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Cognitive complexity and selected aspects of leaders' self-reported cognitions

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The University of North Carolina at Greensboro, 1991

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COGNITIVE COMPLEXITY AND SELECTED ASPECTS

OF LEADERS' SELF-REPORTED COGNITIONS

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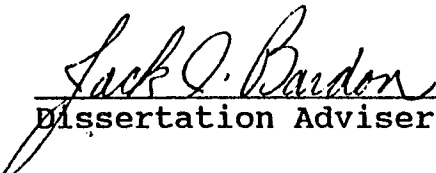
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A Dissertation Submitted to the
Faculty of the Graduate School at
The University of North Carolina at Greensboro
in Partial Fulfillment
of the Requirements for the Degree
Doctor of Philosophy

Greensboro

1991

Approved by

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Dissertation Adviser

APPROVAL PAGE

This dissertation has been approved by the following committee of the Faculty of the Graduate School at The University of North Carolina at Greensboro.

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Date of Acceptance by Committee

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Date of Final Oral Examination

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WOOTEN, HERBERT RAY JR., Ph.D. Cognitive Complexity and
Selected Aspects of Leaders' Self-Reported Cognitions. (1991)
Directed by Drs. Jack I. Bardon and L. DiAnne Borders. 151
pp.

The purpose of this study was to assess the relationship

between leaders/managers' level of cognitive complexity and

(a) their cognitive processing during decision making about

hypothetical leadership situations and (b) their self-

reported leadership style, flexibility, and effectiveness.

Sixty MBA students, 33 men and 27 women, comprised the

sample.

Participants were administered the Paragraph Completion

Method (Hunt, Butler, Noy, & Rosser, 1978) and divided via a

median split into two groups: low conceptual level and high

conceptual level. Participants were then administered two

leadership behavior inventories: Leadership Complexity

Assessment (LCA), created by the researcher, and Leader

Behavior Analysis II (LBA; Blanchard, Hambelton, Forsyth, &

Zigarmi, 1985). On the LCA participants reported influencing

factors, range of factors, options, multiple perspectives,

and dissenting viewpoints when responding to two situational

vignettes. The LBA was used to assess participant's

leadership style, flexibility, and effectiveness.

A series of multiple t-tests were performed on the

measures from the LCA and Chi-square procedures were

performed on the LBA measures between the two conceptual

level groups. Data analysis revealed no significant

differences between low and high conceptual level groups on
any of the dependent measures.

ACKNOWLEDGEMENTS

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CHAPTER I

INTRODUCTION

Leadership is, perhaps, one of the most researched yet least understood social phenomena in the behavioral sciences (Bennis, 1959; Lombardo & McCall, 1978; Stodgill, 1974). The lack of understanding often results from a narrow research focus on one particular component of leadership to the exclusion of a wider variety of other relevant components. The result is a confusion of contradictory and inconclusive evidence concerning the composite definition of leadership. Nevertheless, a strong interest in leadership is evident. In fact, many view leadership as a major determinant of organizational effectiveness (Katz & Kahn, 1978; Peters & Waterman, 1982).

Leadership research has evolved from searching for leadership traits and behaviors to investigating leadership from a contingent or situational perspective. Early approaches to leadership (through the 1940's) emphasized the examination of leadership characteristics or traits that could serve as a benchmark for effective leaders in any situation (Stodgill, 1948). Several traits were identified that appeared to be universally important for leaders. Subsequent research of these traits, however, yielded contradictory results (Gibb, 1954).

Following the trait phase, a movement towards identifying leadership behaviors ensued. From the late 1940's through the early 1960's, researchers investigated the relationship between leadership behaviors and subordinates' satisfaction and performance (Jacobs, 1970). Major studies at that time identified two behavioral headings: consideration (e.g., friendship, mutual trust, respect), and initiation of structure (e.g., directing subordinates, planning, and coordinating). Subsequent studies involving these leader dimensions (e.g., Hand & Slocum, 1972; Wexley & Nemeroff, 1975) found they were effective in most instances, although effectiveness was somewhat dependent on the situational context of the study. These findings suggested that no single leadership style was effective in every situation.

From the early 1960's to the present, leadership research has focused on leadership style and the characteristics of the environment in which the leader is operating. Situational models of leadership effectiveness (e.g., Fiedler, 1964, 1967; Hersey & Blanchard, 1972, 1977) have been developed to demonstrate the complexities of the environment and the interplay of variables that must be considered in making decisions. Effective leadership is viewed not as an absolute, but as an interplay of human and environmental variables within a given situation. Research from this perspective has been relevant to the functions of

the leader/management process. A conceptual framework,

written in contingency terms, indicates appropriate

behaviors in response to a particular situational context.

One common theme in current situational descriptions of

leadership is that leaders must be able to comprehend,

understand, interpret, and take action in a variety of

situations. The situational leadership models characterize

these skills or competencies as critical in dealing with

today's complex work environments. Hersey and Blanchard

(1988) state that

> the common thread to all situational approaches require
> the leader to behave in a flexible manner, to be able
> to diagnose the leadership style appropriate to the
> situation, and be able to apply the appropriate style.
> (p. 106)

Leaders work with simultaneous informational inputs

into the organizational system, in combination with an array

of situational demands (e.g., environmental and

organizational demands). With this flux of information and

considerations, the atmosphere for decision making seems

uncertain and ambiguous. It becomes increasingly important

for leaders to be able to expand their understanding of the

ongoing situation to include several dimensions. This

expanded understanding would include developing multiple

perspectives and interpretations of organizational events to

take into account the complexities and variety of

situational determinants (Bartunek, Gordon, & Weathersby,

1983).

The effective leader serves as a mediating link between incoming environmental and organizational events and subsequent decisions and implementation of plans. This leader works proactively by taking advantage of opportunities, developing multiple perspectives of causes and actions, and changing the parameters of a problem. This leader is concerned with coordination and integration of resources (technology and manpower), with monitoring the system while anticipating change.

In contrast, ineffective leadership had been characterized as perceiving and interpreting events from a narrow frame of reference (Bartunek et al., 1983). These leaders are unable or unwilling to comprehend the complexities of the system. Instead, ambiguity and inconsistencies in the organizational environment lead to confusion, stress, and tension. Ineffective leaders want to have "a neat, static, compartmentalized world of clear goals, clearly identified resources, and obvious performance measures, and instead they find almost the diametric opposite" (Sayles, 1989, p. 11).

Bartunek et al. (1983) suggested that, to be effective, leaders must "develop the ability to generate several interpretations and understandings of organizational events so that the 'variety' in their understanding is equivalent to the variety in the situation" (p. 273). Likewise, Weick

(1979) suggests that managers need to "complicate" themselves or develop a wider range of perspectives in order to better understand organizational and environmental events. These statements imply leaders need to develop the ability to accurately register the complex nature of the situation and environment, and act decisively and appropriately depending on the situation.

In essence, these writers are suggesting that leaders need to function at high levels of cognitive complexity. One characteristic theory of cognitive complexity is Conceptual Systems Theory (CST) (Harvey, Hunt, & Schroder, 1961). Harvey et al. (1961) proposed a cognitive developmental approach to personality in which individual differences in interpersonal behavior are explained as a function of the structure and functioning of conceptual systems (Miller, 1978). Miller (1978) states, "in emphasizing structure, the authors (Harvey et al., 1961) are making the point that how a person thinks (structure) is as important as what a person thinks (content)" (p. 80). Individual differences in conceptual structure are a result of degrees of differentiation and integration. Differentiation refers to the breaking down of a situation into more clearly defined parts, while integration is the connection or organizing of such parts (Harvey et al., 1961). Differences in conceptual structure are arranged along a continuum referred to as the concreteness-abstractness

continuum. "Concrete" refers to low levels of differentiation and integration while higher levels of each are referred to as "abstract."

Harvey et al. (1961) suggested characteristic differences at four levels of development. The concrete individual (level 1) can be described as intolerant of ambiguity, dependent on authority, highly stereotypical, and resistant to change. An abstract individual (level 4) is the converse of the concrete individual, with added ability to process complex information, develop multiple alternatives, and make decisions based on objective and subjective criteria.

Research has indicated that cognitively complex or "abstract" persons are more effective in complex situations. Abstract persons are better able to use multicombinatory rules, are more flexible (Harvey & Ware, 1967), have the ability to act "as if" (Wolfe, 1974), tend to be less prejudiced (Gardiner, 1972), have greater tolerance for ambiguity, can assume leadership roles, and have better prediction accuracy (Streufert, Streufert, & Castore, 1968).

In an essay overview of developing "complicated" understanding, Bartenuk et al. (1983) applied complexity to leadership. They pointed out that managers who are cognitively complex are able, when appropriate, to judge employees' performance on the basis of several dimensions. They also are able to see interrelationships among different

factors in the work place with the result of acting with
high integration. With diversification of industries,
technologies, markets, etc., complex understanding is of
value to leader/manager effectiveness and organizational
survival (Daft & Weick, 1984).

Leadership/management functions are affected by the
dimensionality (differentiation and integration) of
individuals in leadership positions. Complexity theory
emphasizes that people differ in their capacity to perceive
dimensions, integrate information, and act with flexibility.
Managers who function with what Weick (1979) has called
"mechanical pictures of organizations" in their heads, are
characteristic of the less complex individuals who act in a
unidimensional fashion, and are less integrative and
inflexible.

Purpose of the Study

The purpose of this study was to explore the usefulness
of applying CST to understanding effective leadership. This
general proposition was investigated in two ways. First,
this study investigated whether managers' conceptual level
was related to complexity of thinking in response to
vignettes that depict typical managerial situations. This
research focus was partly in response to the propositions
suggested by Bartenuk et al. (1983) which, to date, have not
been investigated.

This study also investigated the relationship of

cognitive complexity and situational models of leadership, based on self-reported leadership style, flexibility, and effectiveness in response to standardized vignettes. Researchers (e.g., Argyris, 1971; Hersey & Blanchard, 1988; McGregor, 1967; Schein, 1985) have suggested that to be effective, an individual must develop requisite skills, namely, understanding and interpreting a situation and being able to adapt depending on the situation. To date, however, none have studied the relationship of cognitive complexity and situational leadership.

Need for the Study

The need for this study laid in the elusive search for what makes leaders/managers more effective. There is voluminous literature on leadership components but little understanding on how the leader is to integrate these components into effective behavior. A second need for the study was based in the increasingly complex environments with which managers are faced. Leadership/management requires dealing with amounts of uncertainty and ambiguity and an ability to shift from one style and set of circumstances in a matter of moments, while at the same time dealing with people at every level of the hierarchy.

Investigation into an individual's complicated understanding may have implications for designing developmental programs and instructional training that will enhance managerial effectiveness. Bartenuk et al. (1983)

have suggested that increased managerial/leadership complexity may have potential for a ripple effect within the entire organization. This effect could manifest greater understanding of individuals and the dynamics that drive them, more accurate information processing, and greater behavioral performance. Thus, researchers (e.g., Bartenuk et al., 1983; Weick, 1979) have suggested that effective leaders need to have the ability to function at more complex cognitive levels.

Statement of the Problem

This study explored the relationship between leaders/managers' level of cognitive complexity and (a) their cognitive processing during decision making and (b) their self-reported leadership style, flexibility, and effectiveness. The study attempted to answer two general research questions:

1. Do managers (middle and lower level) at various levels of cognitive complexity differ in their understanding of managerial dilemmas, including differences in their (a) identification of causes, (b) identification of options, (c) use of multiple perspectives, (d) and recognition of dissenting viewpoints?

2. Do managers (middle and lower) at varying complexity levels exhibit differences in self-reported (a) leadership style, (b) style range or flexibility, and (c) style effectiveness?

Definitions

Leader/manager refers to the person in the process of influencing the activities of an individual or a group in efforts toward goal achievement in a given situation (Hersey & Blanchard, 1988).

Cognitive complexity represents the degree of multidimensionality in a person's conceptual abilities. This ability represents a generic capacity to employ differentiation and integration as part of information processing. For purposes of this study, complexity was measured by the Par graph Completion Method (Hunt et al., 1978).

Leadership style refers to the self-reported behavior pattern that a person exhibits when attempting to influence the activities of others (Hersey & Blanchard, 1988). For purposes of this study, leadership style was measured by a subscale on the Leader Behavior Analysis II (LBAII; Blanchard, Hambleton, Zigarmi, & Forsyth, 1985).

Style flexibility refers to the extent to which a person can vary leadership style. For purposes of this study, style flexibility was measured by a subscale on the LBAII.

Style effectiveness indicates the degree to which a person can adapt leadership style, appropriate to the situation. For purposes of this study, style effectiveness was measured by a subscale on the LBAII.

<u>Causes</u> refers to the sources of organizational problems and employee behavior. Categories of causes include such factors as personal traits, psychological variables, and situational variables inside and outside the organization. For purposes of this study, causes were measured (categorized) using the Leadership Complexity Assessment.

<u>Options</u> refers to the number of alternative solutions to solving or alleviating a managerial dilemma. For purposes of this study, options were determined using the Leadership Complexity Assessment.

<u>Multiple perspectives</u> refers to the understanding of events from various viewpoints. Categories of perspectives include such factors as subordinates, company policy, technology, etc. For purposes of this study, multiple perspectives were determined using the Leadership Complexity Assessment.

<u>Dissenting viewpoints</u> refers to the activity of recognizing the viewpoints of others and attempting to incorporate them in formulating an action plan. For purposes of this study, dissenting viewpoints were measured using the Leadership Complexity assessment.

CHAPTER II

REVIEW OF RELEVANT LITERATURE

Chapter Two presents a review of literature on leadership and Conceptual Systems Theory relevant to this research study. Each section is divided into selected research areas within the defined broad area. Rationale for the study, within the context of the literature, will be presented.

Leadership

The phenomenon of leadership may be the most extensively studied social process, yet one of the least understood. In 1959 Bennis (1959) stated, "Of all the hazy and confounding areas in social psychology, leadership theory undoubtedly contends for the top nomination" (p. 259). Almost twenty years later, Lombardo and McCall (1978) stated that "the number of unintegrated models, theories, prescriptions, and conceptual schemes of leadership is mindboggling. Much of the literature is fragmentary, trivial, unrealistic, or dull" (p. 3). Perrow (1972) added,

One is tempted to say that the research on leadership has left us with the clear view that things are far more complicated and 'contingent' than we initially believed, and that, in fact, they are so complicated and contingent that it may not be worth our while to spit out more and more categories and qualifications. (p. 115)

Despite these comments, there is still strong interest in conducting leadership research. Leadership is still considered essential for achieving the goals and objectives of a group or organization. In fact, leadership is now considered even more important due to technological development, competitive markets, changing customer preferences, and awareness of employee relations (Kotter, 1986).

Organizations are important structures in an industrial and information-based society. These structures organize and coordinate activities of a large number of people, making them central to the quality of everyday life as well as to the entire international business and political communities. In the past, organizations could work in a relatively stable environment. With recent dramatic changes (politics, business, environment), however, flexibility, adaptability, and adherence to new standards is vital for the survival of organizations.

In effect, to be successful, organizations must take risks, be innovative and flexible, and adapt to changing environments. This emphasis on adaptability and change takes leadership out of the isolated domains of top executive positions and places it virtually in every managerial position (Kotter, 1986). Thus, continual study of the understanding and components of leadership is vital.

Definitions of Leadership

There is no generally accepted definition of leadership (Bass, 1981). Instead, theorists often shape the meaning of leadership around the most salient traits or characteristics endemic to their idea of the leadership function. Bennis (1959) stated that,

> always, it seems, the concept of leadership eludes us or turns up in another form to taunt us again with its slipperiness and complexity. So we have invented an endless proliferation of terms to deal with it...and still the concept is not defined. (p. 259)

Stodgill (1974) summarized over 3,000 conceptualizations of leadership in a review of the leadership literature. He indicated that leadership has been viewed as: (a) a focus of group processes (Cooley, 1962; Kretch & Cruthfield, 1948); (b) a set of personality characteristics (Bernard, 1926; McClelland, 1965); (c) an act of inducing compliance (Allport, 1924; Bennis, 1959); (d) the exercise of influence (Katz & Kahn, 1966; Stodgill, 1950); (e) an act or behavior (Hemphill, 1949); (f) a form of persuasion (Schenk, 1928); (g) power relations (Cyert & March, 1963; French, 1956); (h) an instrument of goal achievement (Cattell, 1957; Cowley, 1928); (i) an effect of interaction (Bogardus, 1929; Jennings, 1947); (j) a differentiated role (Sherif & Sherif, 1956); (k) the initiation of structure (Hersey & Blanchard, 1969; Stodgill, 1959); (l) interpersonal styles of interaction with others (Blake &

Mouton, 1964); (m) socio-emotional support (Bales & Slater, 1955); and (n) the use of structure and position (Hosmer, 1963).

