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## Differentiating between Successful and Unsuccessful Executives: A Psychodynamic Approach

Christopher P. Chroniak  
*Loyola University Chicago*

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LOYOLA UNIVERSITY CHICAGO

DIFFERENTIATING BETWEEN SUCCESSFUL AND UNSUCCESSFUL  
EXECUTIVES: A PSYCHODYNAMIC APPROACH

A DISSERTATION SUBMITTED TO  
THE FACULTY OF THE GRADUATE SCHOOL  
IN CANDIDACY FOR THE DEGREE OF  
DOCTOR OF PHILOSOPHY

DEPARTMENT OF COUNSELING PSYCHOLOGY

BY

CHRISTOPHER P. CHRONIAK

CHICAGO, ILLINOIS

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The labor of a dissertation, as is the case with most significant undertakings, provides a poignant reminder of how interdependent we are upon one another. Certainly this has been the experience of the current author, who now wishes to express his considerable gratitude to those who have helped him along the way. The idea for the current research project owes its inception to Mr. John Fontana, who introduced the author to Dr. David Morrison and his associates. The author owes a tremendous debt of gratitude to Dr. Morrison, Mr. David Deacon and the entire staff at Morrison and Associates, who warmly and graciously welcomed a researcher into their midst. The author is also extremely grateful to Ms. Tammy Dee Jones for her unstinting assistance in the area of data analysis. The author extends a particularly heart felt thanks to Ms. Mary Kane, who supported the author in so many ways throughout the entire dissertation project. Finally, the author wishes to thank, in a most special way, Dr. Clyde L. Rousey, who brought an abundance of technical support, moral encouragement, and not a little wit and humor to this project.

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## CHAPTER I

The discovery of a formula for effective leadership and management has long been a major enterprise of business organizations throughout the world. This collective effort has intensified as competition in the business world, both domestic and international, grows ever fiercer and the stakes of winning and losing, of being successful or not, grow higher. Selecting the right person to carry the company standard into the corporate fray has become one of the most important decisions organizations must make, and making the wrong one is often disastrous, both monetarily, in terms of staggering levels of profit loss and organizational expenditure, and in the personal cost to the lives of those affected by such decisions (e.g., Clark & Clark, 1990; Meyer, 1991; Steffy, 1991). Yet incorrect choices are made for leadership positions with alarming regularity, despite the plethora of research which has addressed the issue of identifying, predicting and nurturing business and management potential (Hogan, Curphy & Hogan, 1994). It has been estimated that the incidence rate of those who fail or become derailed in their leadership and management positions in U.S. business ranges from 10 to 33 percent (McCauley & Ruderman, 1991). It is no mystery then,

why the effort to identify, predict, and cultivate effective leadership and management potential has become a major concern for U.S. business. How big a concern? It has been estimated that U.S. business' expenditure for management development exceeds 40 billion dollars annually (McCall, Lombardo & Morrison, 1988).

The effects of failed leadership potentially stretch far beyond the organization's bottom line or the impact upon the individual employee and his or her family. Citing the chilling examples of Challenger, Bhopal and Chernobyl; Hay (1990) reminds us that leadership and management mistakes are viewed by the entire world and frequently have global repercussions. Hay echoes Levinson (cited in Hay, 1990), who suggests that we have entered into a new era of critical interdependence characterized by an acute need for leaders and managers who maintain high levels of integrity and moral courage, and who possess the ability to imbue their respective organizations with such values so as to better serve as stewards to the world community. Furthermore, just at the time when the need for effective leaders and managers has never been greater, there is a growing concern that those of the younger generations, to whom the reigns of leadership must inevitably be handed, may be less willing to make the commitment and sacrifice inherent in filling top leadership and management roles (Clark & Clark, 1990).

Today's imperative to better understand the dynamics of effective leadership and management, so acutely felt in the current business, political and military communities, is hardly a modern phenomenon. Philosophers, the military, and the business community have long attempted to better understand the phenomenon of leadership (e.g., De Pree, 1989; Hogan, 1994; McCall & Lombardo, 1978). More recently, social scientists have lent their expertise to the study of leaders and managers in the fields of business, the military, politics, and elsewhere, in the hope of discovering how to more accurately identify, predict, and develop leadership and management potential. The result has been a plethora of research, replete with numerous and sometimes contradictory theories and conclusions regarding what leadership is and is not. As Bennis and Nanus somewhat wryly put it, "never have so many labored so long to say so little" (Bennis & Nanus, 1985, p. 4). It is this author's hope that the current study represents a step towards greater clarity in this field of research.

The current work is a systematic replication and elaboration upon an earlier study conducted by Rousey, Morrison and Deacon (1993) entitled "Differentiating Levels of Functioning in Executives." In that study, the authors utilized data generated from executive consultations conducted under the auspices of Morrison and Associates, Ltd., an executive consultation firm founded and headed by

Dr. David Morrison, a psychiatrist. The data was generated from measures of both cognitive and personality functioning; from psychosocial and work histories; and from a psychiatric interview conducted by David Morrison. The subjects were middle and top-level executives who had been divided into three categories based upon their level of adaptive functioning in their work and personal lives.

Rousey, Morrison and Deacon (1993) stated that the purpose of their study was "...to determine if the psychological tests could define the parameters which would statistically differentiate the three groups (of executive functioning) and which would have some theoretical constancy and practical clinical coherence" (p. 2). They suggest that the results of their research "...partially support the assumption that levels of cognitive functioning are of major import in executive functioning," (p. 2). They further suggest that "the study of the executive's emotional status as well as the protocol used in the study demonstrated a technique and some clinically significant differences which have potential usefulness for personnel selection in general and executives in particular" (p. 2).

