	Hypothesis 7a: Leader's initiating structure will be positively related to the A-R Connection.
NT	NT	NT	Hypothesis 7b: Leader's initiating structure will have a stronger effect on the A-R Connection than will consideration.
S	NS	S	Hypothesis 7c: Leader's initiating structure will be positively related to the R-E Connection.
NS	NS	NS	Hypothesis 7d: Leader's initiating structure will have a stronger effect on the R-E Connection than will consideration.
S	NS	S	Hypothesis 7e: Leader's consideration will be positively related to the E-O Connection.
NS	NS	NS	Hypothesis 7f: Leader's consideration will have a stronger effect on the E-O Connection than will initiating structure.
S	NS	S	Hypothesis 7g: Leader's consideration will be positively related to the O-NS Connection.
NS	NS	NS	Hypothesis 7h: Leader's consideration will have a stronger effect on the O-NS Connection than will initiating structure.
NT	NT	NT	Hypothesis 8a: Motivation will partially mediate the relationship between initiating structure and performance.
S	NT	NT	Hypothesis 8b: Motivation will partially mediate the relationship between consideration and performance.

## APPENDIX C: MOTIVATION ASSESSMENT QUESTIONNAIRE

*A-R Connection*

Motivation and Work Attitudes

In the following pages, we are asking about your job. Please answer each question by marking the box that best gives your opinion.

In this section, we want to know how much your effort on the job influences the quantity and quality of your work.

<b>1. My level of effort determines the quantity and quality of work I do.</b>	Never	Rarely	Sometimes	Usually	Always
<b>2. If I increase the amount of effort I put into this job, the quantity and quality of my work:</b>	Get Worse	Stay the Same	Improve Slightly	Improve	Improve Greatly
<b>3. My level of effort has no effect on the quantity and quality of my work.</b>	Strongly Disagree	Disagree	Neither Agree or Disagree	Agree	Strongly Agree
<b>4. How much of the quantity and quality of your work is due to your own efforts?</b>	None	Very Little	Some	Almost All	All
<b>5. When I put more effort into this job, the quantity and quality of my work go up.</b>	Never	Rarely	Sometimes	Usually	Always

*R-E Connection*

Evaluations

In this section, we want to know about evaluations of your work. Evaluations include formal evaluations like a performance review or feedback systems and informal evaluations such as coworkers' comments about your work or your supervisor saying such things as saying "nice job" or "that needs improvement."

<b>1. If the quantity and quality of my work went up a lot, my work evaluations would:</b>	Decrease	Stay the Same	Slightly Increase	Increase	Greatly Increase
<b>2. If the quantity and quality of my work go down, my work evaluations go down.</b>	Never	Rarely	Sometimes	Usually	Always
<b>3. The quantity and quality of my work have no effect on the evaluations of my work.</b>	Strongly Disagree	Disagree	Neither Agree or Disagree	Agree	Strongly Agree
<b>4. The higher the quantity and quality of my work, the higher my evaluations.</b>	Never	Rarely	Sometimes	Usually	Always
<b>5. The most important factors in how my work is evaluated are the quantity and quality of my work.</b>	Never	Rarely	Sometimes	Usually	Always
<b>6. The quantity and quality of my work determine how favorable my evaluations are.</b>	Never	Rarely	Sometimes	Usually	Always

*E-O Connection*

**Job Outcomes**

In this section, we want to know about job outcomes.

Job outcomes include things that you give yourself such as feelings of accomplishment, personal growth, pride, or disappointment.

Outcomes also include things you receive from the organization such as raises, work space, criticisms, recognition, promotion opportunities, type of work assignments, friendships, and other job outcomes.