There are few convergences in the literature on what leadership is or how it works. Yukl (1989), however, identified three common factors characteristic of most definitions of leadership: (a) the notion that it is a group phenomena involving the interaction of persons in the group (Janda, 1960), (b) recognition of differences between some members in the group (leader and followers), and (c) the assumption of an influence process whereby intentional influence is exerted by the leader over the followers. These three factors have provided the basis for formulating a variety of models describing leadership.

Models of Leadership

Leadership models have gone through an evolutionary process that reflects the diverse conceptualizations in leadership research. Leadership research has developed from early efforts to identify unidimensional personality traits or characteristics of an effective leader, to investigations of leader behavior, to the current situational/contingent view of leadership. Each approach has been rather narrowly focused with little integration of previous approaches. Representative models from each stage in the evolutionary process are described in the following sections.

Trait approaches to leadership. Up until the 1940's,

writers (e.g., Bernard, 1926; Carlyle, 1910; Stodgill, 1948) emphasized leader characteristics and traits. Their writings were an attempt to develop a profile that could discriminate leaders from nonleaders. It was assumed that a person would have various amounts of a measurable personality trait(s). Researchers (e.g., Smith & Krueger, 1933) concentrated on trying to describe the leader, assuming that personality traits were the causal factor of success. No one set of traits, however, was identified that consistently could predict leadership effectiveness.

Later researchers (e.g., Gibb, 1947; Mann, 1965; Stodgill, 1948) concluded that the trait approach orientation could not be empirically supported, nor could any specific, definitive personality traits be found that were indicative of effective leadership in various situations. This does not mean, however, that certain traits may not be more beneficial than others. Yukl (1981) stated that certain traits, dependent on the situation, may increase but not guarantee leadership effectiveness.

Behavioral approaches to leadership. From the 1940's through the early 1960's, emphasis shifted from identifying traits to examining leadership behaviors. Researchers at Ohio State University (e.g., Fleishman, 1953; Halpin, 1954; Hemphill, 1949; Stodgill, 1948; Stodgill & Coons, 1957) began a series of studies to identify important leadership behavior dimensions. Most of the studies were based on

self-reports rather than measures of actual behaviors.

The Ohio State researchers developed the Leader Behavior Description Questionnaire (LBDQ) to measure how leaders acted during their everyday activities. Based on data accumulated via the LBDQ, two dimensions underlying leadership behavior were identified: (a) consideration and (b) initiation of structure. The researchers defined consideration as "leaders' behaviors indicative of friendship, mutual trust, respect, and warmth in the relation between the leader and members of the staff" (Halpin, 1959, p. 4). Initiation of structure referred to

> the leader's behavior in delineating the relationship between himself and members of the work group and in endeavoring to establish well defined patterns of channels of communication, and methods of procedure. (Halpin, 1959, p. 4)

Research results indicated that Initiation of Structure and Consideration were independent dimensions, and that a high score on one behavior did not necessitate a low score on the other. This conclusion was the beginning of plotting leadership behavior on two separate axes rather than on a single continuum (Hersey & Blanchard, 1988).

At the same time, researchers at the University of Michigan's Survey Research Center (Cartwright & Zander, 1960; Kahn & Katz, 1953; Katz & Kahn, 1951) reached similar conclusions to those derived at Ohio State. Based on interview data, two basic dimensions of leader behavior were

established: (a) employee orientation and (b) production orientation. Employee orientation implied interest in people and relationships among employees (similar to "consideration"), while production orientation was concerned with the job and technical aspects of the job (similar to "initiation of structure") (Cartwright & Zander, 1960).

Other leadership studies during this time period produced similar results. Bale (1958), in a rare study that used an observational rating of actual leader behaviors, found that leadership behavior included both socio-emotional support and task behavior. Based on his study, Mann (1965) concluded that leader behavior was composed of human relations skills, technical skills, and administrative skills. Bowers and Seashore (1966) developed a four factor model of leadership behavior that included supportive behaviors, interaction facilitation, goal emphasis, and work facilitation. Wofford (1967) reported five factors of leadership behavior: order and group achievement, personal enhancement, personal interaction, security and maintenance, dynamic and achievement oriented behaviors.

After extensive research concerning task and relationship behaviors (Katz, Macoby, & Morse, 1950), participative leadership behavior came into vogue (Coch & French, 1960). Participative leadership was defined as incorporating others into the overall decision making procedure. Participative leadership was seen as distinct

from the former task and relationship research, yet there was much overlap (Yukl, 1971). With this change of perspectives came an array of complex and contradictory taxonomies (e.g., Strauss, 1977; Tannenbaum & Schmidt, 1958; Vroom & Yetton, 1973). Characteristic of all leadership research, however, was the lack of agreement on the procedures or definition of participative leadership.

Studies involving leadership behaviors were significant in moving the focal point of leadership research away from personality traits towards examining leader behavior. This change took the focus off of the "gene pool" and gave emphasis to a broader understanding of the leadership process.

Normative approaches to leadership. Following the research into task, relationship, and participative behaviors came the normative models of effective leadership behavior. Normative leadership models espoused "one best way" to be effective in an organization. Using a few variables from previous research, these models prescribed the appropriate behavior a manager should use to be effective.

The basis of McGregor's (1960) Theory X and Theory Y was that a manager's style of leadership directly determined employee behavior. If a Theory X manager treated employees as if they were lazy and irresponsible, McGregor asserted that employees would act that way. Theory Y leaders were

employee-centered and viewed employees as motivated and seeking responsibility. This normative view suggested that a democratic style of leadership was neccesary to increase a participatory environment for subordinates. McGregor believed that if an organization followed a Theory Y set of assumptions, employees could contribute far more to the organization.

Likert (1967) proposed that, when leaders acted in a participatory manner involving followers in the decision making process, organizational effectiveness and follower satisfaction would increase. He developed four stages or "systems" that ranged from an autocratic (System 1) to a democratic system (System 4). Likert regarded System 4 (democratic/participative management) as always superior to the other three.

Blake and Mouton (1964) developed a Managerial Grid that popularized concepts of task and relationship found in the earlier Ohio State leadership studies. Blake and Mouton defined the terms as attitudinal measures of values and feelings of the manager (Hersey & Blanchard, 1988), however, while the Ohio State framework included both behavioral and attitudinal measures.

Blake and Mouton (1964) argued that managerial behavior is a function of the concern for people and the concern for production. These two functions made up five management styles that progressed from a minimal concern for both

people and production to the most desirable style,
characterized by maximum concern for both people and
production. The objective of the Managerial Grid was to
help managers learn a style of leadership that would change
the organizational climate. Despite the employee
flexibility, Blake and Mouton still proposed one best style
of leadership. As a result, there was little room for the
leader to affect a situation since a prescribed leadership
style was viewed as a "one best way" for all situations.

Little research has been conducted on the tenents of a
normative leadership theory; published investigations
yielded only limited support for the contentions of the
various models. These models provide pieces of effective
leader behavior, but also offer another static framework
from which to define effectiveness. Normative models
increased the knowledge regarding the leadership process,
but neglected to incorporate many situational variables.

Based on research to this point, investigators began to
realize that leadership was a function of many variables,
not just the leader. This change in focus led to the
investigation of the idea that there is no one best
leadership style. The focus change also gave some insight
into training modalities that could actually help in
developing effective leaders.

Situational approaches to leadership. A number of
researchers (Bass, 1985; Bennis, 1984; Fiedler, 1987; House

& Mitchell, 1974; Reddin, 1967; Tannenbaum & Schmidt, 1958; Vroom, 1973; Yukl, 1981) demonstrated that situational effects were requisite to a complete definition of effective leadership. Numerous studies based on previous models led to the conclusion that certain behaviors and attitudes (e.g., consideration, structure, participation, etc.) were imperative for leadership effectiveness, but this significance varied based on situational variables. Leadership research moved from primarily attitudinal and behavioral explanations of leadership to include research that focused on behavioral situational approaches. The major assumption of this line of research was that, to be most effective, leaders must adjust their behaviors in response to situational determinants in the organization.

Situational or contingency models provided the framework for this line of research. These models were descriptive of the interrelationships between leader, subordinate, and the situations in which they were involved (Hersey & Blanchard, 1988). Leaders adapted their behaviors according to the situational factors, such as size of organization, technology, follower maturity, and crises.

Tannenbaum and Schmidt (1957, 1973) developed one of the initial situational approaches to leadership. Their model was comprised of interrelationships between the leader, subordinate, and situation. According to the interplay of these variables, a leader chose one of seven

leadership behaviors ranging from authoritarian (task) to democratic (relationship).

Fiedler (1967) concluded that leaders are motivated by both interpersonal relations and task accomplishments. He suggested that a group's performance was a function of the leader's style and the favorableness of the situation, defined as "the degree to which the situation enables the leader to exert his influence over his group" (Fiedler, 1967, p. 13). Fiedler suggested that situational favorableness consisted of leader-member relations, degree of task structure, and leader's power. He devised eight combinations of leader behaviors that could be employed for various group situations. Numerous studies have been conducted on the model. However, validity of the model is in question, and it is believed to have little utility for understanding leader effectiveness (Yukl, 1989).

House and Mitchell (1974) developed a leadership approach combining consideration, initiation of structure, and subordinate's expectations of the leader. The Path-Goal model suggested that subordinate satisfaction and performance would be improved to the degree that the leader's behavior could increase subordinate goal attainment and clarify those goal paths. Leader behavior would be satisfying and motivating to the extent that this behavior influenced subordinate's expectancies and preferences. Research on the Path-Goal model provided support for

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theorized effects on subordinate satisfaction, but not necessarily for performance (Evans, 1974; House, 1971).

Vroom and Yetton (1973) developed a contingency model based on situational variables (e.g., time, subordinates, environmental demands, etc.) interacting with leader attributes or behavior that affects organizational effectiveness. Depending upon the assessment of the situation and the decision making procedure, the leader had several possible alternatives and responses. The model was based on the leader's decision making, the effects of the decision, and acceptance by subordinates. Research studies (e.g., Crouch & Yetton, 1987; Jago & Vroom, 1980) provided general support for the model.

Reddin (1967) believed that managers should concern themselves with the dimensions of task and relationship behaviors, but did not believe that a manager could be simultaneously concerned with both dimensions. He argued that different situations would demand different leadership styles. Reddin (1967) believed that leadership effectiveness resulted from using the appropriate leadership style for the situation and not from anything innate in the combination of task and/or relationship behaviors. Environmental factors (i.e., organization, technology, superiors, coworkers, subordinates) were components that a leader must assess when adopting an appropriate leadership style. Reddin (1967) developed eight leadership styles on a

continuum from less effective to more effective, depending
on the situation.

Hersey and Blanchard (1969) developed their Tri-
Dimensional Leader model of leadership from an integration
of the Managerial Grid (1964), Reddin's (1967) 3-D
Management Model, and the Maturity/Immaturity theory of
Argyris (1964). Hersey and Blanchard (1972) redeveloped the
attitudinal model to a behavioral emphasis model of
leadership that has been coined "Situational Leadership."
Hersey and Blanchard's interest was in developing a
practical model that could be utilized to make the decisions
necessary to effectively influence other people in any
situation. Variables in Situational Leadership are task
behavior, relationship behavior, and the readiness level of
the follower. According to the model, an effective leader
varies the amount of communication and socio-emotional
support based on an assessment of the subordinate's level of
readiness or maturity.

Task behavior is defined as the extent to which the
leader engages in spelling out the duties and
responsibilities of an individual or group. These behaviors
include telling people what to do, how to do it, where to do
it, and who is to do it (Hersey & Blanchard, 1982).
Relationship behavior is defined as the extent to which the
leader engages in two-way or multi-way communication. The
behaviors include listening, facilitating, and supportive

behaviors (Hersey & Blanchard, 1982).

Readiness is defined as the extent to which a follower has the ability and willingness to accomplish a specific task (Hersey & Blanchard, 1982). Ability (job readiness) is the knowledge, experience, and skill that is brought to a particular task or activity, while willingness (psychological readiness) is the confidence, commitment, and motivation to accomplish a specific task (Hersey & Blanchard, 1982).

Task behavior and relationship behavior are distinct dimensions placed on separate axes of a two dimensional plane. Relationship behavior is on the vertical axis and task behavior is on the horizontal axis (Figure 1). Each dimension lies on a continuum from low to high.

The diagnostic continuum of follower readiness is seen as being in conjunction with the leadership styles matrix. Follower readiness is divided into four levels from low to high. Each level is a combination of ability and willingness. The readiness level of the follower is an interactive influence on the entire system because a change in the readiness level indicates a change in the appropriate leadership style (Hersey & Blanchard, 1988).

The appropriate leadership style is determined by the right combination of task behavior and relationship behavior in accordance to the follower's readiness level. Four styles of various combinations of behavior make up the matrix. Combinations of these two dimensions make up four

different leadership styles: telling (high task/low relationship), selling (high task/high relationship), participating (high relationship /low task, and delegating (low relationship/low task). The resulting leadership styles matrix is depicted in Figure 1.

Style 1, "Telling," is a directive and structured approach for the follower who has a low readiness level. Style 2, "Selling," is characterized by explaining, persuading, and clarifying for the follower who has a low to moderate readiness level. Style 3, "Participating," is an encouraging and communicative approach for the follower with a moderate to high level of readiness. Style 4, "Delegating," is an observing or monitoring approach for the follower with a high level of readiness.

The Situational Leadership model is based on the premise "that there is no one best way to influence people" (Hersey & Blanchard, 1988, p. 171). This premise is a dramatic move away from the earlier trait and normative approaches to leadership. Effective leadership now is based on the manager's ability to diagnose both the situation and the person one is attempting to influence, and then adopting the appropriate leadership style.

The Situational Leadership model was adapted and extended by Blanchard and Johnson when they attempted to overcome the academic and controlling nature of the model in

Figure 1.

LEADER BEHAVIOR

(HIGH)

(Supportive Behavior)
RELATIONSHIP BEHAVIOR

Share ideas and facilitate in decision making

PARTICIPATING

SELLING

Explain decisions and provide opportunity for clarification

S3 **S2**

DELEGATING

TELLING

Turn over responsibility for decisions and implementation

S4

Provide specific instructions and closely supervise performance

S1

(LOW) ◄——— TASK BEHAVIOR ———► (HIGH)
(Guidance)

FOLLOWER READINESS

HIGH	MODERATE		LOW
R4	**R3**	**R2**	**R1**
Able and Willing or Confident	Able but Unwilling or Insecure	Unable but Willing or Confident	Unable and Unwilling or Insecure

FOLLOWER
DIRECTED

LEADER
DIRECTED

the One minute manager (1982). The book focused on three

principles: (a) One Minute Goal Setting, (b) One Minute

Praising, and (c) One Minute Reprimands (Blanchard &

Johnson, 1982). The idea of the "One Minute Manager" was

developed for managers to take an extra minute to identify

the factors that have an effect on workers' performance.

"Managers need to concentrate on setting clear goals with

their people, praising good performance, and reprimanding or

redirecting poor performance when necessary" (Hersey &

Blanchard, 1988, p. 377). The concepts of the "One Minute

Manager" integrated well with the developmental aspect of

the Situational Leadership model and brought the model to

life for managers. Blanchard, Zigami, and Zigarmi (1985)

made the point that Situational Leadership is not something

one does to people, but with people. The extended model was

coined Situational Leadership II (Figure 2).

Semantic and definitional changes ensued with the

integration of Situational Ledership with "One Minute

Management" and research in the area of adult learning

theory. The former labels of task and relationship were

changed to Direction and Support (Figure 2). Blanchard

(1985) defined directive behavior as "the extent to which

the leader engages in one-way communication; spells out the

follower(s) role and tells the follower(s) what to do, where

to go, when to do it, and how to do it; and then closely

supervises performance" (p. 4). Supportive behavior is "the

extent to which the leader engages in two-way communication, listens, provides support and encouragement, facilitates interaction, and involves the follower(s) in decision-making" (Blanchard, 1985, p. 4).

Zigarmi, Blanchard, and Zigarmi (1988) described examples of directive behavior as setting and clarifying goals, setting timelines, defining roles; supportive behaviors included listening to the subordinate, praising, and asking for input. It is important to note that the concepts and behaviors of the Situational Leadership II parallel the classical definitions of task and relationship or structure and consideration found in the earlier models and research that was used to develop the original Situational Leadership model.

The four leadership styles remain as combinations of directive and support behaviors; Style 1 = high direction/low support, Style 2 = high direction/ high support, Style 3 = high support/low direction, Style 4 = low direction/low support. However, the style names have changed from "telling," "selling," "participating," "delegating," to (S1) "directing," (S2) "coaching," (S3) "supporting," and (S4) "delegating" (Figure 2) (Blanchard, et al., 1985).