As mentioned above, the current study systematically replicates and elaborates upon the work of Rousey, Morrison and Deacon (1993). In so doing, the current study exhibits characteristics which distinguish it from other leadership and management research. First, Rousey et al. and the

current author construe the data regarding personality functioning from a rigorously psychodynamic perspective. As will be explicated in the review of the literature, this is a road less taken in leadership and management research. Secondly, there is an aspect of the Rousey et al. study and current study which makes them virtually unique to this field of research. Their singularity is derived from the use of the Rousey Assessment of Personality (RAP), a personality measure developed and validated by Clyde L. Rousey. The RAP, which is theoretically grounded in ego psychology and psychoanalytic concepts, assesses personality functioning through the interpretation of objective speech and hearing behavior. Thus, not only do the two studies explore executive personality functioning from the psychodynamic perspective, they do so by using data generated, in part, by an instrument which is unique to this field of research.

In summary, the author is replicating and building upon previous research which attempts to differentiate levels of functioning in an executive population. By studying executives in middle to high leadership and management positions, the author is, perforce, examining those elements which characterize effective leadership and management, solidly grounding the current study within the field of leadership and management research. By examining such levels of functioning, the author will be exploring

whether or not successful executives differ significantly from unsuccessful ones in regards to their intellectual and personality functioning, and if so, how they differ. The current study also examines the effectiveness of the testing battery used by Morrison and Associates, Ltd. in terms of its ability to produce data which significantly differentiates between such levels, which in turn would make it useful in the task of predicting executive functioning. In particular, the study investigates the validity of the RAP as a measure of personality functioning and examines its utility in the evaluation and prediction of executive potential. Finally, data generated from the study will be used to construct profiles of the successful versus the non-successful executive. These profiles will then be compared and contrasted with profiles generated from previous executive and leadership research.

Chapter two will present a literature review of leadership theories, related areas of research and their methodologies, and a thorough examination of the theoretical underpinnings of the RAP and its associated research. Chapter two will end with the research questions addressed in the current study.

CHAPTER II  
REVIEW OF THE LITERATURE

A comprehensive review of the related literature will necessarily span some decades in its examination of the major theories, the areas of research and its findings and the numerous methodologies utilized in exploring the phenomenon of effective leadership and management. To lend clarity, the author will divide the review of the literature into the following categories: an overview of leadership theories, the history of personality assessment in organizations, personality and cognitive-based factors characteristic of effective leaders and managers, the contribution of assessment centers, factors related to executive derailment, leadership research from the psychoanalytic perspective, and the Rousey Assessment of Personality.

An Overview of Leadership Theories

The evolution of leadership research logically parallels, to a degree, the trends in personality and cognitive-based research. Thus, from the late 1940s through the early sixties, the 'Great Man Theory,' an outgrowth of

the then predominant trait theory of personality functioning, was likewise dominant in the field of leadership research (Hollander & Offerman, 1990; Johnson & Luthans, 1990). From this perspective, a leader is imbued from birth with those particular traits and qualities which constitute the essence of leadership potential. Next, a shift occurred towards a greater emphasis upon the behavior of the leader as opposed to the presence or absence of inherent leadership traits (Sashkin & Burke, 1990). The well known Harvard and Ohio State University studies, which took place during the 1950s and sixties, championed this behavioral approach, and concluded that the effective leader is one who initiates structure, engages in high task accomplishment behavior, and manifests consideration for employees (Clark & Clark, 1990; Sashkin & Burke, 1990).

Yet another development shifted the focus of study to the interaction between the leader and the follower, particularly in terms of the attributions which the follower ascribes to the leader. This shift in focus led to the development of the attribution theory of leadership (Johnson & Luthans, 1990). Another, contemporary vein of research, focused upon the interaction of situational demands and leader qualities, which was articulated as the contingency model (Hollander & Offerman, 1990).

The next major development, which came to be identified as the transactional model of leadership, grew



out of a social exchange perspective (Hollander & Offerman, 1990). In this model, the relationship between leader and follower is reciprocal, each supplying particular needs of the other. Transactional leadership, in its actual application, has been criticized on the grounds of its reliance upon contingency rewards, or the 'carrot and stick approach' (Bass, 1985; Levinson, 1973). It is argued that such a contractual relationship between leaders and followers tends to inhibit employees, in that it fails to inspire and motivate them to reach their true potential.

In juxtaposition to the transactional model is one of the most recently developed theories of leadership, the transformational model, or as it sometimes termed, charismatic leadership (e.g., Bass, 1985; Bennis & Nanus, 1985; Yammarino & Bass, 1990). The transformational leader is one who is able to motivate and inspire followers to achieve goals they might have otherwise believed were unattainable. Such leaders, who are frequently viewed as possessing great personal magnetism and charisma, epitomize the wise use of power (Bennis & Nanus, 1985). They are individuals who have the ability to articulate a vision, and through relentless dedication, translate that vision into reality (Bass, 1985). The transformational leader is genuinely concerned about the welfare of his or her subordinates and strives to empower them. Such a leader also attempts to achieve as much insight as possible into

his or her own personal make-up, and attempts to ameliorate or compensate for areas of weakness (Yammarino & Bass, 1990). In a similar vein, De Pree (1989), who considers leadership more an art form than management technique, emphasizes the importance of a covenantal relationship between leaders and subordinates. The effective leader, suggests De Pree, is one who frees individuals to achieve their maximal performance by enabling and liberating their innate gifts. For De Pree, an effective leader is a servant leader, that is, one who believes that intimacy with fellow workers and subordinates is the heart of competency and who continually fosters such intimacy through on-going communication with all levels of workers and management.

Building upon the concept of transformational leadership, Sashkin's and Burke's (1990) recently developed model articulates the primary task of the leader as realizing his or her vision through constructing and modifying the respective organizational culture. Sashkin and Burke thus construe effective leaders as long-range organizational culture builders.

Finally, in a return to the behavioral perspective, Posner and Kouzes (1990) offer a behaviorally based model of leadership as an alternative to the more psychologically based theories. Posner and Kouzes maintain that leadership is a skill which is normally distributed throughout the population. They identify primary practices in which

leaders commonly engage, and propose that leadership, like any other skill, may be taught and enhanced.