<b>1. If my work evaluations go up, the amount of job outcomes (like raises, promotions, recognition, criticism, feelings of achievement, etc.) I get:</b>	Get Worse	Stay the Same	Get Slightly Better	Get Better	Get Much Better
<b>2. The job outcomes that I get have little to do with how good my work evaluations are.</b>	Strongly Disagree	Disagree	Neither Agree or Disagree	Agree	Strongly Agree
<b>3. If the evaluations of my work go down, the job outcomes I get will be worse.</b>	Never	Rarely	Sometimes	Usually	Always
<b>4. The better the evaluations of my work are, the better the job outcomes I will get.</b>	Never	Rarely	Sometimes	Usually	Always
<b>5. If my work evaluations improved a lot, my job outcomes would:</b>	Decrease	Stay the Same	Slightly Increase	Increase	Greatly Increase

*O-NS Connection*

**Satisfaction**

In this section, we want to know how satisfied you are with job outcomes you can get on your job. As before, these job outcomes include raises, work space, friendships, feelings of accomplishment, criticisms, type of work assignments, and other job outcomes.

<b>1. The job outcomes (like raises, promotions, recognition, criticism, etc.) I can get on this job are:</b>	Not Important to Me	Slightly Important to Me	Somewhat Important to Me	Important to Me	Very Important to Me
<b>2. The job outcomes I can get on this job are valuable to me.</b>	Strongly Disagree	Disagree	Neither Agree or Disagree	Agree	Strongly Agree
<b>3. If I get the positive job outcomes and avoid the negative outcomes this job can provide, I am going to be satisfied.</b>	Never	Rarely	Sometimes	Usually	Always
<b>4. It does not matter what my job outcomes are, my level of satisfaction will not change.</b>	Strongly Disagree	Disagree	Neither Agree or Disagree	Agree	Strongly Agree

<b>5. The more positive my job outcomes, the more satisfied I am.</b>	Never	Rarely	Sometimes	Usually	Always
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*Overall Motivation*

Please answer the following questions about your overall motivation on your job by clicking the most accurate answer.

	<b>QUESTIONS</b>	<b>ANSWERS</b>					
1	Overall, how motivated are you to do a good job?	<b>Not at all Motivated</b>	<b>Slightly Motivated</b>	<b>Moderately Motivated</b>	<b>Highly Motivated</b>	<b>Very Highly Motivated</b>	
2	How would you rate the amount of effort you put into your job?	<b>Very Low</b>	<b>Low</b>	<b>Moderate</b>	<b>High</b>	<b>Very High</b>	
3	I consistently put forth the maximum effort possible at work.	<b>Strongly Disagree</b>	<b>Disagree</b>	<b>Neutral</b>	<b>Agree</b>	<b>Strongly Agree</b>	
4	Overall, my motivation to work hard on my job is:	<b>Very Low</b>	<b>Low</b>	<b>Moderate</b>	<b>High</b>	<b>Very High</b>	
5	I put in only the minimum effort needed to keep my job.	<b>Never</b>	<b>Rarely</b>	<b>Sometimes</b>	<b>Often</b>	<b>Always</b>	
6	I put in as little effort as possible at work.	<b>Never</b>	<b>Rarely</b>	<b>Sometimes</b>	<b>Often</b>	<b>Always</b>	
7	How much of your total, <u>maximum possible</u> effort do you put into your job?	<b>Less than 50%</b>	<b>50-59%</b>	<b>60-69%</b>	<b>70-79%</b>	<b>80-89%</b>	<b>90-100%</b>

## APPENDIX D: PERFORMANCE

Please complete the following questionnaire about your employee. Select the most accurate response to each item. Your honest and thoughtful replies are appreciated. Your responses will remain confidential and will not be released to anyone, including the employee whom you are evaluating.

1. Overall, this person's work is:

Very Poor      Poor              Adequate      Good              Excellent

2. Compared to other people, this person's overall performance is:

Marginal      Fair              Satisfactory      Good              Exceptional

3. This person's overall performance is:

Well Below Expectations      Below Expectations      Meets Expectations      Exceeds Expectations  
Greatly Exceeds Expectations

4. In how many areas does this person's performance need to improve?

None              Very Few Areas              Some Areas              Many Areas              Most Areas

5. How often does this person perform his/her job effectively?

Never              Rarely              Sometimes              Frequently              Always

## APPENDIX E: ORGANIZATIONAL CITIZENSHIP BEHAVIORS



Items taken from Podsakoff (1990).