The major change in the model was made in the four developmental levels, formerly called readiness level. The former readiness level was a combination of ability and

Figure 2.

SITUATIONAL LEADERSHIP II
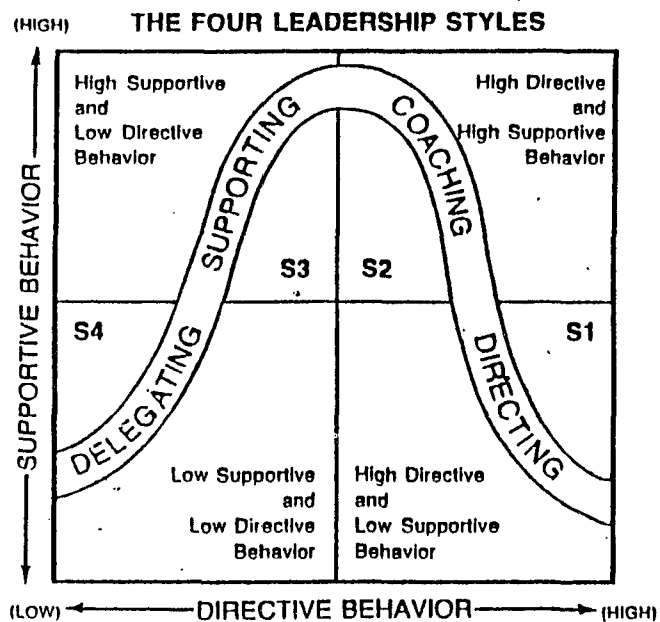
DEVELOPMENT LEVEL OF FOLLOWER(S)

willingness towards a task. The new developmental level is a combination of competence and commitment. Competence refers to the function of knowledge and skills, which can be learned through education, training, and/or experience, while commitment is a combination of confidence and motivation (Blanchard et al., 1985). Developmental level 1 (D1) was changed from low competence/low commitment to low competence/high commitment, and developmental level 2 (D2) was changed to low/some competence/low commitment. Such changes were a result of feedback from managers and research on adult learning theory that suggested that new employees (D1) would or should have the commitment to start a new assignment and that commitment is initially high with most groups at the start and needs to be maintained (D2) (Zigarmi, Edeburn, & Blanchard, 1990). Blanchard et al. (1985) emphasized that developmental level is not a global concept, but pertains to specific tasks. Understanding and correctly diagnosing an individual's developmental level is followed with correctly applying the appropriate leadership style.

Widespread acceptance of Situational Leadership as a concept with face validity and as a major training component for many Fortune 500 companies has been well documented (Hersey & Blanchard, 1988). Despite the model's enormous popularity, however, Situational Leadership is not without its critics (Barrow, 1977; Graeff, 1983; Yukl, 1981). SLT

was built from previous leadership studies, yet, as an
aggregate theory it was not empirically founded. There is
no explicit rationale between the dimensions of task and
relationship and the connection to the model's broad
definition of maturity (Graeff, 1983; Yukl, 1981). Yukl
(1981) pointed out that Hersey and Blanchard (1977)
neglected to provide an explicit rationale for the
interrelationships of the model's dimensions, and ignored a
number of situational variables that could have an effect on
leader behavior. Concepts of the model (e.g., maturity,
relationship) have been noted to be conceptually ambiguous
(Barrow, 1977; Graeff, 1983; Yukl, 1981), also creating some
conceptual contradictions within the model (Graeff, 1983).

Despite these criticisms, SLT has been credited for its
focus on situational determinants of leadership and "its
emphasis on flexible, adaptable leader behavior" (Yukl,
1981, p. 144). Graeff (1983) stated

> the recognition of the subordinate as the most
> important situational determinant of appropriate leader
> behavior is a perspective that seems justified and
> highly appropriate if leadership is defined
> conceptually as an interpersonal phenomenon involving
> influence and collective efforts toward goal
> attainment. (p. 290)

The SLT model and instruments have been undergoing
continuous revisions since its conception as the Life Cycle
Theory of Leadership in 1969. Conceptual ambiguity
associated with the model and the instruments have been

reduced and have been scrutinized in validation studies with
positive results (Gumpert & Hambelton, 1979; Haley, 1983;
Hambelton & Gumpert, 1982; Jacobson, 1984; Zigarmi et al.,
1990). The widespread acceptance of the model is evidenced
with 400 of the Fortune 500 companies utilizing the program
in training and development of their managers (Hersey &
Blanchard, 1988).

Leadership and Cognitive Complexity

Situational models imply that leader/managers must
develop the ability to accurately register the complexity of
their environment, come to some understanding, and act on
the situation. These persons "literally must wade into the
ocean of events that surround the organization and actively
try to make sense out of them" (Daft & Weick, 1984, p. 286).

This perspective gives importance to Weick's (1979)
sage advice to managers, "Complicate yourself!" (p. 261).
Weick suggested that leader/managers must have a broader
framework for understanding the organization and its
activities. Leaders/managers must understand that most
situations are complex and that no one interpretation,
understanding, or "best way" is sufficient for handling the
dilemma. Leaders/managers must develop the capacity for
detecting events (e.g., competition, markets, technological
developments) relevant to the survival of the organization.

Weick (1979) suggested that having a complicated
understanding increases the variety of inputs that can be

evaluated by the manager/leader. The complicated person can sense variations in the environment, act accordingly, and anticipate further reactions.

Bartunek, Gordon, and Weathersby (1983) voiced agreement with these concepts and suggested needed research in the area of leaders/managers becoming more complicated. They suggested that the abilities to describe multiple perspectives and causes and to utilize dissenting viewpoints would further the understanding of the leader/manager. A complicated leader/manager with these skills would avoid seeking simplistic solutions to otherwise complex situations.

Bartunek et al. (1983) believed that complicated understanding is linked to the increased cognitive complexity of the individual. This cognitive complexity or "complication" is necessary for

> greater supervisor understanding of subordinates, more
> productive use of dissent in decision making, and
> greater potential for the organization to develop
> flexible processes and structures suited to both
> individual needs and societal circumstances. (Bartunek
> et al., 1983, p. 274)

Bartenuk et al.'s (1983) supposition draws from research (e.g., Eiseman, 1978; Gardiner, 1972; Streufert & Sweazy, 1986; Triandis, 1977) suggesting, that in complex situations, cognitively complex persons are more effective, flexible, and make decisions in a multidimensional fashion. In addition, the complexity of the leader/manager not only

affects his/her own performance, but also the performance of the subordinates and the organization as well. Bartenuk et al. (1983) stated "that qualities found at later, or higher, stages are reasons why complex understanding is of value to managers and why, conversely, developmental levels can set ceilings on managerial effectiveness" (p. 274). This widening of perception has implications for leaders/managers' understanding and actions taken in an often ambiguous and complex environment.

The need to complicate suggests that attention needs to be paid to leader/manger's conceptual ability to deal with complex situations. A few studies have explored the relationship of leadership and cognitive complexity. Several researchers (e.g., Bass, Fiedler, & Krueger, 1964; Bieri, 1961; Schroder, Driver, Streufert, 1967) have suggested that there is some relationship between cognitive complexity and leadership behavior.

Fiedler's (1958) Least Preferred Coworker (LPC) scale has been the focus of many studies of cognitive complexity. The LPC is a result of Fiedler's (1967) contingency model of leadership that stressed the interaction of leadership style with situational favorableness. Leadership style, measured on the LPC scale, is based on the leader's rating of the person with whom he/she least prefers to work. Results of several studies (e.g., Ashour, 1973; Mitchell, 1970) suggested that the LPC can be used as a direct measure of

cognitive complexity. It is assumed that an individual with a high score on the LPC must perceive negative and positive qualities of an individual, while a low score indicates perceptions of negative qualities only (Mitchell, 1970). Mitchell (1970) reported a slight relationship between LPC and cognitive complexity (based on Scott's [1963, 1967) measure of complexity). Other researchers (e.g., Arnett, 1978; Schneier, 1978; Vecchio, 1979; Weiss & Adler, 1981), however, found very limited support when comparing the LPC and cognitive complexity. Schriesheim and Kerr (1977) concluded that the LPC is a "measure in search of a meaning" (p. 23). The LPC to date is empirically weak, while continuously changing its interpretation.

Developmental theorists (e.g., Kohlberg, 1969, 1976; Loevinger, 1976; Piaget, 1954, 1969) have suggested that individuals evolve through a sequence of stages (low to high) that transform perspective. Loevinger (1976) demonstrated empirically that stages of development affect complexity, understanding of others and relationships, ethical judgment, and capacity for self-awareness. She labeled her cognitive developmental theory "ego development."

Merron, Fisher, and Torbert (1987) used Loevinger's (1976) Sentence Completion Test (SCT) of ego development in the investigation of manager's complexity. They argued that how a manager reacts to the world is a function of how the

manager makes meaning of the events. Managers completed the
SCT and the Consolidated Fund In-Basket Test. In the In-
Basket test, the manager functions as the director of a
community; the "director" is asked to respond to 34 in-
basket items and to give reasons for chosen actions.
Results indicated that managers at varying developmental
stages responded differently to the in-basket items.
Managers at higher levels of ego development acted more
collaboratively and were more integrative than their lower
level counterparts. Managers at higher levels also used a
systemic approach to the items (rather than handling each
response as discrete tasks), delegated many items, and
worked collaboratively with others.

A larger body of studies related to leadership have
been based on Conceptual Systems Theory. Before these
studies are reviewed, constructs of the theory and empirical
support for CST will be presented.

<div align="center">Conceptual Systems Theory (CST)</div>

Conceptual Systems Theory (CST) is a cognitive-
developmental theory that describes individual differences
in personality. Individual differences are identified by
investigating the processes of cognitive structure and
functioning. Miller (1978) described CST as "an attempt to
account for individual differences in interpersonal behavior
in terms of variation in the structure and functioning of
conceptual systems" (p. 80). Structure is defined in CST as

the way concepts are differentiated and integrated within an individual's conceptual system. Low levels of differentiation-integration are termed "concrete" structures; high levels are referred to as "abstract." Differences in structures are ordered along a continuum that represents a developmental sequence of individual differences. The continuum represents four stages of structural development from concrete to abstract.

In addition to structural differences, Harvey et al. (1961) have included the functioning or "content" of individual conceptual systems in the developmental sequence. Functioning refers to the process by which the self-system is maintained by confirming or refuting events that would sustain the current equilibrium. CST maintains that both structure and function are parts of the developmental continuum. Structure and content integrate to form the cognitive processes that are unique to CST. As a result, cognitive processes are the "governing principles" of the system that determine the quality or nature of its operation.

General Principles of CST

One main tenent of CST is that through experience individuals develop cognitive patterns which predilect them to process information in an idiosyncratic manner. The behavior that ensues from this process is not merely a reaction to the input (stimulus), but also embodies the

meaning (i.e., attitudes, assumptions, beliefs, values) that is associated with the input.

The processing of information was a shift from the stimulus-response (S-R) paradigms of the self to a S-O-R paradigm, with the O being a mediating process. In the mediating process, input is broken down into meaningful or psychologically significant parts (i.e., differentiation) and then reorganized into a meaningful whole (i.e., integration). The process serves as a filter through which events are translated into psychological significance. Harvey et al. (1961) stated, "an individual interacts with the environment by breaking it down and organizing it into meaningful patterns congruent with one's own needs and psychological make up" (p. 7). The internal mediating process converts all incoming events into psychological dimensions and conceptual standards. The conceptual standards filter and construct perceptions and behavior. When interpreting information from the milieu, an individual is selectively attending to some stimuli while ignoring other information. These conceptual standards create stability which maintains the self-system.

Structural Characteristics of CST

Structural components of CST influence one's processing and development of a worldview and one's reaction to it. There are two major structural components: differentiation and integration.

Differentiation is the ability to discern categories within stimuli, while integration is the ability to combine these categories by the use of complex rules or schema. Harvey et al. (1961) stated that

> differentiation refers to the breaking of a novel, more undifferentiated, situation into more clearly defined and unarticulated parts. Integration, is the relating or hooking of such parts to each other and to previous conceptual standards. (p. 18)

Integration, or the connectedness of conceptual rules, refer to the ordering and organizing information from stimulus events. Differentiation and integration influence the way one perceives information, thinks, and judges.

Concreteness-Abstractness

According to CST, persons differ in their ability to differentiate and integrate events. This ability is ordered along a continuum of nodal points from concrete to abstract. The more concrete person identifies fewer mediating links, resulting in minimal differentiation and integration of events. Concreteness is characterized as having a simpler cognitive structure, a greater tendency towards bifurcated evaluations, dependence on authority, intolerance of ambiguity, poorer capacity to act "as if," more stereotypy, paucity of alternatives, and lower levels of stress (Harvey & Schroder, 1963). At the other end of the continuum, an abstract person represents maximal differentiation and integration. Greater abstractness denotes a higher level of

integrative complexity and implies the opposite
characterization of the above dimensions (i.e., tolerates
ambiguity, has complex cognitive structure, exhibits greater
capacity to take the role of the other, and tolerates higher
levels of stress).

Development of Concepts

As the ability to differentiate and integrate
increases, so does the psychological abstractness of the
individual. Harvey et al. (1961) proposed that the degree
of concreteness and abstractness was the most critical
aspect of the person's perceptual system. The degree was
critical because the structural charateristics along the
continuum demonstrated variation in ability to utilize an
array of information while using multiple alternatives to
interpret environmental events. Harvey et al. (1961) stated
that "the present view of development occurring along the
abstractness-concreteness dimension assumes an increased
availability of alternative concepts or schemata for coping
with the same stimuli" (p. 4). Harvey et al. (1961)
proposed four stages or levels of conceptual complexity
(outlined below). Each stage is characterized by distinct
levels of differentiation and integration, as well as
differences in behaviors, attitude, and interactions with
others.

Levels of Cognitive Complexity

System 1: Unilateral dependence. The first level of

cognitive complexity is the most concrete stage because of poor differentiation and integration abilities. The individual's evaluative scheme is best described as categorical (right-wrong, good-bad, black-white, etc.), absolutist, stimulus bound, and overgeneralized. At this level of functioning, the individual is intolerant of ambiguity, dependent on authority, highly stereotypical, and resistant to change. Because the individual fails under high stress, a highly structured environment is needed.

System 2: Negative independence. At the second level, the individual has the ability to perceive and develop simple alternatives. The individual rebels against authority (external control) while maintaining a bifurcated (black-white) orientation of the world. System 2 is characteristically a poorly differentiated stage, differing from stage 1 more in content than structure. System 2 persons are still characterized as unable to delineate various environmental stimuli, and they do not try alternate approaches to complex problems.

System 3: Conditional dependence and mutuality. At the third level of development, individuals are capable of greater differentiation and integration. They are able to handle complex problems, develop alternatives, and make decisions based on their own analytical behavior. System 3 persons are characterized as being more autonomous, less categorical, more tolerant of ambiguity, more objective

about the world, and tending to focus on developing mutual relationships.

    System 4: Interdependence. This is the highest level of abstract functioning. Characteristic of this stage is the ability to process complex information, develop multiple alternatives, and make decisions based on both objective and subjective criteria. Individuals at this stage tend toward experimentalism, and are relativistic and nonjudgmental in their thinking.

Support for Conceptual Systems Theory

    Numerous studies have been conducted to investigate the constructs of CST. The literature is too large to attempt a comprehensive review of CST research. Representative studies and literature reviews will be presented in this section.

    General validity studies of CST have focused on differences between concrete and abstract individuals. Researchers consistently found that concrete persons exhibited (a) a simpler cognitive structure, demonstrated by poor differentiation and incomplete integrations (Harvey, 1966; Harvey, Reich, & Wyer, 1968); (b) a greater tendency towards a bifurcated view of the environment (White & Harvey, 1965); (c) reliance on authority (Harvey, 1964; (d) intolerance of ambiguity (Harvey, 1965); (e) a greater change of experience from cognitive dissonance (Harvey, 1965); (f) greater inability to change set, resulting in

greater stereotypy (Harvey, 1965); (g) inability to see alternative solutions to problems (Harvey, 1965); (h) poorer ability to play and to think in hypothetical terms (Harvey, 1963); (i) lasting impressions of other people based on incomplete information (Ware & Harvey, 1967); (j) insensitivity to subtle and minimal cues, with greater sensitivity to false but salient cues (Harvey, 1967); and (k) higher degree of dictatorialness (i.e., need for structure, low flexibility, rule boundedness, low diversity of activity) (Harvey, White, Prather, Alter, & Hoffmeister, 1966). Results of these studies also indicated that greater abstractness implied reverse characteristics on the above dimensions.

Other studies have investigated traits or behaviors of particular relevance to leadership. These studies are summarized in the following sections.