In summary, the first well defined trend in the field of leadership theory and research utilized the trait perspective. Next to develop were the behavioral, attributional and contingency models. The transactional approach emerged next, and finally, the transformational model. However, as with most theory development, these models do not represent clearly delineated areas of research and resultant paradigmatic shifts. Rather, various elements of their constituent parts have tended to be woven together, with newer theories emerging from pre-existing ones. However, a leitmotif found throughout much of leadership research is the evaluation of the role personality variables play in the leadership phenomenon. It is to this area which the author now turns.

#### The History of Personality Assessment in Organizations

The use of personality measures in industry has a lengthy history, dating back to the early part of this century (Hogan, Carpenter, Briggs & Hanson, 1985). Their use increased during the 1920s and thirties and peaked during the sixties, before beginning a precipitous descent, in parallel with personality theorizing in general (Anastasi, 1985). The most influential early critics of the use of personality measures in assessing leadership

potential were Stogdill and Mann, who published their findings in the fifties and sixties, respectively (cited in Lord, DeVader & Miller, 1986). Stogdill and Mann maintained that no personality traits consistently differentiated leaders from non-leaders across varying situations. Their findings were largely circulated and had considerable impact upon the shaping of the scientific and business communities' attitudes toward the role personality functioning plays in applied business settings and leadership research (cited in Lord et al., 1986). Stogdill and Mann's research foreshadowed Mishel's withering indictment against the trait theory of personality (Mishel, 1968). Mishel's conclusion that there were no pervasive and consistent personality traits which account for the variations in human behavior sent the field of personality psychology into a tailspin, leading, in the short run, to a greater emphasis upon the study of how situational and environmental factors influence human behavior. This shift in emphasis was also reflected in leadership theorizing, as mentioned above (e.g., Hollander & Offerman, 1990). Furthermore, it was not only trait psychology that was affected by the downturn in personality theorizing and research. Psychoanalytic personality theory and projective techniques were also severely criticized, particularly on psychometric grounds regarding the validity of clinically based predictions as

opposed to statistically derived ones (e.g., Korchin & Schuldberg, 1981; Millon, 1984).

In response to such assaults, personality researchers engaged in a campaign of more carefully designed and painstakingly executed research which served to usher it into a new era of growth and development (e.g., Korchin & Schuldberg, 1981; Millon, 1984). They also subjected those prior studies which were critical of personality research, and of the trait theory in particular, to careful reexamination. This resulted in a highly critical reassessment of those studies' conclusions, bringing their validity into question (e.g., Hogan & Nicholson, 1988). This resurgence in research and the reevaluation of prior studies provided the basis for a new widespread belief that personality descriptors do exhibit stability over time and situations, and that their study is an appropriate methodology in numerous fields of psychological research (Campbell & Velsor, 1985; Hogan & Nicholson, 1988; Howard & Bray, 1990).

In specific regard to personality functioning and leadership and management research, Lord, DeVader and Miller (1986) suggest that Stogdill's and Mann's findings were misinterpreted due to the following factors; an over-generalization of their findings regarding personality and leadership perceptions to leader effectiveness, methodological artifacts regarding the variable relationship

between personality and leadership perceptions, the unreliability of the personality measures used and the influence of range restriction. Hollenbeck and Whitener (1988) add, that in general, early studies' low validities of personality measures as related to personnel selection and prediction of job success may be traced to theoretical inadequacies and the methodological problems related to low statistical power and contaminated measurements. Schippmann and Prien (1989) suggest that the poor showing of personality predictors in personnel studies may also be linked to the variability of the measures used from study to study, as well as to the wide variation in criterion measures used to determine leadership and management success.

In summary, just as Mischel's conclusions regarding the proposed irrelevancy of personality traits were reassessed and criticized on methodological and statistically-based grounds, the conclusion that there are no significant correlations between personality functioning and leadership and management potential was likewise determined to be flawed and largely unsupported (e.g., Hogan & Nicholson, 1988; Lord et al., 1986).

Personality research conducted during the post-Mischel era, utilizing improved methodologies and more sophisticated and more powerful statistical procedures, has produced a trend of results highly supportive of a significant

relationship between personality functioning and leadership and management potential (e.g., Baehr, 1987; Campbell, 1990; Clark & Clark, 1990; Goldberg, 1993; Hakstian, Woolsey & Schroeder, 1987; Hogan, Hogan & Busch, 1984; Hogan, Carpenter, Briggs & Hanson, 1985; Hogan & Hogan, 1989; Hogan, Raskin & Fazzini, 1990; Tett, Jackson & Rothstein, 1991). Such higher level correlations have been achieved by paying greater attention to a number of technical and theoretical issues. First, researchers have attempted to address the conceptual difficulties inherent in applying personality measures in organizational and industrial research. For example, efforts have been made to produce more comprehensive and consistent definitions of the key terms used in leadership research, and to more definitively state measurement goals (Hogan et al., 1985).

Gaining greater conceptual clarity has also been important in the effort to focus more carefully upon the critical issue of construct validity when developing the theory-driven personality measures used in leadership research (Anastasi, 1985). Bentz (1985) underscores the importance of more carefully defining and clarifying the criterion measures which are used in identifying levels of executive functioning, while Clark and Clark (1990) point out the importance of attending to the specific level of leadership being studied and to avoid making cross-comparisons of levels within and between studies.

Hollenbeck and Whitener (1988) suggest that greater emphasis should be placed upon assessing the perception and judgment of the subjects used in leadership research in an effort to avoid the potentially confounding subjective factors inherent in self-report personality inventories and observational methods (e.g., faking and observer bias). Hakstian, Woolsey and Schroeder (1987) attempted to deal with such potential confounds by developing an empirically-based assessment battery that assesses managerial potential. Their battery integrates measures of cognitive ability, personality and motivational traits and administrative skills. Baehr (1987) has also addressed this issue by developing a system which produces an empirically derived estimate of the degree of fit between the individual's abilities, skills and personality functioning on the one hand, and the requirements of the job on the other.