This employee...						
1	Is one of my most conscientious employees.	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
2	Always finds fault with what the organization is doing.	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
3	Attends functions that are not required, but help the company image.	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
4	Takes steps to try to prevent problems with other workers.	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
5	Is always ready to lend a helping hand to those around him/her.	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

## APPENDIX F: TURNOVER INTENTIONS

1	My current plans are to stay in this organization.	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
2	I would like to leave this organization within the next year.	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
3	I have started to look around for another job.	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

APPENDIX G: LEADER BEHAVIOR DESCRIPTION QUESTIONNAIRE FORM XII

## Structure and Consideration Scales (Stogdill, 1962)

- a. Read each item carefully.
- b. Think about how frequently your supervisor engages in the behavior described by the item.
- c. Decide whether he/she Always, Often, Occasionally, Seldom or Never acts as described by the item.

Is friendly and approachable

Does little things to make it pleasant to be a member of the group

Puts suggestions made by the group into operation

Treats all group members as his/her equals

Gives advance notice of changes

Keeps to himself/herself

Looks out for the personal welfare of group members

Is willing to make changes

Refuses to explain his/her actions

Acts without consulting the group

Lets group members know what is expected of them

Encourages the use of uniform procedures

Tries out his/her ideas in the group

Makes his/her attitudes clear to the group

Decides what shall be done and how it shall be done

Assigns group members to particular tasks

Makes sure that his/her part in the group is understood by the group members

Schedules the work to be done

Maintains definite standards of performance

Asks that group members follow standard rules and regulations

## APPENDIX H: TASK AMBIGUITY

Items adapted from Rizzo et al. (1970).

Please rate the extent to which the following statements are true ranging from 1 (very false) to 7 (very true).

**Original Wording**

1. I feel certain about how much authority I have.
2. Clear, planned goals and objectives for my job.
3. I know what my responsibilities are.
4. I know exactly what is expected of me.
5. Explanation is clear of what has to be done.

**Wording for Current Study**

Without any input or advice from my supervisor I would ...

1. be certain about how much authority I have.
2. have clear, planned goals and objectives for m y job.
3. know what my responsibilities are.
4. know exactly what is expected of me.
5. it would be clear what has to be done.





APPENDIX I: INSTITUTIONAL REVIEW BOARD APPROVAL LETTER



University of Central Florida Institutional Review Board  
Office of Research & Commercialization  
12201 Research Parkway, Suite 501  
Orlando, Florida 32826-3246  
Telephone: 407-823-2901, 407-882-2012 or 407-882-2276  
[www.research.ucf.edu/compliance/irb.html](http://www.research.ucf.edu/compliance/irb.html)

## Notice of Expedited Review and Approval of Requested Addendum/Modification Changes

From: **UCF Institutional Review Board**  
**FWA00000351, Exp. 5/07/10, IRB00001138**

To: **Robert D. Pritchard, Ph.D. and Melissa Harrell**

Date: **April 08, 2008**

IRB Number: **SBE-07-04157**

Study Title: **Measuring Components of Work Motivation**

Dear Researcher:

Your requested addendum/modification changes to your study noted above which were submitted to the IRB on 04/07/2008 were approved by **expedited** review on 4/7/2008.

Per federal regulations, 45 CFR 46.110, the expeditable modifications were determined to be minor changes in previously approved research during the period for which approval was authorized.

Use of the approved, stamped document(s) is required. The new form supersedes all previous versions, which are now invalid for further use. Only approved investigators (or other approved key study personnel) may solicit consent for research participation. Subjects or their representatives must receive a copy of the consent form(s).

This addendum approval does NOT extend the IRB approval period or replace the Continuing Review form for renewal of the study.

On behalf of Tracy Dietz, Ph.D., IRB Chair, this letter is signed by:

Signature applied by Janice Turchin on 04/08/2008 12:44:07 PM EDT

A handwritten signature in black ink that reads 'Janice Turchin'.

IRB Coordinator

Internal IRB Submission Reference Number: 002612

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