Judgment. Differences in how information is perceived and utilized have important implications for how leaders judge and evaluate situations. The area has not been extensively studied, but the propositions concerning variations of judgment in relationship to complexity have been substantiated in several empirical studies.

Wolfe (1974) investigated the accuracy of person perceptions and complexity. Complex persons were found to have a greater ability to act "as if" and take the role of the other. O'Keefe and Delia (1978) found that complex

persons had a more comprehensive array of perceptual categories and the ability to spread these categories more evenly across observed others. Complex persons also were less apt to reject inconsistencies in information (Wojiciazke, 1979), and had a higher tolerance for ambiguity and inconsistent verbal messages (Domangue, 1978).

Holloway and Wolleat (1980) found that complex persons generated hypotheses of greater quantity and quality concerning reasons for the behavior of others. Cognitively complex persons sought more types of information and raised more questions about the underlying cause of another's behavior. The diversity and quantity of hypothesis generation enabled the more complex individual to generate a multidimensional perspective of situations, as compared to the unidimensional perspective of a less complex person.

Attitude change. Investigation into how a person forms attitudes also has implications for leadership behavior. The attitudinal judgment of the leader influences an important part in the decision making process. Attitudinal judgments that are multidimensional would appear to be more advantageous than judgments based on linear dimensions. The ability to integrate information and to develop multidimensional attitudes and attributions was of interest in the following studies.

In attitude studies, several researchers (e.g., O'Keefe & Brady, 1980; White & Harvey, 1965) found that less complex

persons articulated extreme and intense attitudes and tended
to dichotomize their attitudes instead of spreading them out
on a psychological scale. Other studies indicated that less
complex persons changed their minds more often, were more
influenced by public sentiment (Harvey, 1965), and were more
susceptible to attitude change than were abstract persons
(Hewitt & Rule, 1968; Suedfeld, 1964). Linville and Jones
(1980) reported that cognitively complex persons, as opposed
to cognitively simple persons, tended to make more moderate
judgments when exposed to additional and diverse material.
Durand (1979) found that cognitive complexity could be
applied to attitudes in other areas. Beyond the
interpersonal domain, he examined the relationship of
cognitive complexity to attitude affect and dispersion of
affect scores in reaction to product brands. Results
indicated that cognitively simple subjects had a less
critical perceptual set than complex subjects. Complex
subjects had a lower level of affect and greater dispersion
of affect scores than did simple subjects, while less
differentiated simple subjects were more alienated (Durand,
1980; Durand & Lambert, 1979).

In summary, results of attitude studies indicated that
less cognitively complex individuals tended to generate and
maintain attitudes on a single salient dimension, while
cognitively complex individuals were more multidimensionally
based. The differences in complexity resulted in less

complex individuals changing attitudes on one salient
dimension, while cognitively complex individuals were more
capable of responding on a number of different salient
dimensions when forming attitudes. As a result, complex
individuals made more moderate changes in attitude on
several dimensions, while less complex individuals were more
easily persuaded where a salient dimension was modified.

Empathy. Leaders/managers' relationships with peers
and subordinates are a critical factor in the success of a
group or organization. Leaders/managers must be able to
understand and relate appropriately to peers and
subordinates. Empathy communicates that the leader/manager
understands, appreciates, and is interested in that person.
The relationship of complexity to empathy has received
substantial attention in the counseling literature. These
studies provide additional support for the relevance of
cognitive complexity to leadership.

Heck and Davis (1973) investigated differential
expressions of empathy in counseling. Counseling trainees
were presented with two analogue interview tasks (concrete
and abstract). The results of the interview indicated that
complex counselors expressed a higher level of empathy in
both interviews than did their less complex counterparts.

Goldberg (1974) investigated the relationship between
complexity and verbal behavior in a counseling analogue
situation. More complex persons responded better to

counselee feelings and were more empathic. Less complex persons exhibited more directive responses, while more complex persons exhibited nondirective responses.

Kimberlin and Friesen (1977) found significant differences in empathy levels between persons at varying complexities when the affect stimulus was ambiguous. When the participants were presented with a clear nonambiguous stimulus, there were no differences between the groups.

Behavioral performance. Several studies have investigated the relationship of cognitive complexity to behavior. Typically, these studies have included performance measures in a variety of tasks.

Jones and Butler (1980) investigated the relationships of cognitive complexity to perceptions of and performance in the work environment. Results indicated that cognitively complex individuals perceived a greater number of dimensions in the work environment that significantly correlated with increased behavioral performance. Hendrick (1979) found that more complex persons worked faster than less complex persons in a problem solving task. Streufert, Streufert, and Denson (1985) investigated adult working males participating in a visual motor task that permitted some utilization of strategy. Higher conceptual level persons made fewer errors, utilized more strategic actions, and exhibited higher overall performance at optimal stress levels than did their concrete counterparts.

Leadership. Several researchers (e.g., Bass, Fiedler, & Krueger, 1964; Bieri, 1961; Schroder, Driver, Streufert, 1967) have suggested that there is some relationship between cognitive complexity and leadership style and/or behavior. Although numerous studies have investigated styles and behaviors of leaders/managers, few have included the complexity variable. The studies reported in this section have incorporated the complexity variable.

Driver and Streufert (1969) and Schroder, Driver, and Streufert (1967) have been interested in complexity theory and management for some time. The authors have regarded managerial effectiveness as dependent on the information processing of the individuals and organizations involved. Driver and Streufert (1969) stated that "the particular way in which organizations search for information and handle it is therefore of great importance in developing a model for productivity" (p. 272).

These authors suggested that individuals can be viewed as information processing systems that differ in differentiation and integration when processing information. They suggested that cognitive complexity is not only a function of differentiation and integration, but also is dependent on environmental conditions. Streufert and associates have conducted a series of studies to investigate the properties of this association. The relationship between environmental complexity and information processing

is represented by inverted U-shaped curves relating environmental complexity to information processing. The U-shaped curves indicate that there is a maximum level of complexity depending on the environmental complexity (e.g., information load). Differences between groups (high and low complexity) occurred under conditions of optimal environmental complexity (Schroder et al., 1967). Subsequent research has investigated the effects of various levels of environmental complexity in relation to individual conditions.

In two studies (Driver, 1969; Streufert & Driver, 1965), the effects of information load on complexity were studied. In both studies subjects were divided into groups of high and low levels of complexity. Subjects participated in tactical simulation games (e.g., military negotiation situation; simulated internation game) where information load was varied over the course of the game. Results of both studies indicated that under comparable load conditions, more complex individuals displayed more integration than individuals with low complexity.

Further research has supported a number of propositions predicted by the theorists to differentiate between levels of complexity. These include differences in attitude change (Streufert, 1965), perceptions of others and strategies (Streufert & Driver, 1965), decision making characteristics (Streufert & Schroder, 1965), innovative behavior (Tuckman,

1966), information orientation, utilization, and search (Karlins & Lamm, 1967; Stager, 1967), and conflict reduction (Crano & Schroder, 1967). The results of these studies clearly indicated that complex persons had an ability to differentiate and integrate more information at higher levels of intensity that resulted in elevated performance.

For example, in several studies (Karlins, 1967; Karlins, Coffman, Lamm, & Schroder, 1967; Karlins & Lamm, 1967) a problem solving simulation was used to measure differences in participants of varying complexity level. Cognitively complex participants asked more questions, requested different types of information, and employed better planning and strategy than did their less complex counterparts. As a result of these early studies, Driver and Streufert (1969) suggested implications for management. They believed that tasks involved in job assignments of individuals (and groups) should be matched to the requsite level of complexity.

Streufert, Streufert, and Castore (1968) compared managers at varying complexity levels to Stodgill's (1948) ten leadership characteristics. Streufert et al. (1968) investigated potential differences of complexity among groups of managers while participating in a negotiation game. Participants were divided into homogeneous groups according to complexity level. After the simulation, participants were rated by group members and by trained

raters. The results of the two sources of ratings were virtually identical. Cognitively complex leaders emphasized leadership characteristics such as tolerance of ambiguity, assumption of leadership role, consideration of others, and prediction accuracy. The less complex leaders emphasized initiation of structure, production emphasis, and demands for reconciliation. No differences were found between the groups' ratings of persuasiveness, tolerance for freedom of action, and representiveness of group. Furthermore, cognitively complex leaders spread these leadership styles more evenly across the characteristics. This spread of scores implied that leaders at higher levels of complexity might be more effective overall because of the flexibility of styles and activities in leadership situations.

In a later study, Streufert (1984) designed a hypothetical managerial situation in which senior executive managers were asked to provide information about how an "excellent" and a "poor" manager would act. The problem facing the executives was the introduction of a new product line that had the potential to double sales in the next three years. They were asked to provide information concerning the two managers (excellent and poor) over a twenty-four month period. Information obtained included (a) specific decisions, timing, and actions taken, (b) how decisions related to the overall plan (if any related), (c) how the decision was related to information received, and

(d) strategic planning.

Time-event decision matrices of simulation performance were developed. The time-event matrix is a two dimensional representation of decision sequences across time. The matrix is a combination of time (plotted horizontally) and decisions or information flow (plotted vertically). The time-event matrixes are only concerned with inter-relationships among decisions and not with the content of the decisions. The hypothetical "excellent" manager portrayed a complex style with an integrative, sequential, strategic decision making style. The matrix of the excellent manager had far more decision points and interconnections than did the "poor" manager. The more complex style reflected a more flexible, strategic, planful, and integrative style than that of the "poor" counterpart.

Streufert's (1984) study with hypothetical managers was compared by Streufert and Sweazy (1986) to an actual simulation with a cognitively complex manager and a less complex manager researched by Streufert (1983). Streufert's (1983) study illustrated the sequence of decisions by two executives of different complexity (high and low) in a simulation of international business situations. Information (written, phone, video, computer) was received by the executives who were instructed to make the best decisions for the company.

Time-event matrixes again were used in the actual

simulation. Results indicated that the matrixes of the cognitively complex executive were quite similar to that of the "excellent" manager, and the matrixes for the less complex manager were similar to that of the "poor" manager. Results indicated that cognitively complex managers were more multidimensional and had a greater ability to plan, make decisions, and develop strategy.

Hendrick (1979) investigated group problem solving behavior of experienced managers. Subjects were divided into two groups according to their measures of concreteness or abstractness. The group problem solving task was a broken squares exercise. The exercise consisted of putting puzzles together and required a group effort. Abstract group members acted at a faster pace and demonstrated better cue utilization than the concrete group. They also demonstrated greater flexibility, teamwork, and a willingness to try alternative combinations.

The choice of CST for this study. CST was chosen as the conceptual theory base for this study because of its developmental, descriptive approach and its focus on individual differences. In addition, following the original statement by Harvey et al. (1961), considerable research support for the validity of CST has been reported. Because of the developmental focus in CST, the outcomes in conceptual differences or change are of primary interest. The "concreteness-abstractness" continuum is an indicator or

typology of an individual's conceptual development. The levels in CST are a convenient device for describing variations in conceptual development along the continuum. Research results has tentatively suggested that these variations in complexity affect managerial and organizational effectiveness (Bartenuk et al., 1983).

Summary

Researchers for decades have debated over the theories, definitions, components, and effect (if any) of leadership. It is agreed that leadership and the functioning of managers is imperative not only to organizations but likewise to society and the world. Nonetheless, after voluminous writings and studies, researchers still have not reached a consensus on a definition of leadership or what it takes to be an effective manager. This state of affairs is largely a result of researchers investigating only a small aspect of leadership depending on their own conception of the field. Much of the previous leadership theories and research has examined traits and descriptive accounts of what researchers thought or saw managers do. This research, which focused on the content of leadership/managerial activities, was beneficial in describing what leaders/managers do. However, due to the complexities of the current work environment (fluxuating economy, technology, personnel, etc.), a different approach to understanding managerial functioning is needed. Instead of investigating primarily what

leaders/managers do, it also is important to investigate leaders/managers' underlying cognitive processes that result in subsequent thoughts and behaviors (Streufert & Sweazy, 1986).

It is apparent in descriptions of effective leaders that leaders/managers be able to synthesize simultaneous inputs of information, develop an understanding of the information as an integrative whole, and take action accordingly. Yukl (1989) suggested that a large part of managerial activity involves gathering, analyzing, and disseminating information. However, little has been done in identifying the processes of this activity beyond the identification of traits and skills.

Several researchers (Bartenuk et al., 1983; Merron et al., 1987; Streufert & Sweazy, 1986; Weick, 1979) have suggested that a fruitful approach to effective leadership/management is in the development of greater understanding or complexity of the individual. This approach requires an investigation into the underlying processes of leader/managers' ability to apply multiple perspectives in describing and analyzing situations. Such understanding reflects a high capability to differentiate and integrate and is indicative of higher levels of cognitive complexity. Research data (Harvey et al., 1961; Kohlberg, 1969; Loevinger, 1976) has demonstrated that individuals differ developmentally, and that such

differences contribute to the person's ability to perceive complex situations and solutions.

Previous research studies of leadership and cognitive complexity have made numerous inquiries into the interpersonal, attitudinal, informational, and perceptual domains. Yet, to date, research studies investigating the relationship between leadership/management and complexity has been limited. Most studies have concentrated on tactical strategy games with executive level individuals and groups.

The purpose of this study was to investigate the usefulness of applying a cognitive complexity theory (CST) and leadership assessments to developing lower and middle managers. This follows Bartenuk et al.'s (1983) propositions for research, which, to date, have not been investigated. As described earlier, it was proposed that leaders/managers who are more complex should be more flexible and capable of developing a more complex understanding of a situation. This ability to develop and apply a complicated understanding should increase the liklihood that they will respond with more effective alternatives and solutions.

The significance of the study was in the investigation of leader/manager complexity using a variety of measures that assess the individual's understanding of a typical managerial situation. With this data, further means into the development of leader/manager complexity, effectiveness,

and training can be investigated.

CHAPTER III

METHODOLOGY

Chapter three presents the design and methodology of this research study. Included are (a) qualifications for participants in the study, (b) description of the instruments, (c) description of the procedures, and (d) a description of the statistical procedures used in the data analysis.

Participants

The participants consisted of 60 Master of Business Arts students, 33 men (55%) and 27 women (45%), who voluntarily responded to three inventories. The participants were drawn from MBA classes and seminars at the University of North Carolina at Greensboro during the Spring 1991 semester. To qualify for participation in this study, each subject had to be admitted to the MBA program and have prior or current work experience as a manager.

Demographic information pertaining to the participant's age, classes completed in the MBA program, and years in managerial experience is shown in Table 1.

Instruments

Each participant completed a demographic questionnaire and two standardized inventories: the Leadership Behavior Analysis II Self (LBAII) and the Paragraph Completion Method

Table 1.

Demographic information

Variable	N	M	SD	Range
Age	60	31.400	6.854	22-50
Classes completed	60	7.933	5.513	1-18
Experience	60	5.200	4.818	1-21

(PCM). Participants also responded to a semi-structured assessment of leadership behavior. Data was entered and analyzed by the researcher using the VAX computer at the University of North Carolina at Greensboro.

The **Leadership Behavior Analysis II** (LBAII; Blanchard et al., 1985; Appendix A) is a 20 item, self-report inventory consistent with the constructs of Situational Leadership as described in Chapter II. The items consist of 20 short vignettes describing management situations involving interactions with an individual or a group of subordinates. Following each vignette are four multiple choice responses that describe possible actions. The four choices reflect the four styles outlined in the Situational Leadership model: Directing (S1), Coaching (S2), Supporting (3), and Delegating (S4).

There are two versions of the instrument: the LBAII

Self and the LBAII Other. The two versions contain the exact same items and subscale scores. The only difference is that the LBAII Other is written so that respondents indicate their boss's reactions (i.e., This leader would...) rather than their own leadership behavior (i.e., I would...). In this study only the LBAII Self was used. Therefore, the following descriptions only refer to the LBAII Self.

The LBAII Self yields six scores that include two primary scores (i.e., Flexibility and Effectiveness) and four discrete secondary scores (i.e., Style scores S1, S2, S3, S4).

The Flexibility score is a numerical indicator of how often the respondent chooses a different leadership style in solving the 20 leadership situations. Greater flexibility is evidenced when multiple leadership styles are used across the situations, while less flexibility is evidenced when a single style is chosen for most of the situations. To obtain the flexibility score, each of the four columns of S1-S4 are individually totalled and subtracted from 5. These four scores are then added together and subtracted from 30. Flexibility scores range from a low of 0 to a high of 30.

The Effectiveness score is a numerical indicator of the appropriate use of the chosen leadership style in reaction to the situation described (Zigarmi et al., 1990). The

Situational Leadership model advocates that in certain situations a particular leadership style would be more effective. A value is assigned to represent excellent (4), good (3), fair (2), and poor (1) responses to the situations. There are five situations (items) for which each style is the best answer. Effectiveness scores range from 20-80, with 80 representing a perfect score (i.e., most effective theory-based responses for all 20 items).