Another vein of research has demonstrated that more significant relationships between personality functioning and job performance may be obtained when personality-oriented job analyses and organizational analyses are integrated into the design (e.g., Baehr, 1991; Day & Silverman, 1989; Goldberg, 1993; Hollenbeck & Whitener, 1988; Jordan, Herriot & Chalmers, 1991; Tett, Jackson & Rothstein, 1991). Tett et al. (1991) add that the strongest relationships are achieved in studies which utilize confirmatory statistical designs as opposed to exploratory



ones. Similarly, numerous studies have demonstrated that the most significant measurements and accurate predictions of leadership and management potential are obtained when cognitive, personality and ability measures are used together (e.g., Baehr & Orban, 1989; Lord, DeVader & Alliger, 1986; Ghiselli, 1963; Morrow & Stern, 1990; Schippmann & Prien, 1989). It is interesting to note that in Baehr's and Orban's (1989) study, while all three of the major variables examined, i.e., cognitive, personality and ability factors, contributed significantly to the prediction of job success, personality measures were better predictors at the executive level than were cognitive measures, due, the authors suggest, to the uniformity of superior levels of intelligence exhibited by upper level executives.

Hogan, Carpenter, Briggs and Hansson (1985) suggest that research in this field requires more careful and systematic integration of personality psychology and organizational theory so that personnel decisions may better reflect evolving organizational dynamics, thus producing a better fit between the individual and the organization's evolving needs. Similarly, Bowen, Ledford and Nathan (1991) discuss the importance of hiring the 'whole person' and not just an assemblage of knowledge, skills and abilities. They suggest that personnel decisions should include measures of personality functioning as well as organizational and job

analyses to the end of producing the best fit possible between the individual and the organization's culture.

Finally, the use of standardized personality measures, such as the California Personality Inventory, the Minnesota Multiphasic Personality Inventory and the 16 PF have gained increased use in this field of research in the effort to increase both the validity and reliability of test results and the standardization of comparisons across studies (e.g., Barrick & Mount, 1991; Butcher, 1991; Gough, 1990; Sobchik & Lobanova, 1989; Hakstian, Woolsey & Schroeder, 1987).

The above-mentioned studies reflect some of the theoretical, methodological and statistical improvements which have been integrated into personality assessment as conducted within the industrial and organizational setting. The author now turns to research which has identified those personality and cognitive-based factors which characterize effective leaders and managers.

### Personality and Cognitive-Based Factors Characteristic of Effective Leaders and Managers

#### Cognitive-Based Factors

Numerous studies have documented the significance of cognitive-based factors as valid and stable predictors of leadership and management potential (e.g., Ghiselli, 1956, 1959, 1963; Gratzinger; Hay, 1990; Hendrick, 1990; Kotter,

1990; Morrow & Stern, 1990; Schippmann & Prien, 1989; Schmidt & Hunter, 1981). Superior intelligence was one of the earliest factors which was determined to be characteristic of effective leaders and managers (Ghiselli, 1963). Furthermore, superior intelligence has been considered the best overall index of good judgment, which is considered an essential quality for all leaders and managers (Ghiselli, 1959). It has also been suggested that successful leaders and managers are intellectually superior to those who work under them, and that failures in leadership are often related to problems in cognitive functioning (Jaques & Clement, 1991). The idea that intellectual ability plays a critical role in successful leadership and managerial functioning has received considerable support over the past several decades, and it has been suggested that superior intelligence is the only consistent trait which consistently differentiates successful from unsuccessful leaders (Johnson & Luthans, 1990), and in particular, superior verbal intelligence (Baehr & Orban, 1989; Bass, 1990; Morrow & Stern, 1990). Furthermore, superior intelligence has been found to characterize successful leaders and managers in virtually all jobs and in all settings (McDaniel, 1991; Schmidt & Hunter, 1981). It has also been suggested, however, that too superior a level of intelligence may potentially hinder leaders if it leads them to becoming impatient with their

less intelligent subordinates and results in their attempting to do everything by themselves (Most, 1990).

Raw intelligence, per se, may not be as critical for leaders and managers as intelligence related to adaptability (Morrow & Stern, 1990). Wagner and Sternberg (1990), for example, stress the importance which 'street smarts' plays in managerial success. They suggest that there are two types of intelligence, academic and practical, or 'street smarts,' and that the hallmark of possessing the latter type is the ability to acquire tacit knowledge, that is, knowledge related to managing oneself, others and tasks. It has also been suggested that the most effective leaders and managers utilize a blend of thinking styles, which provides them with greater cognitive flexibility and adaptability (Gratzinger, Warren & Cooke, 1990).

Successful leaders and managers also tend to exhibit high levels of cognitive complexity, which may result in more accurate perception and reality testing, good conceptualization, greater insight into self and others, greater cognitive flexibility and more effective and versatile problem solving behaviors (Hay, 1990; Hendrick, 1990; Lombardo, Ruderman & McCauley, 1988). Jacobs and Jaques (1990) add that successful leaders use their complex cognitive maps to reduce the complexity of their organizations' environments, and by so doing, diminish the uncertainty and anxiety it may engender within employees.

Similarly, Moses and Lyness (1990) point out that ambiguity is both stressful and unavoidable for managers, and that to be successful, they must possess the requisite abilities and cognitive-based coping styles to effectively deal with it. Finally, Bennis and Nanus (1985) suggest that the power of leaders comes, in part, from their ability to make sense out of and simplify incredibly complex concepts, which assists them in translating and communicating their multi-faceted visions to their respective organizations.

#### Personality-Based Characteristics

It has been suggested that the best overall criteria for defining successful leadership and management includes the ability of the leader to consistently achieve or exceed his or her own high-reaching goals, combined with the ability to motivate one's employees to consistently perform up to their maximum potential (e.g., Bennis & Nanus, 1985; Bray, 1982). A variety of personality-based factors have been suggested to contribute to the potential for leadership capability, and are presented below.