The Style scores of S1, S2, S3, and S4 are based on frequency counts of the number of times a respondent chooses one particular style out of four within the twenty situations. The resulting score is the predominant leadership style. The categorical score reflects the amount of direction and support most frequently used by the respondent at the time the data are collected (Zigarmi et al., 1990).

The validity of the LBAII was studied by comparing responses on the LBAII with responses on a validated leadership style inventory, the Multi-Level Management Survey (MLMS; Wilson, 1981). The MLMS was chosen because it was projected to measure the same constructs as the LBAII (Zigarmi et al., 1990). The MLMS yields 23 areas or subscales. The first 15 subscales deal with managers' specific behavior constructs, while the remaining eight subscales deal with group motivation, morale, and organizational climate dimensions, which are not necessarily

manager-specific. The fifteen manager-specific subscales were used in the LMS/LBAII comparison to establish content and construct validity (Zigarmi et al., 1990).

In this validation study of the LBAII, only the subordinate LBAII Other scores were used. Subordinates ($\underline{N}$ = 522) were asked to evaluate their managers ($\underline{N}$ = 122) on both the MLMS and the LBAII Other. The group was drawn from three medium-sized companies from three different areas in the United States.

To examine construct validity, a regression analysis was used with the LBAII Other scores to determine the overall relationship to the manager-specific MLMS subscales (1 through 15) (e.g., clarify goals and objectives, participation, work plan, expertise, work facilitation, feedback, time emphasis, control of details, goal pressure, delegation, recognition of good performance, approachability, team building, interest in subordinate growth, and building trust). When all six LBAII Other scores were used, a significant relationship at the $\underline{p}$ < .0001 level was determined in all but one (93%) of the comparisons. The subscale Expertise was found to be significant at the .0004 level. In a second comparison, the LBAII Other scores of Flexibility and Effectiveness were suppressed to examine the relationship between the constructs of the MLMS subscale totals and the managers' Style scores (S1, S2, S3, S4) as reported by the 552 subordinates. A significant relationship

at the p < .0001 level was evidenced in comparisons to all
15 subscales (100%) (Zigarmi et al., 1990). Both of the
comparisons were seen as evidence of the common variance
between these two instruments and an indicator of validity
of the LBAII Other (Zigarmi et al., 1990).

To determine whether or not specific subscale scores or
clusters of subscale scores on the MLMS were related to the
six scores on the LBAII, a stepwise regression was conducted
(Zigarmi et al., 1990). Subscales 1 through 11 (i.e.,
clarity of goals, participation, orderly work plan,
expertise, work facilitation, feedback, time emphasis,
control of details, goal pressure, delegation, recognition
of good performance) and 12 through 15
(i.e., approachability, team building, interest in
subordinate growth, building trust) were separated in the
stepwise procedure. In development of the MLMS, subscales had
been categorized as either a Managerial Task Cycle or
Interpersonal Relations (Wilson, 1975). MLMS subscales 1
through 11 were categorized as task-related subscales and 12
through 15 were defined as interpersonal in nature.
Therefore, two stepwise procedures were implemented for each
of the six LBAII scales (i.e., Flexibility with MLMS task and
interpersonal, Effectiveness with MLMS task and
interpersonal, Style 1, 2, 3, 4 with MLMS task and
interpersonal).

The Flexibility subscale did not generate a significant

multiple correlation coefficient with either the task or interpersonal MLMS subscale groups. This was to be expected because of the inconsistency in the definition of flexibility, and because the construct of flexibility does not lend itself to consistent patterns of relationship as measured in the subscales (Zigarmi et al. 1990). Zigarmi et al. (1990) suggested Flexibility is a useful training concept to illustrate the importance of using different leadership styles depending on the situation, but it may not be an important psychometric measure of the general concept of leadership in comparison to the MLMS.

The LBAII Effectiveness scores were related in the stepwise regression procedure to both the task and interpersonal managerial subscale groups advocated by the MLMS. The significance levels (p < .0001) demonstrated that the two instruments were measuring similar constructs in regard to these variables.

In regards to the relationships between Styles 1 through 4 with the MLMS task and interpersonal subscale groups, Zigarmi et al. (1990) reported that "the set of stepwise regressions leave no doubt that the LBAII and MLMS are related statistically and conceptually" (p. 31). In all cases a strong relationship was evidenced, with significance at the p < .0001 level.

In a third analysis, three comparisons were initiated. MLMS subscales that were perceived as being directive (i.e.,

clarity of goals, orderly work planning, work facilitation, time emphasis, control of details, and goal pressure), supportive (i.e., participation, approachability, team building, interest in subordinate growth, and building trust), and an integration of both (i.e., expertise, feedback, delegation, and recognition of good performance) were compared to the six LBAII subscales.

Significant correlations were found as hypothesized (e.g., high directive behavior in S1 and S2 in the LBAII was confirmed through the Directive MLMS subscales). Styles 1 through 4 on the LBAII were confirmed statistically with the MLMS directive, supportive, and integrative subscale groups. The Flexibility score showed no strong statistical relationship with the MLMS subscales and was not a usable psychometric score when compared with the MLMS (Zigarmi et al., 1990). There was evidence confirming a strong relationship between the selected Directive and Supportive subscales on the MLMS and the LBAII Other. Results of the analysis provided evidence that the LBAII measured Directive and Supportive dimensions of the Situational Leadership model.

Various reliability studies of the LBAII have been conducted over the past several years (e.g., Haley, 1983; Jacobsen, 1984; Punch, 1987). A majority of the studies have used the LBAII Self and have focused on leadership styles rather than the two primary scores of Flexibility and

Effectiveness. In two studies (Clothier, 1984; Haley, 1983), internal consistency reliability coefficients for Flexibility and Effectiveness scores of .66 and .66 on the LBAII Other were reported. Internal consistencies of the LBAII Other ranged from a low of .54 to .86, while the range for the LBAII Self was from .43 to .60 (Zigarmi et al., 1990).

The **Paragraph Completion Method** (PCM; Hunt, Butler, Noy, & Rosser, 1978; Appendix B) is a semi-projective sentence-completion measure of levels of conceptual development as described in conceptual systems theory (Harvey et al., 1961). Hunt et al. (1978) define conceptual development (CL) in terms of

> (1) increasing conceptual complexity as indicated by discrimination, differentiation, and integration, and (2) increasing interpersonal maturity as indicated by self-definition and self-other relations. (p. 3)

The PCM is a revised version of the Paragraph Completion Test (Schroder, 1971). The revision in the scoring procedure (i.e., reducing a 7 point scale to a 0-3 point scale) has not modified the results of the method, nor the stimulus properties of the stems (Hunt et al., 1978).

The PCM is introduced by the following instructions:

> On the following pages you will be asked to give your ideas about several topics. Try to write at least three sentences on each topic. There are no right or wrong answers, so give your own ideas and opinions about each topic. Indicate the way you really feel about each topic, not the way others feel or the way you think you

should feel. You will have about three minutes for each page. (Hunt et al., 1977, p. 1)

The topics, each on a separate page, are stated as five sentence stems: (a) What I think about rules..., (b) When I am criticized..., (c) When someone does not agree with me..., (d) When I am not sure..., (e) When I am told what to do... (Hunt et al., 1978). Respondents are encouraged to write at least three sentences on each topic, and are allowed three minutes per stem.

General scoring procedures require two steps: (1) assigning a score from 0-3 to each of the responses, and (2) aggregating these separate scores into a total score. Only the top three scores are calculated to obtain the total score. The rationale for using the top three rather than all scores is that if individuals are able to demonstrate a high level of conceptual thinking on a few responses they can be considered to generally operate at this level of functioning (Hunt et al., 1978). Characteristics of cognitive complexity with the corresponding PCM score are as follows. It is important to note the obvious parallel between the PCM score characteristics and the developmental stages of Conceptual Systems Theory (Harvey et al., 1961) as described earlier (Chapter 2).

(1) Score 0: Individuals at this level may react in one of two ways. They may be impulsively aggressive, self-centered, and resistant to external control, or they may

react defensively by withdrawing, ignoring the situation, or blaming others.

(2) Score 1: Individuals at this level are concerned with being socially accepted and have dichotomous thinking. The individual reacts in a concrete fashion to social norms, and is sensitive and anxious to please authority.

(3) Score 2: Individuals are open to ideas and alternatives, yet do not attempt to integrate them in any fashion. They strive for independence and have a greater tolerance of uncertainty and ambiguity.

(4) Score 3: These individuals are capable of integrating ideas and alternatives while balancing the consequences of the decision. They are independent and secure in what they believe and with relationships with others.

Inter-rater reliability coefficients for the PCM have ranged from .68 to .94 (median r = .86 over 26 studies) (Hunt et al., 1978). Scoring for this study was performed by professional scorers, whose inter-rater reliability coefficients range from .85 to .90.

The validity of the PCM has been established in over a hundred studies employing complexity as a major experimental variable. The test consistently predicted behavioral performances congruent with theoretical expectations (Gardiner & Schroder, 1972). Schroder et al. (1967) and Schroder (1971) summarized programmatic studies

demonstrating persons having high scores showed less tendency to exhibit black/white thinking, greater tendency to exhibit tolerance of ambiguity and conflict, independence of judgment, greater ability to integrate perspectives, and more flexibility of judgment than did persons with low scores. Gardiner (1972) and Schneider and Giambra (1971) found similar results; individuals with high scores of complexity used a significantly greater variety of components in identifying concepts than did their less complex counterparts.

Predictive power of the test has been found in a number of social interaction settings (Gardiner & Schroder, 1972). In representative studies, Stager (1967) found that teams high in complexity generated and used a high degree of conflict when competing against a computer in a strategy game. Crouse, Karlins, and Schroder (1968) found that cognitive complex married couples were happier than couples low in complexity.

In correlational studies, the test has demonstrated low but significant relationships with other cognitive measures (Gardiner & Schroder, 1972). Schroder et al. (1967) found expected negative relationships with theoretically-related personality variables (i.e., authoritarianism and dogmatism), while Bottenberg (1969) found positive relationships with measures of flexibility, openness, and differentiation.

Internal reliability of the test also has been found to be satisfactory. Schroder et al. (1967) reported intercorrelates in the .60 to .75 range for the five items. Bottenderg (1969) reported a Spearman-Brown correlation of .75 between two approximately equal test halves with a sample of 100 persons. Gardiner and Schroder (1972) reported a test-retest correlation of .67 for 36 college students.

The Leadership Complexity Assessment (LCA; Appendix C), created by the researcher through a series of pilot studies, was administered to each participant. This assessment consists of two different managerial situations (vignettes) followed by three open-ended questions related to cognitive processing. The semi-projective questions, each on separate pages, assess respondents' understanding and interpretation of the situation. The vignettes were taken from Vroom and Yetton (1969) and were deemed by experts (i.e., Drs. Nur Gryskiewicz and Luke Nouvelli), professors in the UNC-Greensboro School of Business, as representative of possible managerial dilemmas in every day life. The questions are based on Bartunek et al.'s (1983) recommendations for research concerning the relationship between complexity and leadership. Bartunek et al. (1983) proposed several testable hypotheses concerning methods of developing complicated understanding and the effects in organizations. Their propositions indicated that managers who are developmentally complex should be able to (a) understand events from multiple

perspectives, (b) perceive multiple complementary causes for organizational dilemmas and employee behavior, (c) and make productive use of dissenting viewpoints regarding the situation. Questions for the LCA were designed to assess the multiple causes and perspectives, options, and use of dissenting viewpoints that are indicative of cognitive processes.

The assessment is introduced by the following instructions:

> On the following pages you will be asked to read two vignettes and then to give your ideas about each both separately. Three questions follow each vignette. There are no right or wrong answers, so give your own ideas and opinions when answering questions concerning each vignette. Indicate the way you really feel or think about each vignette, not the way others might react or the way you think you should act.

The vignettes are followed by three questions, each on a separate page. The questions were drawn directly from Bartenuk et al.'s (1983) propositions for research: (a) Describe in any way you wish how this situation developed...i.e., the "factors influencing the situation," (b) What do you see as your options in this situation?, and (c) Describe your plan of action in response to this situation. The instrument takes approximately fifteen to twenty-five minutes to complete.

This particular assessment is a result of several pilot studies designed to develop the most efficacious manner in which to assess the respondent's cognitions about

leadership/management situations. In the first pilot, using MBA students, managerial vignettes and structured questions were used to assess respondent's reactions. This method proved to constrain and lead participant's responses to the questions. The current semi-projective approach was developed for a second pilot study. This approach appeared to yield a more realistic sample of the MBA student's thoughts and reactions.

Responses from the questions were scored by three trained, experienced raters. Rating categories (see scoring manual, Appendix D) were identified through close study of approximately 70 pilot sample responses obtained in the second pilot study with MBA students. Results from the sample data reinforced the existing content codes and identified a need for a new category for one item (i.e., outside situational variable). Based on feedback from the raters, definitions of the categories and scoring instructions were further refined for ease in understanding and scoring. Rating scales, content codes, examples, and instructions for scoring are presented in the manual (Appendix D).

Question one, "Describe in any way you wish, how this situation developed...e.g., the factors influencing the situation", was scored in two ways: (a) causes were counted numerically, and (b) causes expressed were categorized into four different dimensions. The dimensions were (a) personal

traits, (b) psychological traits, (c) situational variables inside the company, and (d) situational variables outside the company. Conceptual systems theory would suggest that leaders/managers at higher conceptual levels would report an ability to understand a situation from a greater variety of perspectives.

Options listed in response to Question two were counted numerically to assess the number of alternative ways the respondent reported for handling that situation. Conceptual systems theory would suggest that leaders/managers at higher conceptual levels would report a greater variety of alternatives to a situation.

Question three (i.e., plan of action) was categorized based on the various perspectives represented in the responses. Categories included (a) manager/self, (b) subordinate(s), (c) superior(s), (d) company policy, (e) clients/customers, (f) vendor(s), (g) colleagues, (h) technology, (i) culture, (j) sociopolitical, and (k) other. Conceptual systems theory would suggest that leader/managers at higher conceptual levels would report a greater use of perspectives in developing a solution.

The final score, consideration of dissenting viewpoints, was assessed from question three. This score refers to the activity of encouraging and considering another's viewpoint, regardless if it is used in the action plan. Rating is from one to five. A rating of one

indicates that only one opinion (the respondent's own opinion) is represented. A rating of five indicates a repondent considered several opinions, including input from inside and outside the organization. Conceptual systems theory would suggest that leader/managers at higher conceptual levels would report greater use of a variety of viewpoints regarding problem situations.

For the pilot study, two raters were employed to rate the vignettes. Both raters were currently enrolled in graduate studies in the Department of Counseling and Specialized Education. The investigator conducted all training activities. The first session involved a period of approximately two hours; three subsequent one hour meetings were held to discuss scoring of sample protocols. The raters were familiarized with the theoretical constructs of informational processes, the vignettes, scoring manual, and scoring sheets. They were not informed of the particular nature of the present research nor of the proposed hypotheses.

The general procedure for training included discussion of the categories and scoring procedure, followed by independent rating of a protocol. Raters reported scores and resolution of discrepancies between raters ensued. This procedure was followed several times on different sample protocols until scoring consensus was reached. The interrater reliability (after the initial two hour meeting)

on the sample protocols was 95% for two persons in agreement and 80% for all three in agreement before any discussion. In scoring responses, the raters followed how the responses were answered and did not try to interpret what the respondent might have meant. The scoring of each protocol took 4 to 8 minutes.

Inter-rater reliability of scoring the protocols was over .80 for 20 pilot study protocols. In this study, the same three raters independently score the protocols. Scores were based on 2 out of the 3 raters' agreement or consensus; if not this result, discrepancies were resolved by discussion.

Procedure

The MBA students responded to the three different assessments in one class period. First, students responded to an informed consent (Appendix E) of their rights as subjects and completed a demographic questionnaire (Appendix F). Secondly, the PCM, the Leadership Complexity assessment, and the LBAII were administered separately. Instructions for these assessments were presented aloud just prior to each administration. All response sheets were labeled with an identification number only.

Data Analysis

First, the participants were divided into two groups: high level of complexity (abstract thinking) and low level of complexity (concrete thinking). This was done by

identifying a median score for this particular group.

Differences between the two conceptual groups were examined for 8 dependent variables: (a) number of influencing factors, and (b) particular type(s) of factor; (c) number of options generated; (d) number of perspectives; (e) use of dissenting viewpoints; (f) leadership flexibility; (g) leadership effectiveness; and (h) leadership style.

Research Hypotheses

Based on the literature, the following research hypotheses were proposed.