Numerous studies suggest that successful leaders and managers possess exceptionally high levels of energy and are able to use that energy to work extraordinarily hard at their jobs (e.g., Bray, 1982; Hogan & Hogan, 1991; Schippmann & Prien, 1989). Researchers suggest that they are motivated to work so tenaciously for a variety of

reasons; such as a strong desire to excel and achieve status and independence (e.g., Baehr, 1987; Shippmann & Prien, 1989), to achieve mastery and wield power constructively (e.g., England & Lee, 1974; Sashkin & Burke, 1990), as an attempt to deal with their fear of failure and dependency (Sobchik & Lobanova, 1989), and to compete with others as a test of their considerable skills (e.g., Kotter, 1990; Sobchik & Lobanova, 1989). Furthermore, their heavy work loads tends to be energizing and positively reinforcing for them, which motivates them to maintain such high work levels (e.g., Hogan & Hogan, 1991; Piotrowski & Armstrong, 1989). They also tend to be unfailingly optimistic and are willing and able to take considerable risks (e.g., Bass, 1990; Bennis & Nanus, 1985; Bray, 1982; Morrow & Stern, 1990).

Kaplan (1993) suggests that high level executives exhibit what he terms expansiveness, which is characterized by a strong ambition for achievement, mastery and the desire for recognition for one's efforts. Kaplan adds that such people, in order to successfully keep such strong drives balanced and in check, must also possess particularly strong ego-strength. In a similar vein, Piotrowski and Armstrong (1989) report that they were surprised by a finding in their research which suggested that social visibility and narcissistic need fulfillment were low priorities for high level executives. Rather, their research identified a pattern of executive functioning which included playing the

role of team player and coach in egalitarian efforts designed to help their organizations succeed. Hogan and Hogan (1991) point out, however, that motivation based upon status need is not necessarily negative or pathological, and that positive adjustment is usually positively correlated with higher status. None the less, Piotrowski and Armstrong, along with Bennis and Nanus (1985) found the executives in their respective studies to be quite humble, and that they credited a portion of their success to simply having good luck.

While they expect a great deal from their subordinates and encourage them to excel, truly successful leaders and managers are not unfeeling task masters. Quite the contrary, they are genuinely interested in those who work for them, are highly social and people-oriented, and exhibit high levels of empathy, integrity, and a sense of duty and responsibility (e.g., Bass, 1985; De Pree, 1989; Piotrowski & Armstrong, 1989; Yammarino & Bass, 1990). Nor do effective leaders shy away from recognizing and dealing with their own, or others' emotions (Clover, 1990). They also welcome and are sensitive to feedback from their work partners (Hay, 1990; Sobchik & Lobanova, 1989). Successful leaders recognize the need to examine themselves introspectively, and are able to do so in order to gain insight into their motivations and behavior and to learn

from their failures and mistakes (e.g., Bass, 1990; Bennis & Nanus, 1985; McCall, Lombardo & Morrison, 1988).

In summary, successful leaders are likely to be endowed with superior intelligence and abilities as well as with a number of the personality attributes elucidated by the above-mentioned research. A number of researchers, however, suggest that truly exceptional leaders are also gifted with the charisma that enables them to both inspire and elevate those around them, and to communicate their vision in a manner which transforms their organizations (e.g., Bass, 1985; 1990; Bennis & Nanus, 1985; Yammarino & Bass, 1990). When they do so, such leaders are said to be practicing the fine art of transformational leadership.

#### The Contribution of Assessment Centers

For the past four decades, assessment centers have served the dual roles of providing data for the selection of candidates for managerial and leadership positions, as well as being a rich source of data for basic research into the dynamics of leadership and management and human functioning in general (Bray, 1982, 1985). The assessment center approach warrants specific consideration, particularly since it bears some similarity to the approach used by the consultation service which has produced the data used in the present study.



Modern day assessment centers developed from the personality research conducted by Henry Murray at the Harvard Psychological Clinic during the 1930s (Bray, 1985). Murray's strategy involved having different assessors study the same individuals in great depth in order to formulate a complex picture of personality functioning. The United States' involvement in World War II provided Murray with the opportunity to apply his assessment technique in the selection of intelligence agents for the Office of Strategic Services (Bray, 1985). Beginning in the latter half of the 1950s, Douglas Bray and other researchers at American Telephone and Telegraph (AT&T) adopted Murray's technique for their Management Progress Study, a longitudinal study designed to monitor the changes in the personal characteristics of managers as they progressed through their careers (Bray, 1982). The original intent of the study was to provide data for basic research, however, it soon came to be utilized, by AT&T and other organizations, for assisting in the process of management selection (Bray, 1982). AT&T's Management Progress Study marked the first industrial application of assessment center technology, and the assessment center model developed by Bray and his associates became the model for most subsequent assessment centers (Bray, 1982; Howard, 1974).

Of the three most popular methods of assessing employee potential; formal testing programs, individual

assessment and assessment centers, the assessment center approach is unique in that it eschews the elementalistic approach characterized by quantitative measurements of partial and compartmentalized processes, in favor of the organismic approach, which begins with the whole person and moves into deeper and more complex levels of analysis in order to investigate the dynamic components of the individual's entire personality (Bray, 1982, 1985; Howard 1974; Kress, 1989). By so doing, the centers are able to provide data regarding an exceedingly complex array of behavioral, personality and cognitive factors, including; decision-making ability, oral and written communication skills, organization and planning ability, decision-making ability, energy level, analytical ability, resistance to stress, use of delegation, behavioral flexibility, human relations competence, creativity, controlling tendencies, self-direction, and overall potential (Byham, 1991; Howard, 1974). To collect such an array of data, assessment centers utilize a wide range of measures and techniques, including; objective tests of cognitive-based functioning, ability tests, projective tests, interviews, peer and self-ratings, autobiographical essays, creative writing assignments, individual presentations, in-basket work simulations, leaderless group exercises and management games (Howard, 1974). The assessment also frequently includes the contribution of a clinical psychologist, particularly in

regards to evaluating projective test data (Moses, 1985). The result of such an intensive assessment approach, which may take anywhere from one to three days, is that assessment centers have come to be recognized by many as the most valid and reliable method currently available for the collection of data related to leadership and management potential and future managerial success (Bray, 1982, 1985; Byham, 1991; Fletcher, 1991; Howard, 1974).

A critical aspect of the assessment center evaluation is the feedback which is provided to those who undergo them (London & Bray, 1984). Such feedback has been demonstrated to significantly affect the career motivation of the evaluatees, particularly in the period immediately following the evaluation and feedback session (Fletcher, 1991; London & Bray, 1984). The purpose of such feedback may include the following; facilitating the evaluatees' recognition of their internal conflicts and inconsistencies, identifying dysfunctional behavioral patterns, providing insight into their advancement, achievement and dependency needs, and providing information regarding their ability to deal with change and uncertainty (Cooke, Rousseau & Lafferty, 1987; London & Bray, 1984). As mentioned earlier, the executive consultation service which produced the data used in the current study shares some of the characteristics of the assessment center approach, specifically, the team approach to data collection, the use of a variety of assessment

measures and assessment techniques and the providing of feedback to evaluatees regarding their strengths, weaknesses and personality dynamics.

### Factors Related to Executive Derailment

The area of research which stands juxtaposed to the study of leadership and management success is the study of those factors related to leadership and management failure. It is to such research which the author now turns.

Executive failure, or derailment, has been identified as involuntary termination, forced early retirement, demotion, or becoming plateaued in one's position (Lombardo & McCauley, 1988; McCauley & Ruderman, 1991). McCauley and Ruderman (1991) estimate that the derailment rate for top level executives ranges from 10 to 33 percent, making it a staggeringly costly phenomenon.

Numerous factors have been identified as being linked to executive derailment, including inadequate managerial and administrative skills, personality flaws, weak leadership potential and situational factors (Bentz, 1985; McCall, Lombardo & Morrison, 1983). Lombardo and McCauley (1988), in their extensive research in this area, have identified the following six clusters of flaws which they suggest underlie executive derailment; problems with interpersonal relationships (e.g., being overambitious, insensitive, arrogant), overdependence (upon a boss, mentor, or a

particular strength or skill), strategic differences with higher management, difficulty molding a staff, difficulty making strategic transitions (e.g., promotions, new assignments or new jobs) and lack of follow-through. Of these six clusters, their research suggests that the latter three are the ones most highly correlated with derailment. Kaplan (1993) adds that some executives derail due to excessive worries and anxiety about their self-worth, which may lead to self-defeating compensatory efforts such as the need to dominate and promote their own self interests over those of their organization. Kaplan suggests that such behavior serves to decrease these executives' flexibility and erodes their organizational integrity.

The flaws which may eventually lead to derailment frequently go undetected until the individual is promoted, given a new assignment, transferred or changes jobs, and is exposed to new and greater challenges which test and expose those specific flaws (Lombardo & McCauley, 1988). A promotion or job change may also require the individual to practice a different set of technical or relational skills, and as a consequence, turn what was previously considered a strength into a flaw (McCall & Lombardo, 1983).

Lombardo and McCauley (1988) also suggest that derailment may be predicted before it happens, and that when a number of specific factors occur in combination, a dangerous profile results. Such factors include; a lack of

hard management skills (e.g., strategic thinking, ability to mold a staff), a lack of necessary personal qualities (e.g., flexibility, comfort with ambiguity), and the moving into challenging situations which may expose inherent flaws.

Finally, Lombardo and McCauley (1988) suggest that the following strategies may be employed by organizations to prevent derailment; provide reflection time for executives and give them straight feedback about their performance, encourage learning from past mistakes and the recognition of personal blind spots, provide an environment where learning, and not just results, is taken seriously, make smaller progressions up the managerial ladder as opposed to huge leaps, bring flaws out into the open and provide opportunities to overcome or compensate for them. Lombardo and McCauley suggest that by adopting such strategies, particularly the fostering of a productive learning environment and treating critical transitions and other leadership challenges seriously, organizations may provide the opportunities for their managers and executives to develop new strengths and overcome and compensate for flaws, thus reducing their potential for derailment.

#### Leadership Research from the Psychoanalytic Perspective

As the author has mentioned, the current study, in terms of data collection, interpretation and hypothesizing, is cast within the psychodynamic perspective.

Interestingly, in the voluminous amount of leadership and management research reviewed by the author, only a proportionally small amount was similarly construed. The author now turns to several of the principle researchers and theoreticians of the psychodynamic, or psychoanalytic perspective who apply that theoretical orientation in the study of the leadership and management phenomenon.

Zaleznik (1966) has conducted considerable research in the leadership and management field, and has written widely of those factors which contribute to executive success and failure. Zaleznik (1966) espouses the belief that Freud's theory of ego functioning and emotional development is the most complete explanation of executive functioning and of how executives pattern their work roles. Zaleznik (1966) defines such work roles or styles, as manifestations of the executive's ego organization, the compilation of identifications with significant others, and the competencies and interests developed and utilized over a lifetime of negotiating with one's environment. He also suggests that an important key to successful executive functioning includes the executive gaining an increased awareness of his or her inner conflicts and the working towards their resolution so as to more firmly ground the executive in reality (Zaleznik, 1966). When executives are able to do so, Zaleznik believes that they are better able to successfully practice the substance of leadership, which

he suggests includes; getting excited and being able to excite others about their work, originating and translating an organizational vision, contributing to substantive thinking, exhibiting a high degree of imagination, and being able to perceive opportunity (Zaleznik, 1989).

Zaleznik suggests that there are numerous factors which serve as potential roadblocks to effective executive functioning. For example, when internal conflicting demands occur as a result of inconsistencies with the executive's developmental history and personality structure, the executive will likely experience role and career conflict, creating internal confusion and disintegration which may ultimately lead to the executive becoming less able to interact effectively with others and becoming less invested in his or her organization (Zaleznik, Dalton & Barnes, 1970). Zaleznik (1966) also believes that the executive must learn to successfully deal with the negative effects of projection, the searching outside of oneself for the answer, status anxiety, fear of aggression in both oneself and authority figures, competition anxiety, fear of both failure and success, and the problem of discontinuities between others' evaluations and evaluations of oneself. Ultimately, Zaleznik (1966) believes that the executive must assume responsibility for his or her own development and that a reservoir of positive self-esteem facilitates successfully



negotiating the inevitable roadblocks encountered along the way.