1. High CL subjects will generate a greater number of influencing factors within a managerial situation than will low CL subjects.

2. High CL subjects will generate a wider range of influencing factors than will low CL subjects.

3. High CL subjects will generate a greater number of options in developing alternatives than will low CL subjects.

4. High CL subjects will generate a greater number of multiple perspectives than will low CL subjects.

5. High CL subjects will make use of more dissenting viewpoints than will low CL subjects.

6. High CL subjects will have higher flexibility scores than the low CL subjects.

7. High CL subjects will have higher effectiveness

scores in the leadership situations than will low CL subjects.

8. Low CL subjects will be more likely to have a primary leadership style of S1 than will high CL subjects.

Research hypotheses 1, 2, 3, 4, and 5, were addressed using a series of multiple t-tests. In order to control the experimenter-wise error rate that results from multiple comparisons, the Bonferroni correction was employed to hold the overall significance level at .05. In general, the Bonferroni approach requires that if k hypotheses are tested at the alpha/k level, the probability of a Type I error is no greater than alpha (Cliff, 1987). In this case, five questions were being tested. Seeking an overall alpha of .05, the relevant probability is .05/5, or 0.01. Consequently, an alpha level of .01 was used. Note that, if significance was found at the .01 level it would have been reported at the .05 level.

Secondly, because the distribution of the scores were positively skewed, a logarithm transformation was performed before the t-test. This transformation of the scores into logarithms normalized the distribution.

A Chi-square test of association was used to address questions 6, 7, and 8. High and low groups on the Flexibility and Effectiveness scales (hypotheses 6 and 7) were formed via a median split in order to use the Chi-square association. Question 8 was divided in terms of one

group consisting of leadership style S1 and the other group consisting of Styles 2, 3, 4.

CHAPTER IV

RESULTS

This chapter consists of two parts. First, descriptive statistics are reported for the combined sample, as well as for the low CL and high CL groups. Second, the results of the data analyses as determined by a series of multiple t-tests and Chi-square procedures, are reported for each research hypothesis.

Descriptive Statistics

The Paragraph Completion Method was employed as the measure of conceptual level (CL), the independent variable in the study. The 60 subjects had a mean score of 1.851 ($\underline{SD}$ = 0.2890; range = 1.2 - 2.5), indicating levels of conceptual development.

As suggested by Hunt et al. (1978), a median split was performed on the sample to form two groups. This procedure resulted in a median split at 2.0; any score below 2.0 was classified as low CL and any score equal to or above 2.0 was classified as high CL. An examination of age, classes completed, and managerial experience by complexity level group is presented in Table 2.

T-tests were performed to determine whether there were any significant differences between the two groups on these demographic variables (i.e., age, classes completed, and

managerial experience) between the high and low complex

groups.   Results are reported in Table 3.

Table 2

Comparisons of Demographic Information

Variable	N	M	SD
Low cognitive complexity			
Age	30	32.133	7.045
Classes completed	30	8.033	5.726
Experience	30	5.433	5.103
High cognitive complexity			
Age	30	30.666	6.697
Classes completed	30	7.833	5.388
Experience	30	4.966	4.589

No significant differences were found for any of the

categories.   These results suggested a homogeneous sample

group on age, classes completed, and managerial experience

across complexity levels.

The Leadership Complexity Assessment (LCA) and the

Leader Behavior Analysis (LBA) were employed as the

dependent measures.   The LCA assessed the connection between

complexity and managerial leadership.   The specific measures

were influencing factors, options, multiple perspectives,

and use of dissenting viewpoints. The LBA assessed

leadership styles, flexibility and effectiveness.

Table 3

T-test on Demographic Variables by Conceptual Level

Variable	N	t	df	prob > T
Age				
Low group	30	.8264	58.0	0.4120
High group	30			
Classes completed				
Low group	30	.1393	58.0	0.8897
High group	30			
Experience				
Low group	30	.3724	58.0	0.7110
High group	30			

Descriptive statistics on these measures for the composite

group are shown in Table 4.

On the LBA, a large majority of participants (90%)

reported Style 3 as their predominant leadership style.

Style 3 is referred to as the "Supporting" style. This

style is characterized by the leader's facilitation and

support of subordinates' task accomplishments and decision

making. The remaining participants reported Style 2 (6.67%) or Style 1 (3.33%) as their predominant leadership styles.

Table 4

Descriptive Statistics of Leadership Complexity Assessment and Leader Behavior Analysis for Complete Sample

Variables	N	M	SD	Range
Leadership Complexity Assessment				
1. Influencing factors	60	3.666	2.088	2-15
2. Range of factors	60	2.800	0.898	2-5
3. Options	60	6.133	2.843	2-16
4. Multiple perspectives	60	3.900	1.084	2-7
5. Dissenting viewpoints	60	3.816	1.346	2-8
Leader Behavior Analysis				
6. Flexibility	60	16.666	4.946	6-26
7. Effectiveness	60	58.800	5.014	43-69

Style 2 is a "Coaching" style, characterized by close supervision of tasks while soliciting suggestions and supporting progress. Style 1 is a "Directing" style, characterized by specific directions of the leader and close supervision of tasks.

Research Hypotheses

Eight research hypotheses were tested to examine the differences in CL groups on the various measures of cognitions. A series of five multiple t-tests were conducted on questions 1 through 5 (Table 4); three Chi-square tests of association were conducted on questions 6 through 8.

On the LCA, consensus scores from the two situational vignettes were added together to attain a total score for each dependent measure of influencing factors, range, options, multiple perspectives, and dissenting viewpoints. The mean scores for each group (i.e., low and high conceptual levels) on the LCA measures were computed from the additive scores from each variable. For questions 1 through 5, the Bonferonni correction was employed for the t-tests to hold the overall significance level at .05. Consequently, an alpha level of .01 (.05/5) was required. The computer program used for the data analysis was SAS. Results are reported in Table 5 and in the following paragraphs.

Hypothesis 1. High CL subjects will generate a greater number of influencing factors within a managerial situation than will low CL subjects.

The first research question compared means of the number of total factors influencing the situation identified by the low CL and high CL groups. As reported in Table 5,

the t-test revealed no significant differences between the two CL groups.

Hypothesis 2. High CL subjects will generate a wider range of influencing factors than will low CL subjects.

The second t-test compared the means of the number of influencing factor categories generated by low CL and high CL subjects. As reported in Table 5, the t-test revealed no significant differences between the two CL groups.

Hypothesis 3. High CL subjects will generate a greater number of options in developing alternatives than will low CL subjects.

The third hypothesis compared the means of the number of options for situation solutions generated by low CL and high CL groups. As reported in Table 5, the t-test revealed no significant differences between the two CL groups.

Hypothesis 4. High CL subjects will generate a greater number of multiple perspectives than will low CL subjects.

This question compared the means of the number of multiple perspectives in the solution generated by low CL and high CL groups. As reported in Table 5, the t-test revealed no significant differences between the two groups.

Hypothesis 5. High CL subjects will make use of more dissenting viewpoints than will low CL subjects.

This question compared the means of the use of dissenting viewpoints in the solution by low CL and high CL groups. As reported in Table 5, the t-test revealed no

significant differences between the two groups.

Hypothesis 6. High CL subjects will have higher
flexibility scores than will low CL subjects.

There was no significant relationship between
conceptual level and flexibility scores on the LBA of the
low CL and high CL groups, X^2 (1, $\underline{N}$ = 60) = .000, $\underline{p}$ = 1.000.

Hypothesis 7. High CL subjects will have higher
effectiveness scores in the leadership situations than will
low CL subjects.

There was no significant relationship between
conceptual level and LBA effectiveness scores of the low CL
and high CL groups, X^2 (1, $\underline{N}$ = 60) = 1.699, $\underline{p}$ = .196.

Hypothesis 8. Low CL subjects will be more likely to
have a primary leadership style of S1 than will high CL
subjects.

This hypothesis could not be examined, since only two
subjects (3.33%) had a primary leadership style of S1,
making the Chi-square test invalid.

Summary

Results of this study did not support the hypothesized
relationships between conceptual level and various measures
of managerial cognitions. These results and methodological
and design limitations of the study are discussed in the
next chapter.

Table 5

Differences of Low and High Conceptual Level Groups on LCA

Subscales

CL groups	N	M	SD	t	df	prob>T
		Number of influencing factors				
Low CL	30	1.2616	.4483	1.2185	58.0	0.2280	High
CL	30	1.1265	.4100			
		Range of influencing factors				
Low CL	30	1.0258	.3177	1.1015	58.0	0.2752
High CL	30	.9399	.2859			
		Number of options				
Low CL	30	1.6738	.4938	-.4137	58.0	0.6806
High CL	30	1.7273	.5090			
		Multiple perspectives				
Low CL	30	1.2455	.3372	-2.1168	58.0	0.0386
High CL	30	1.3981	.2050			
		Dissenting viewpoints				
Low CL	30	1.1749	.3471	-2.2818	58.0	0.0262
High CL	30	1.3796	.3478			

CHAPTER V

DISCUSSION

This chapter summarizes the purpose and results of this study. Also included are a discussion of limitations and implications for future research and education.

Summary

The purpose of this study was to assess the relationship between leaders/managers' level of cognitive complexity and (a) their cognitive processing during decision making about hypothetical leadership situations and (b) their self-reported leadership style, flexibility, and effectiveness. This investigation was based on the propositions of Bartenuk et al. (1983), who proposed that managers at higher conceptual levels would be more flexible and would be capable of developing a more complex understanding of a situation. The authors also believed that this ability to develop and apply a complicated understanding would increase the likelihood that leaders/managers would respond with more effective alternatives and solutions to leadership/managerial situations.

The LCA inventory was used as a measure of cognitive responses to leadership situations, while the LBA was used to assess self-reported leadership behaviors. The LCA

provided measures of cognitive responses to two leadership situations; subscales included the dependent measures of influencing factors, options, multiple perspectives, and dissenting viewpoints. Based on Bartenuk et al.'s (1983) propositions, the LCA was designed to elicit an individual's cognitions pertinent to the effects of complicated understanding. The results were post-coded and scored for categories designed to discern differences in CL. The LBA, a self-report multiple choice inventory, provided measures of flexibility, effectiveness, and leadership style based on the constructs of Situational Leadership (Hersey & Blanchard, 1972). Series of t-tests and Chi-square tests of association were used to determine differences between high/low CL groups on these leadership indicators.

Data analyses revealed no significant differences between low CL and high CL groups. These findings are somewhat surprising when considering the research reviewed in Chapter II, which indicated the likelihood of differences between and low and high CL groups.

<center>Limitations</center>

Certain limitations of this study may have affected the lack of significant findings.

The CL scores for this sample were similar to those typically found for graduate students. However, there was little variability of CL scores, which pooled around the mean (1.85); approximately 67% of the sample ranged from

1.7-2.0. The restricted range of scores limited the real differences in CL between the high/low CL groups. The lack of significant differences may have been influenced by these restricted scores.

In previous studies, the top third and bottom third of a CL distribution have been used to study differences between CL groups. Time and manpower constraints in this current study made it impossible to sample a proportion of students to yield a sufficient number of participants at each end of the CL continuum.

The dependent measures of leadership were chosen on the basis of theoretical premises drawn from the literature on CL and were developed to be consistent with the propositions as suggested by Bartenuk et al. (1983). While these measures were theoretically appropriate, some limitations of these measures also may have influenced the lack of significant findings. First, they were self-report measures of cognitions and behaviors, rather than measures of actual on-the-job behaviors. It is unknown to what extent participants' self-reports matched their actual behavior.

Second, it may be that the LCA vignettes were not complex enough to elicit relevant differentiating responses from the two CL groups. In addition, the LCA yielded quantitative measures necessary for data analysis. This approach, however, did not take into account any qualitative variability in responses. For example, two participants in

the same CL group reported an identical number of influencing factors. Participant 1 noted, "Obviously, somebody did a poor job of designing the parking lot," while participant 2 noted "this situation developed because the manager was not up on the building plans. If final approval was a decision of the manager he should have known way ahead of time the number of spaces available. It was his responsibility to make sure everything was taken care of and he should have done so, whether it meant delegating people to follow-up or what..." The qualitative differences within the content of these two responses could not be "scored" in the coding scheme for the LCA.

The LBA could lack validity with regard to the said theoretical constructs, since it was not designed in reference to the CL literature. In addition, 90% of the participants' reported a style of S3 (supporting) as their primary leadership style. It may be that the participants' self-reported style was influenced by the MBA curriculum and/or was a reflection of their beliefs about the socially accepted leadership style. It is unknown whether these self-reports would match their actual managerial behavior.

Finally, the sample employed was selected from one particular MBA program. Results may be idiosyncratic to the students from this department. Results must be interpreted as representative of the population in this sample.

Implications

In the future, a wider range of CL scores would be desirable, so that the analysis of dependent variables in relation to CL might best be done by considering the top and the bottom subjects on the CL continuum. Using the extremes of the distribution may maximize opportunities for finding any differences that exist in relation to CL.

Greater differentiation on other relevant variables also could be helpful. For example, using a wider range of the population, such as persons with longer and shorter managerial experience, could yield more diversified scores.

In this study, the content of the responses were coded along CL categories. This approach neglected content relevance, thought processes, and the progression of the managers' cognitions. Investigations into actual thought processes and relevance might be more revealing. Likewise, an independent measure that could tap into both structural and content processes might better reflect diversity of complexity within low CL and high CL groups.

Although this study produced no significant results, those in the behavioral sciences, including counselor education, would benefit from an awareness of the literature applying CL to leadership. Additional studies may indicate that emphasis in leadership development programs should be given to participants' cognitive processes and to developing their "complicated understanding" of leadership/managerial

situaitons.

Theoretical relevance of CL for leadership and the behavioral sciences suggests a need for further studies. Results of this study did not support the theoretical premises, but may have suggested more fruitful approaches to studying this question in future investigations.

BIBLIOGRAPHY

Allport, F. H. (1924). Social psychology. Boston: Houghton
Mifflin.

Argyris, C. (1971). Management and organizational
development: The path from XA to YB. New York:
McGraw-Hill.

Arnett, M. D. (1978). Least preferred coworker score as a
measure of cognitive complexity. Perceptual and Motor
Skills, 47, 567-574.

Ashour, A. S. (1973). Further discussion of Fiedler's
contingency model of leadership effectiveness.
Organizational Behavior and Human Performance, 9, 369-
376.

Bales, R. F., & Slater, P. E. (1955). Role differentiation in
small decision making groups. In T. Parsons (Ed.),
Family, socialization, and interaction process (pp. 259-
306). Glencoe, IL: Free Press.

Barrow, B. M. (1977). The variables of leadership: A review
and conceptual framework. Journal of Applied Behavioral
Science, 2, 231-251.

Bartunek, J. M., Gordon, J. R., & Weathersby, R. P. (1983).
Developing complicated understanding in administators.
Academy of Management Review, 8, 273-284.

Bass, B. M. (1981). Individual capability, team response, and productivity. In E. A. Fleischman & M. D. Dunnette (Eds.), Human performance and productivity (pp. 325-347). New York: Erlbaum.

Bass, B. M. (1985). Leadership and performance beyond expectations. New York: Free Press.

Bennis, W. G. (1959). Leadership theory and administrative behavior: The problem of authority. Administrative Science Quarterly, 4, 259-260.

Bennis, W. G. (1984). The four compentencies of leadership. Training and Development Journal, 38, 15.

Bernard, L. L. (1926). An introduction to social psychology. New York: Holt.

Bieri, J. (1961). Complexity-simplicity as a personality variable in cognitive and preferential behavior. In D. W. Fiske & S. R. Maddi (Eds.), Functions of varied experience (pp. 355-379). Homewood, IL: Dorsey.

Blake, R. R., & Mouton, J. S. (1964). The managerial grid. Houston, TX: Gulf Publishing.

Blanchard, K., Hambleton, R., Zigarmi, D., & Forsyth, D. (1985). Leader Behavior Anaysis II. Escondido, CA: Blanchard Training and Development.

Blanchard, K., & Johnson, S. (1982). The one minute manager. New York: Morrow.

Blanchard, K., Zigarmi, P., & Zigarmi, D. (1985). Leadership and the one minute manager. New York: Morrow.

Bogardus, E. S. (1929). Leadership and social situations. Sociology and Social Research, 13, 377-387.

Bowers, D. G., & Seashore, S. E. (1966). Predicting organizational effectiveness with a four factor theory of leadership. Administrative Science Quarterly, 11, 238-263.

Carlyle, T. (1910). Lectures on heroes, hero-worship, and the heroic in history. Oxford: Clarendon.

Cartwright, D., & Zander, A. (1960). Group dynamics: Research and theory (2nd ed.). Evanston, IL: Row, Peterson.

Cattell, R. B. (1957). A mathematical model for the leadership role and other personality-role relations. In M. Sherif & M. O. Wilson (Eds.), Emerging problems in social psychology (pp. 245-267). Norman, OK: University of Oklahoma.

Cliff, N. (1987). Analyzing multivariate data. New York: Harcourt Brace Jovanovich.

Coch, L., & French, J. R. P., Jr. (1948). Overcoming resistance to change. Human Relations, 1, 512-532.

Cooley, C. H. (1962). Human nature and the social order. New York: Scribners.

Cowley, W. H. (1928). Three distictions in the study of leaders. Journal of Abnormal and Social Psychology, 23, 144-157.

Crano, W. D., & Schroder, H. M. (1967). Complexity of attitude structure and processes of conflict reduction. Journal of Personality and Social Psychology, 5, 110-114.

Cyert, R. M., & March, J. G. (1963). A behavioral theory of the firm. Englewood Cliffs, NJ.: Prentice-Hall.

Daft, R. L., & Weick, K. (1984). Toward a model of organizations as interpretation systems. Academy of Management Review, 9, 284-295.

Domangue, B. A. (1978). Decoding effects of cognitive complexity, tolerance of ambiguity, and verbal-non-verbal inconsistency. Journal of Personality, 46, 519-535.

Driver, M. J., & Streufert, S. (1969). Integrative complexity: An approach to individuals and groups as information-processing systems. Administrative Science Quarterly, 14, 272-285.

Durand, R. M. (1979). Cognitive complexity, attitudinal affect, and dispersion in affect ratings for products. Journal of Social Psychology, 107, 209-212.

Durand, R. M. (1980). The effect of cognitive complexity on affect ratings in retail stores. Journal of Social Psychology, 110, 141-142.

Durand, R. M., & Lambert, Z. C. (1979). Cognitive differentiation and alienation of consumers. Perceptual and Motor Skills, 49, 99-108.

Eiseman, J. (1978). Reconciling "incompatible" positions.
Journal of Applied Behavioral Science, 14, 133-150.

Fiedler, F. E. (1958). Leader attitudes and group
effectiveness. Urbana, IL: University of Illinois
Press.

Fiedler, F. E. (1967). A theory of leadership effectiveness.
New York: McGraw-Hill.

Fiedler, F. E. (1987). New approaches to effective
leadership. New York: Wiley.

Fleishman, E. A. (1953). Leadership climate, human relations
training, and supervisory behavior. Personnel
Psychology, 6, 205-222.

French, J. R. (1956). A formal theory of social power.
Psychological Bulletin, 63, 181-194.

Gardiner, C. S. (1972). Complexity training and prejudice
reduction. Journal of Applied Social Psychology, 2,
325-342.

Gibb, C. A. (1947). The principles and traits of leadership.
Journal of Abnormal and Social Psychology, 42, 267-284.

Goldberg, A. D. (1974). Conceptual systems as a prediction
toward therapeutic communication. Journal of Counseling
Psychology, 21, 364-368.

Graeff, C. L. (1983). The situational leadership theory: A
critical review. Academy of Management Review, 8, 185-
296.

Gumpert, R. A., & Hambelton, R. K. (1979). Situational
leadership: How Xerox managers fine tune management
styles to improve employee maturity and task needs.
Management Review, 12, 8-12.

Haley, M. J. (1983). Relationship between internal-external
focus of control beliefs, self-monitoring, and
leadership style adaptability. Cleveland, OH:
Unpublished Doctoral Dissertation, Case Western
Research University.

Halpin, A. W. (1954). The leadership behavior and combat
performance of airplane commanders. Journal of Abnormal
and Social Psychology, 49, 19-22.

Halpin, A. W. (1959). The leadership behavior of school
superintendents. Chicago: Midwest Administration
Center, University of Chicago.

Hambelton, R. K., & Gumpert, R. A. (1982). The validity of
Hersey and Blanchard's theory of leadership
effectiveness. Group and Organizational Studies, 7,
225-242.

Hand, H., & Slocum, J. (1972). A longitudinal study of the
effect of a human relations training program on
managerial effectiveness. Journal of Applied
Psychology, 56, 412-418.

Harvey, O. J. (1963). Motivation and social interaction. New
York: Ronald Press.

Harvey, O. J. (1964). Some cognitive determinants of influenceability. Sociometry, 27, 208-221.

Harvey, O. J. (1965). Some situational and cognitive determinants of dissonance resolution. Journal of Personality and Social Psychology, 1, 349-355.

Harvey, O. J. (1966). Experience, structure, and adaptability. New York: Springer.

Harvey, O. J. (1967). Conceptual systems and attitude change. In C. W. Sherif & M. Sherif (Eds.), Attitude, ego-involvement and change (pp. 335-367). New York: Wiley.

Harvey, O. J., Hunt, D. E., & Schroder, H. M. (1961). Conceptual systems and personality organization. New York: Wiley.

Harvey, O. J., Reich, J. W., & Wyer, R. S. (1968). Effects of attitude direction, attitude intensity and structure of beliefs upon differentiation. Journal of Personality and Social Psychology, 10, 472-478.

Harvey, O. J., & Ware, R. (1967). Personality differences in dissonance resolution. Journal of Personality and Social Psychology, 7, 227-230.

Harvey, O. J., White, B. J., Prather, M., Alter, R., & Hoffmeister, J. (1966). Teachers' beliefs and preschool atmospheres. Journal of Educational Psychology, 6, 373-381.

Heck, E. J., & Davis, C. (1973). Differential expression of empathy in counseling analogue. Journal of Counseling and Development, 20, 101-104.

Hemphill, J. K. (1949). Situational factors in leadership. Columbus: Bureau of Educational Resaerch, Ohio State University.

Hendrick, H. W. (1979). Differences in group problem solving behavior and effectiveness as a function of abstractness. Journal of Applied Psychology, 64, 518-525.

Hersey, P. (1985). Situational selling: An approach for increasing sales effectiveness. Escondido, CA: Center for Leadership Studies.

Hersey, P., & Blanchard, K. H. (1969). Life cycle theory of leadership. Training and Development Journal, 23, 207-210.

Hersey, P., & Blanchard, K. H. (1972). Management of organizational behavior (2nd ed.). Englewood Cliffs, NJ: Prentice-Hall.

Hersey, P., & Blanchard, K. H. (1977). Management of organizational behavior (3rd ed). Englewood Cliffs, NJ: Prentice-Hall.

Hersey, P., & Blanchard, K. H. (1988). Management of organizational behavior (5th ed). Englewood Cliffs, NJ: Prentice-Hall.

Hewitt, D., & Rule, B. G. (1968). Conceptual structure and

deprivation effects on self concept change. <u>Sociometry</u>, <u>31</u>, 386-394.

Holloway, E. L., & Wolleat, P. L. (1980). Relationship of counselor conceptual level to clinical hypothesis formation. <u>Journal of Counseling Psychology</u>, <u>27</u>, 539-545.

House, R. J., & Mitchell, T. R. (1974). Path-goal theory of leadership. <u>Journal of Contemporary Business</u>, <u>3</u>, 81-98.

Hunt, D. E., Butler, L. F., Noy, J. E., & Rosser, M. E. (1978). <u>Assessing conceptual level by the paragraph completion method</u>. Toronto: Ontario Institute for the Studies in Education.

Jacobs, T. O. (1970). <u>Leadership and exchange in formal organization</u>. Alexandria, VA: Human Resources Research Organization.

Jacobson, E. N. (1984). <u>The subordinate: Moderation variables between leader behavior and effectiveness</u>. Unpublished Doctoral Dissertation. Fuller Theological Seminary.

Janda, K. F. (1960). Towards the explication of the concept of leadership in terms of the concept of power. <u>Human Relations</u>, <u>13</u>, 345-363.

Jennings, H. H. (1947). Leadership and sociometric choice. <u>Sociometry</u>, <u>10</u>, 32-49.

Jones, A. P., & Butler, M. C. (1980). Influence of cognitive complexity on the dimension underlying perceptions of

the work environment. Motivation and Emotion, 4, 1-19.

Kahn, R. L., & Katz, D. (1953). Leadership practices in relation to productivity and morale. In D. Cartwright & A. Zander (Eds.), Group dynamics (pp. 612-628). Evanston, IL: Row, Peterson.

Karlins, M., & Lamm, H. (1967). Information search as a function of conceptual structure in a complex problem solving task. Journal of Personality and Social Psychology, 5, 456-459.

Katz, D., & Kahn, R. L. (1951). Human organization and worker motivation. In L. R. Tripp (Ed.), Industrial productivity (pp. 225-251). Madison, WI: Industrial Relations Research Association.

Katz, D., & Kahn, R. L. (1966). The social psychology of organizations. New York: Wiley.

Katz, D., & Kahn, R. L. (1978). The social psychology of organizations (2nd ed.). New York: Wiley.

Katz, D., Macoby, N., & Morse, N. (1950). Productivity, supervision, and morale, in an office situation. Ann Arbor, MI: Institute for Social Research.

Kimberlin, C., & Friesen, D. (1977). Effects of client ambivalence, trainee conceptual level, and empathy training condition on empathic responding. Journal of Counseling Psychology, 24, 354-358.

Kohlberg, L. (1969). Stage and sequence: The cognitive developmental approach to socialization. In D. Goslin

105

(Ed.), Handbook of socialization theory and research (pp. 347-480). Chicago: Rand McNally.

Kotter, J. P. (1988). The leadership factor. New York: Free Press.

Kretch, D., & Cruthfield, R. L. (1948). Theory and problems in social psychology. New York: McCall-Hill.

Linville, P. W., & Jones, E. E. (1980). Polarized appraisals of outgroup members. Journal of Personality and Social Psychology, 38, 689-703.

Levy, L. (1970). Conceptions of personality: Theories and research. New York: Random House.

Likert, R. (1961). New patterns of management. New York: McGraw-Hill.

Likert, R. (1967). The human organization: Its management and style. New York: McGraw-Hill.

Loevinger, J. (1976). Ego development. San Francisco: Jossey-Bass.

Lombardo, M. M., & McCall, M. W., Jr. (1978). Leadership. In M. W. McCall Jr. & M. M. Lombardo (Eds.), Leadership: Where else can we go. Durham, NC: Duke University Press.

Mann, R. D. (1959). A review of the relationships between personality and performance in small groups. Psychological Bulletin, 56, 241-270.

Mann, R. D. (1965). Toward an understanding of the leadership role in formal organizations. In R. Dublin,

C. G. Homans, F. C. Mann, & D. C. Miller (Eds.), Leadership and productivity (pp. 68-103). San Fransisco: Chandler.

Merron, K., Fisher, D., & Torbert, W. (1987). Meaning making and management action. Group and Organizational Studies, 12, 224-236.

McCall, M. W., Jr., & Lombardo, M. W. (1978). Leadership: Where else can we go? Durham, NC: Duke University Press.

McGregor, D. (1960). The human side of enterprise. New York: McGraw-Hill.

McClelland, D. C. (1965). N-achievement and entrepreneurship: A longitudinal study. Journal of Personality and Social Psychology, 1, 389-392.

McGregor, D. (1967). Professional manager. New York: McGraw-Hill.

Miller, A. (1978). Conceptual systems theory: A critical review. Genetic Psychology Monographs, 97, 77-126.

Mitchell, T. R. (1970). The construct validity of three dimensions of leadership research. Journal of Social Psychology, 80, 89-94.

Mitchell, T. R. (1970). Leader complexity and leadership style. Journal of Personality and Social Psychology, 16, 166-174.

Perrow, C. (1972). Complex organizations: A critical essay. Glendale, IL: Scott, Foresman.

Peters, J. J., & Waterman, R. H. (1982). In search of
    excellence. New York: Harper & Row.

O'Keefe, B. J., & Brady, R. M. (1980). Cognitive complexity
    and the effects of thought on attitude change. Social
    Behavior and Personality, 8, 49-56.

O'Keefe, B. J., & Delia, J. G. (1978). Construct
    comprehensiveness and cognitve complexity. Perceptual
    and Motor Skills, 46, 8-14.

Pfeffer, J. (1978). The ambiguity in leadership. In M. W.
    McCall, Jr., & M. W. Lombardo (Eds.), Leadership: Where
    else can we go? (pp. 13-35). Durham, NC: Duke University
    Press.

Piaget, J. (1967). Six psychological studies. New York:
    Random House.

Piaget, J. (1972). Intellectual evolution from adolesence to
    adulthood. Human Development, 15, 1-12.

Reddin, W. J. (1967). The 3-D management style theory.
    Training and Development Journal, 21, 8-17.

Sayles, L. (1989). Leadership: Managing in real
    organizations. New York: McGraw-Hill.

Schein, E. H. (1965). Organizational psychology. Englewood
    Cliffs, NJ: Prentice-Hall.

Schein, E. H. (1985). Organizational culture and leadership.
    San Francisco CA: Jossey-Bass.

Schenk, C. (1928). Leadership. Infantry Journal, 33, 111-122.

Schneier, C. E. (1978). The contingency model of leadership:

An extension to their emergent leadership and leader's

sex. Organizational Behavior and Human Performance, 21,

220-239.

Schriesheim, C. A., & Kerr, S. (1977). Theories and measures

of leadership: A critical appraisal of present and

future directions. In J. G. Hunt & L. L. Larson (Eds.),

Leadership: The cutting edge (pp. 9-44). Carbondale IL:

Southern Illinois University Press.

Schroder, H. M., Driver, J. J., & Streufert, S. (1967). Human

information processing. New York: Holt, Rinehart, &

Winston.

Sherif, M., & Sherif, C. W. (1956). An outline of social

psychology. New York: Harper.

Smith, H. L., & Krueger, L. M. (1933). A brief summary of

leadership. Bulletin of the School of Education:

Indiana University, 4, 3-80.

Stager, P. (1967). Conceptual level as a composition

variable in small group decision making. Journal of

Personality and Social Psychology, 5, 152-161.

Stodgill, R. M. (1948). Personal factors associated with

leadership: A survey of the literature. Journal of

Psychology, 25, 35-71.

Stodgill, R. M. (1950). Leadership, membership, and

organization. Psychological Bulletin, 47, 1-14.

Stodgill, R. M. (1959). Individual behavior and group

achievement. New York: Oxford University Press.

Stodgill, R. M. (1974). Handbook of leadership: A survey of theory and research. New York: Free Press.

Stodgill, R. M., & Coons, A. E. (1957). Leader behavior: Its description and measurement. Columbus, OH: Ohio State University, Bureau of Educational Research.

Strauss, G. (1977). Managerial practices. In J. R. Hackman & J. L. Suttle (Eds.), Improving life at work (pp. 33-45). Santa Monica, CA: Goodyear.

Streufert, S. (1965). Conceptual structure, communicator importance and interpersonal attitudes toward deviant and conforming group members. Journal of Personality and Social Psychology, 32, 286-291.

Streufert, S. (1983). The stress of excellence. Across the Board, 20, 8-11.

Streufert, S. (1984). The dilemma of excellence: How strategic decision making can kill you. International Management, 39, 36-40.

Streufert, S., & Driver, M. (1965). Conceptual structure, information load and perceptual complexity. Psychonomic Science, 3, 249-250.

Streufert, S., & Schroder, H. (1965). Conceptual structure, environmental complexity and task performance. Journal of Experimental Research in Personality, 1, 132-137.

Streufert, S., Streufert, S. C., & Castore, C. H. (1968). Leadership in negotiations and the complexity of conceptual structure. Journal of Applied Psychology,

52, 218-223.

Streufert, S., Streufert, S. C., & Denson, A. L. (1985).
Effects of load stressors, cognitive complexity and Type
A coronary prone behavior on visual-motor task
performance. Journal of Personality and Social
Psychology, 48, 728-739.

Streufert, S., & Sweazy, R. W. (1986). Complexity, managers,
and organizations. Orlando, FL: Academic Press.

Tannenbaum, A. S., & Schmidt, F. H. (1958). How to choose a
leadership pattern. Harvard Business Review, 36, 95-
101.

Triandis, H. (1977). Interpersonal behavior. Monterey, CA:
Brooks/Cole.

Tuckman, B. W. (1966). Interpersonal probing and revealing
and systems of integrative complexity. Journal of
Personality and Social Psychology, 3, 655-664.

Vecchio, R. A. (1979). A test of cognitive complexity
interpretation of the least preferred co-worker scale.
Educational and Psychological Measurement, 39, 523-526.

Vroom, V. H. (1976). Can leaders learn to lead?
Organizational Dynamics, 4, 17-28.

Vroom, V. H., & Yetton, P. W. (1973). Leadership and
decision making. Pittsburgh PA: University of Pittsburgh
Press.