Zaleznik and Kets de Vries (1975) single out power as being potentially problematic for the executive and manager. They suggest that those who seek power frequently do so in an effort to substitute a corporate mind in place of an inadequate and incohesive sense of self. These authors suggest that the struggle for power is a defensive mechanism used to unite a divided self and as a substitute for an inadequate ego-ideal. Zaleznik and Kets de Vries (1975) also emphasize the importance of good reality testing for executives so that they may more accurately differentiate between fact and fantasy. However, they point out that executives tend to be extremely active individuals and often eschew inward reflection. As a result, they suggest that executives may become insensitive and manifest a general lack of awareness which diminishes their ability to communicate effectively with others. Zaleznik (1989) also suggests that executives grasp for power and control as a means to defend against their own fear of chaos and to maintain distance from human involvement. Such individuals, he posits, tend to separate thinking and feeling, and through an overemphasis upon the former, potentially distort their rational thinking processes.

Levinson (1970) believes that successful executives, and mentally healthy people in general, share the following

characteristics; they have a variety of sources of gratification, they are flexible when in stressful situations, they are able to recognize and accept personal assets and limitations, they are caring of others and treat them as individuals, and they are active and productive. Levinson (1994) suggests that self-doubt is the greatest detriment to executive potential, and that fear, anger and self-doubt become focal issues during critical transitions such as promotions and job changes. He also suggests that guilt is an extremely powerful inhibitor of executive functioning, particularly when it is related to decisions which result in the firing and laying off of workers, as such actions may become imbued with unconscious overtones of organizational fratricide (Levinson, 1994).

Levinson (1973) decries the 'carrot and stick' behavioral approach to worker motivation, believing instead that the effective leader, whom he views as the psychological father figure in the organization, frees the individual to achieve his or her true potential as opposed to motivating them by using rewards or threats. He thus considers it essential that a leader have a thorough understanding of the dynamics of motivation, which he considers to be a complex phenomenon derived from drives, wishes, fantasies, and most importantly, the desire to achieve one's ego-ideal. To that end, he considers it critical that leaders pay particular attention to feelings,

both their own and their subordinates', and specifically, to their own self-images. Levinson suggests, however, that this may be an extremely difficult task for top level executives, due to the narcissistic inflation which frequently accompanies their rise to the top of their organizational hierarchies, and that such an inflated self-image often leads to the denial of those realities which are threatening to it, as well as contempt for other individuals and organizations (Levinson, 1994). According to Levinson, the result of such inflated narcissism, in addition to the executive's desire for peer approval, is a reluctance to take the risky and innovative actions which might result in embarrassment or failure. Levinson suggests that such inaction maintains the organizational status quo as opposed to encouraging the more flexible and creative approaches necessary to maximize a business' competitiveness .

Kernberg (1979) suggests that the choice of effective leaders is a primary task for all organizations and that candidates' personality functioning should always be a major consideration when making such decisions. Of particular importance, he believes, is the quality of an individual's object relations and the interaction between the individual's personality and the inevitable regressive pull inherent within the organizational structure. The effective leader, Kernberg suggests, is one who is able to successfully negotiate such a regressive phenomenon by

remaining flexible and by using an appropriate degree of 'participatory management,' whereby the leader is open and available to his staff and encourages their honest and forthright contributions in the decision-making process.

Kernberg (1979) also discusses those character structures which, when manifested by leaders to a pathological degree, may lead to organizational breakdown and leader derailment. The schizoid leader, Kernberg suggests, tends to remain emotionally isolated, which is frustrating to subordinates, while the obsessive leader is over-controlling, frequently in a sadistic manner. The paranoid leader, whom Kernberg believes to be a serious organizational threat, also engages in sadistic control, but to a greater degree than the schizoid leader. The hallmark of the paranoid leader is the projection of his or her rage onto staff members, which demoralizes staff and may produce organizational breakdown. The character structure which Kernberg believes poses the most dangerous threat to the organization is the pathologically narcissistic leader, which he adds is a type common within organizational hierarchies. Such individuals, characterized by their extreme levels of grandiosity and lack of insight and empathy, tend to exploit their subordinates. They foster dependency upon themselves while autocratically exercising their power over others. They also experience resentment and envy towards those around them who are successful, and

attempt to diminish and undermine their efforts. Needless to say, suggests Kernberg, such leaders wreak havoc within their respective organizations.

### The Rousey Assessment of Personality

The Rousey Assessment of Personality (RAP) plays a prominent role in the assessment battery used by Morrison and Associates in their executive consultation service, which makes it particularly significant to the current study as well. A thorough explication of the RAP's development, theoretical basis, and history of use in applied and research settings is therefore necessitated.

### The Development of the RAP

Clyde Rousey, who is both a speech pathologist and a clinical psychologist, joined the Menninger Foundation in 1961 to conduct research on his developing hypotheses regarding the relationship between personality development and verbal communication. During his years at Menninger, Rousey and his colleagues conducted research with various populations and in numerous settings to further develop and test his hypotheses (e.g., Rousey & Averill, 1963; Rousey & Toussieng, 1964; Rousey & Moriarty, 1965; Rousey, 1974). The assessment instrument which grew out of this research, which eventually came to be christened the RAP, analyzes

speech development from a psychological, and specifically, a psychodynamic framework (Rousey, 1974, 1995).