Ware, R., & Harvey, O. J. (1967). A cognitive determinant of
impression formation. Journal of Personality and Social

Psychology, 1, 38-44.

Weick, K. (1979). The social psychology of organizing (2nd ed). Reading, MA: Addison-Wesley.

Weiss, H. M., & Adler, S. (1981). Cognitive complexity and the structure of implicit leadership theories. Journal of Applied Psychology, 66, 69-78.

Wexley, K. N., & Nemeroff, W. F. (1975). Effects of positive reinforcement and goal setting as methods of management development. Journal of Applied Psychology, 60, 446-450.

White, C. M. (1977). Cognitive complexity and completion of social structures. Social Behavior and Personality, 5, 305-310.

White, B. J., & Harvey, O. J. (1965). Effects of personality and own stand on judgment and production of statements about a central issue. Journal of Experimental Social Psychology, 1, 334-347.

Wofford, J. C. (1967). Behavior styles and performance effectiveness. Personnel Psychology, 20, 461-496.

Wojciszke, B. (1979). Affective factors in organization of cognitive structures in the context of interpresonal perception. Polish Psychological Bulletin, 10, 3-13.

Wolfe, R. (1974). Conceptual level and accuracy of person perception. Canadian Journal of Behavioral Science, 6, 309-317.

Yukl, G. A. (1981). Leadership in organizations. Englewood

Cliffs, NJ: Prentice-Hall, Inc.

Yukl, G. A. (1989). <u>Leadership in organizations</u> (2nd ed.).
Englewood Cliffs, NJ: Prentice-Hall, Inc.

Zigarmi, P., Blanchard, K., & Zigarmi, D. (1988). <u>SLII</u>
<u>facilitator's guide and appendices</u>. Escondido, CA:
Blanchard Training and Development.

Zigarmi, D., & Edeburn, C., & Blanchard. (1990). <u>The leader</u>
<u>behavior analysis II; A study of validity and</u>
<u>reliability of self and other forms</u>. Escondido, CA:
Blanchard Training and Development.

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Appendix A and B, 113-125

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Appendix C

Leadership Complexity Assessment

SS#_____

On the following pages you will be asked to read two vignettes and then to give your ideas about them. There are no right or wrong answers, so give your own ideas and opinions about each vignette. Indicate the way you <u>really</u> feel or think about each vignette, not the way others might react or the way you think you should act.

Vignette 1

You have recently been appointed manager of a new plant which is presently under construction. Your team of five department heads has been selected by you and are now working with you in selecting their own staffs, purchasing equipment, and generally anticipating the problem that are likely to arise when you move into the plant in three months.

Yesterday, you received from the architect a final set of plans for the building, and, for the first time, you examined the parking facilities that are available. There is a large lot across the road from the plant intended primarily for hourly workers and lower level supervisory personnel. In addition, there are seven spaces immediately adjacent to the administrative offices, intended for visitor and reserved parking. Company policy requires that a minimum of three spaces be made available for visitor parking, leaving you only four spaces to allocate among yourself and your five department heads. There is no way of increasing the total number of such spaces without changing the structure of the building.

Up to now, there have been no obvious status differences among your team, who have worked together very well in the planning phase of the operation. To be sure, there are salary differences, with your Administrative, Manufacturing, and Engineering Managers receiving slightly more than the Quality Control and Industrial Relations Managers. Each has recently been promoted to his new position, and expects reserved parking privileges as a consequence of his new status. From past experience, you know that people feel strongly about things which would be indicative of their status. So you and your subordinates have been working together as a team, and you are reluctant to do anything which might jeopardize the team relationship.

Vignette 2

You are regional manager of an international management consulting company. You have a staff of six consultants reporting to you, each of whom enjoys a considerable amount of autonomy with clients in the field.

Yesterday you received a complaint from one of your major clients to the effect that the consultant whom you assigned to work on the contract with them was not doing his job effectively. They were not very explicit as to the nature of the problem, but it was clear that they were dissatisfied and that something would have to be done if you were to restore the client's faith in your company.

The consultant assigned to work on that contract has been with the company for six years. He is a systems analyst and is one of the best in that profession. For the first four or five years his performance was superb, and he was a model for the other more junior consultants. However, recently he has seemed to have a "chip on his shoulder," and his previous identification with the company and its objectives has been replaced with indifference. His negative attitude has been noticed by other consultants, as well as by clients. This is not the first such complaint you have had from a client this year about his performance. A previous client even reported to you that the consultant reported to work several times obviously suffering from a hangover and that he had been seen around town in the company of "fast" women.

It is important to get to the root of this problem quickly if that client is to be retained. The consultant obviously has the skill necessary to work with the clients effectively. If only he were willing to use it!

SCORING SHEET

_____ ID#

Vignette 1

Question 1

_____ # influencing factors

      _____ # personal traits

      _____ # psychological variables

      _____ # situational variables inside

      _____ # situational variables outside

Question 2

_____ # options

Question 3

_____ # multiple perspectives

list categories:

Use of dissenting viewpoints
circle one
1   2   3   4   5

SCORING SHEET _____ID#

Vignette 2

Question 1

_____ # influencing factors

        _____ # personal traits

        _____ # psychological variables

        _____ # situational variables inside

        _____ # situational variables outside

Question 2

_____ # options

Question 3

_____ # multiple perspectives

list categories:

Use of dissenting viewpoints
circle one
1   2   3   4   5

Vignette 1   ID#_____

(1) Describe in any way you wish, how this situation
developed....e.g., "factors influencing the situation"

Vignette 1   ID#_____

(2) What do you see as your options in this situation?

Vignette 1   ID#_____

(3) Describe your plan of action in response to this
situation.

Vignette 2   ID#_____

(1) Describe in any way you wish, how this situation
developed....e.g., "factors influencing the situation"

Vignette 2   ID#_____

(2) What do you see as your options in this situation?

Vignette 2   ID#_____

(3) Describe your plan of action in response to this
situation.

Appendix D

Scoring Manual

Ways to categorize answers to question 1 - "Describe in any way you wish, how this situation developed...ie., the "factors influencing." Definition of dimension - Causes (sources of the problem) for organizational problems and employee behavior which are distinct from each other. Responses are scored in two ways: (1) causes are counted numerically and (2) are categorized into mutually exclusive dimensions (content codes).

Categories (Content Codes)

(a) Personal traits- refers to characteristics or distinguishing qualities that describe a person. This category is descriptive of behaviors without inferring situational or psychological causation. Personal traits include adjective descriptors and stereotypes, and are stated as absolutes.

ex. "...the manager is incompetent"

"...she is ambitious"

(b) Psychological variables- refers to conditions representative of a person's mental and/or emotional state. These conditions are not absolute traits, but refer to states such as internal conflict, degree of assertiveness, confrontiveness, and self-esteem. Statements are more explanatory (vs. absolute) of the state.

ex. "...his self-esteem is low and he does not know how to deal with pressure...",

"...the manager must have known something was wrong, yet he was afraid of confronting the consultant..",

"...the manager is paralyzed and confused over what to do with the consultant.."

(c) <u>Situational inside variables</u>- refers to variables from inside the organization. This includes any circumstances developing in the course of the situation. Situational variables include company policy, environmental (clients, vendors), time, and the organizational hierarchy.

ex. "...pressures of the job have been overwhelming..",

"..someone was responsible for informing the architect..",

"..the situation could be worked out if the company policy will allow for it.."

(d) <u>Situational outside variables</u>- refers to variables outside the organization.

ex. "...the consultant could have family problems..",

"... physical problems could be at the root of the problem.."

<u>Question 2</u>- "What do you see as your options in this situation?" Options- refers to the number of alternative solutions to solving or alleviating the dilemma.

Scoring. Options are counted numerically to assess the number of alternative ways a situation could be handled.

Question 3- "Describe your plan of action in response to this situation"

Responses are categorized by multiple perspectives. Multiple perspectives refers to the generation and understanding of events from various viewpoints (perspectives). These include considerations (things taken into account) that are salient in the various viewpoints (perspectives) to the participant.

Categories- (a) manager/self-putting oneself in manager's place,

(b) subordinate(s)-person(s) that report to the manager,

(c) boss-person(s) to whom manager reports,

(d) company policy-course of action developed by the company,

(e) clients-customer,

(f) vendor-person or company who sells,

(g) colleague-associate or fellow worker in/outside of the company,

(h) technology-method or process of applied systems of the company,

(i) culture (organizational/environmental)-ideas, customs, ambience, of the company or outside environment,

(j) sociopolitical-involving both social and political factors.

Consideration of dissenting viewpoints- refers to the activity of encouraging the presentation of dissenting

viewpoints in formulating action plan. This includes

soliciting and considering another viewpoint(s) (which may

or may not be utilized) in formulating a solution.

Rating is from one to five. One refers to only one opinion

(mine). Five refers to consideration of several opinions,

which may include input from resources inside and outside

the organization.

1   2   3   4   5

1-"I will just tell them what to do..."

2-"I will get feedback from my assistant and make the

decision."

3-"My group of department heads will come up with some good

suggestions to help me come up with a decision."

4-"By conferring with company policy and with the department

heads a good decision can be made."

5-"I will confer with my superior, company policy, and the

EAP official to get my ducks in a row. Likewise, the client

and the consultant should be included in the decision since

it will affect them both."

Practice exercises

Vignette 1 response (Respondent 1)

(1) Describe in any way you wish, how this situation occurred/developed..i.e., the "factors influencing".

"The architect did not have information about the number of spaces needed near the building. From the description, it is unclear who should have conveyed this information"

(2) Options

(3) Describe your plan of action in response to this situation.

"1. Make inquiry re: the company policy of three company spaces. Is it in violation? Is there anybody to obtain an exception and have only two visitor spaces.

2. Meet with the five department heads and explain the situation completely. Tell them that I am going to park in the large lot but that (depending on what I find out in step 1) we are still one space short. Emphasize the cooperative way they have worked together and my belief in participative decision-making. Ask them what they want to do. Brainstorm creative solutions-rotary parking assignments, etc. Make it clear that this is not connected to status, just logistics."

SCORING

(1) Causes: situational- nothing was spelled out explicitly, the architect was not informed, respondent was unclear as who was responsible, yet did not blame anyone. The score would be 2.

(2) Options will be counted

(3) Multiple perspectives: Two overall perspectives were given-company policy and subordinates (department heads). Respondent describes "making an inquiry into company policy, are there any exceptions?", and considering the department heads in the decision because of their feelings (status).

(4) Use of dissenting viewpoints: This response would score a 5. Respondent utilized architect, company policy, and department heads into the development of some decision. The respondent emphasized cooperation and involved department heads in decision.

Vignette 2 verbatim response (Respondent 1)

(1) Describe in any way...

"The cause of this consultant's behavior is unclear and could be any number of things. The more direct case of the immediate situation seems to be that "I" have been unaware of a problem with him for a year and have done nothing (apparently). Thus permitting it to escalate to its current magnitude."

(2) Options

(3) Describe your plan...

"1. Meet first with the consultant. Tell him that the client has come to me with general concerns and make it clear that I have come to him first to hear his perspective but that I will also be responding to the client.

2. Meet with the client and determine the exact nature of the problem. Obtain specific details and document information. Work out a plan to continue working with the client-new consultant? someone paired with the old consultant? close supervision of the old consultant?

3. Meet again with the consultant. Share results of client meeting. Explore the problem. Make my expectations clear and concrete- probably contract with the person to correct/improve the situation. Equally important, refer (if appropriate) according to company policy to necessary

resources-EAP? Personnel?"

SCORING

(1) Causes: Respondent makes reference to "any number of things being the causes", and gives direct cause of the manager/self as a potential factor. Score would be a 2, with possible situational and direct psychological causation.

(2) Options will be counted

(3) Multiple perspectives: The respondent points out 4 possible perspectives, namely, manager/self, consultant, client, and company policy. Respondent suggests meeting with the client, consultant, checking company policy, and giving manager/self some flexibility to take action.

(4) Use of dissenting viewpoints: The respondent indicates many possible viewpoints, namely, company policy, personnel, EAP, client, and consultant. Score would be a 5. All the viewpoints were taken into account and developed into an integrative solution.

Vignette 1 response (Respondent 2)

(1) Describe in any way...

"The situation arose because assumptions were made about a relatively minor detail. Another cause of the problem is the perception of the managers that each must have the best parking space for prestige purposes."

(2) Options

(3) Describe your plan...

"First, I would try to claim one of the visitor parking spaces. I would go to the contractor and tell him that the space simply not be marked visitor. If it ever came up as a policy problem (and it probably would not), I would then deal with the system and try to get an exception to policy. (This would really depend on the situation. The environment of the company. If it is a tightly run, formal organization, I wouldn't try this.I would go to my managers first.If it was an informal organization and if I had sufficient power at my level, I would change the space.) If all else fails I would go to my managers with the problem and tell them we need to come to a resolution of the situation, turning it over to the group. I'd say if a solution was not found that we could all live with, all of the spaces would go to visitor status."

SCORING

(1) Causes: Respondent indicates 2 causes of the dilemma.
One was a situational cause that many persons made
assumptions about a minor detail. Secondly, manager's
perception about where one parks creates a problem; this is
a psychological variable.

(2) Options will be counted

(3) Multiple perspectives: This respondent considers 4
perspectives or considerations. These are manager/self
(manager will break or change rules), will comply to company
policy if organizational culture influences such a decision,
department heads (subordinates) will try to come up with a
decision, and if all else fails the manager will make the
decision that all spaces will be visitor. Categorization
will be manager/self, company policy, organizational policy,
and subordinates.

(4) Use of dissenting viewpoints: Viewpoints include company
policy, subordinates, culture. The intricacy of the managers
handling would suggest a score of 4.

Vignette 2 response

(1) Describe in any way...

"The situation does not seem to be too unusual. The evidence has been mounting that there is a problem and now I have concrete evidence that I must intervene."

(2) Options

(3) Describe your plan...

"I would assign another consultant immediately to the client in question and review all other of his clients to evaluate the status of the consultant's work with them. I will meet with the consultant and give him Dr. Purkey's 3 blues and a wish. We will talk about his situation. If we have an EAP, I will refer him. If not, I will strongly encourage him to see a counselor. He will stay in 'review' status until he is in counseling and seems to be regaining his previous level of functioning. I will write this up in his personnel file as a first step in case I need to document dismissal."

SCORING

(1) Causes: Respondent indicates that "...there is a problem and concrete evidence...". This is a situational (1) cause.

(2) Options will be counted

(3) Multiple perspectives: Several viewpoints are indicated, namely, the client, consultant, and company. Manager wants to take care of business (client), while doing what is best for the consultant within the confines of the company. There are 3 perspectives.

(4) Use of dissenting viewpoints: The manager is utilizing the clients, consultant, EAP, and company policy in this dilemma. This would be assessed as a 4 because of the integrative style of perspectives and resources.

Appendix E

INFORMED CONSENT

University of North Carolina at Greensboro

School of Education

Participant's Name _____ Date_____

Participant's Address_____

Project Title   Cognitions of Managers

Principal Investigator   H. Ray Wooten, Doctoral Candidate

I voluntarily agree to participate in the research as

explained below:

The purpose of this study is to describe cognitions of
managers (MBA students) when responding to a series of
vignettes. Your participation will include the following:

(1) Answering a demographic questionnaire, (2) responding to
five sentence stems, giving your feelings and opinions, (3)
reading two vignettes, and (4) answering a series of
questions about each, and (5) responding to a multiple
choice instrument.

Please feel free to ask any questions which you may have at
this time.

The above stated nature and purpose of this research,
including discomforts and risks involved (if any), have been
explained to me. Furthermore, I understand that this
investigation may be used for educational purposes,
including publication. I also understand that I may withdraw
my consent at any time without penalty or prejudice.

This information will be kept confidential within legal
limits   (or to the extent of the law).

Signed_____
I have defined and explained fully this research to the
participant whose signature appears above.

Signed_____

Appendix F

ID#_____

Address_____

Phone#_____ Age_____ Male/Female_____

Are you in the MBA program?_____ If so, how long?_____

How many courses have you completed?_____

Please give the following information about your current position
and previous positions.

Current work setting_____

Title_____ Years in position_____

Classify the managerial level of this position (circle one):
           lower   middle   high

Types of employees you manage (if any) _____

Number of employees you manage (if any)_____

If you do not manage people what do you manage?_____
                      (ex. accounts, goods)

Past work setting_____

Title_____ Years in position_____

Classify the managerial level (circle one): low   middle
high

Types of employees you managed (if any)_____

Number of employees you managed (if any)_____
If you did not manage people what did you manage?_____

Past work setting_____

Title_____ Years in position_____

Classify the managerial level (circle one: low   middle
high

Types of employees you managed (if any)_____

Number of employees you managed (if any)_____
    If you did not manage people what did you manage?_____

Total your managerial experience_____