Rousey suggests that the psychological approach to understanding speech development has received scant attention in comparison to the neurological, learning/behavioral and cognitive/linguistic approaches (Rousey & Moriarty, 1965; Rousey, 1995). He adds that considerable confusion has resulted from a lack of clarity regarding important terms used in this field of study. In his work, Rousey defines speech as the individual sounds, or technically, the phonemes, which are used in specific ways to produce verbal language (Rousey & Moriarty, 1965). Verbal language then, refers to the symbolic meanings attached to speech sounds (Rousey & Moriarty, 1965). Rousey suggests that the psychological orientation to speech development, despite being the path less taken by theorists and researchers, is none the less not without precedent (Rousey & Moriarty, 1965). Rousey cites Wilhelm Wundt, Sigmund Freud and E. Sapir as bringing attention to the psychical meanings implied, not only by verbal language, but by sounds as well, and other researchers, such as Scripture, Van Riper, Milisen and Wyatt as suggesting that emotional factors have an impact upon speech articulation (cited in Rousey & Moriarty, 1965). Rousey particularly highlights the work of Moses, who published his hypotheses in the 1950s regarding the psychological meanings of sounds as related to

the development of speech problems, as well as the work of Greenson, who in the 1950s and sixties, developed a theory similar to Rousey's which suggests that speech sounds function in the discharge of both pleasure and pain and as indicators of affective states (cited in Rousey & Moriarty, 1965). Rousey also mentions the more recent work of Cantwell and Baker, who, publishing in the early 1990s, have explored the psychological factors which might account for the high incident rates of speech disorders in adults and children who have psychiatric and developmental disorders (cited in Rousey, 1995).

#### Theoretical Basis of the RAP

Rousey broadly construes speech sounds as one of the fundamental ways in which individuals establish and enlarge upon their relationships with other individuals and society at large (Rousey & Moriarty, 1965). As such, he proposes that they are important indicators of basic drives and competencies, and of how adequately individuals negotiate their relationships with others. Such speech sounds, in American English, consist of twenty-five consonants and twenty-one vowels and diphthongs (Rousey & Moriarty, 1965). According to Rousey's theory, distortions, omissions, substitutions and combinations of these sounds, in addition to pitch range, voice quality and auditory perception, provide data which may be used to make inferences regarding

individuals' personality functioning, ego-defenses and overall psychological health (Rousey & Moriarty, 1965; Rousey, 1974, 1995).

The fundamental basis of Rousey's theory, and that which supports its inferences regarding personality functioning, is the striking parallelism which Rousey suggests exists between the development of speech and the appearance of drives and the process of ego development (Rousey & Moriarty, 1965; Rousey, 1974). Rousey points out that in the first six months of life an infant produces predominantly vowels and semivowel sounds, which parallels the predominant expression of drives and affective states which occur within that time frame. From six to twelve months, an infant produces all of the consonant sounds needed for the later production of language, paralleling the intensified development of ego functions, such as perception, awareness, adaptive and defensive mechanisms also occurring at that time. Rousey thus hypothesizes that the expression of vowels is related to the functions and handling of drives, while the expression of consonants is related to ego controls, the mastery of instinctual life, and aspects of how relationships are formed with others (Rousey & Moriarty, 1965; Rousey, 1974). His theory therefore suggests that earlier conflicts will be reflected in speech difficulties involving the use of vowels, while conflicts occurring in later stages of development will be



manifested through difficulties with consonants (Rousey, 1974).

Most recently, Rousey has articulated how his theory of speech development parallels Mahler's (1975) phases of infant development, as well as how speech development may be linked to Kernberg's stages of internalization of object relations (C. L. Rousey, personal communication, October 22, 1994). Rousey explains that the appearance of vowels corresponds with the relatively unrestrained discharge of affect which characterizes the first few weeks of life, which corresponds with Mahler's normal autistic phase. Mahler's normal autistic phase, in its later exposition, has also been identified by Stern (1985) as the "emergent phase." Vowel sounds, suggests Rousey, may thus be construed as the auditory manifestations of libidinal and aggressive drives. Rousey (1994) adds that his clinical experience leads him to suspect that front vowels express libidinal feelings or their derivatives, back vowels, aggression or its derivatives, while mid vowels express the ability to modulate and integrate these two drives.

Rousey (1995) suggests that the cooing sounds made by an infant after its hunger is satiated or when it is being held marks the beginning of Mahler's normal symbiotic phase, indicating that the infant is experiencing some degree of connection with another. He adds that the cooing sounds also serve the function of auditory self stimulation, which

is associated with normal narcissism. Rousey also suggests that this period corresponds to Kernberg's second stage of development, the period of build-up and consolidation of 'good' self-object representations (C. L. Rousey, personal communication, October 22, 1994). Also occurring within the first six months of development is the appearance of semivowels, which contain elements of both vowels and consonants, and which, according to Rousey, signify the earliest beginnings of object relations. Rousey suggests that the semivowel which most significantly heralds the beginning of object relations is the 'L' sound, such as in 'Lady.' He points out that cinefluoradiographic studies have demonstrated that the tongue movement which corresponds with the production of this sound is quite similar to the movement required for effective nursing, and that a lack of early psychological nurturance may be reflected in the inability to produce this sound correctly, as well as by compromised psychological development during the upcoming differentiation subphase.

Rousey (1995) explains that the primary linguistic use of consonants is to contain and shape vowels, which leads to the ability to produce verbal language and ultimately achieve differential responses from others. He suggests that the development of this linguistic feature parallels the development of the infant's ability to respond differentially to important others in its environment. This

phase, according to Rousey, corresponds with Mahler's differentiation subphase, that period when the infant begins to experience the process of separation-individuation. Rousey adds that noting the position of the consonant error, i.e., initial, medial or final position, enables inferences to be made regarding the time frame and hence the type of disturbance in object relations being manifested.

Rousey (1995) suggests that the period when the child's speech sounds begin to be formed into intelligible words corresponds with Mahler's practicing subphase. This is also the first opportunity for others to become aware of disturbed speech behavior which would indicate the presence of unresolved developmental conflicts. Rousey also suggests that this phase corresponds with Kernberg's fourth stage, which is characterized by the integration of partial images into whole images (C. L. Rousey, personal communication, October 22, 1994).

Rousey (1995) points out that Mahler's rapprochement subphase marks that period when the child is able to utilize all previously developed vowels and consonants in the production of verbal language. As it does so, the child will frequently display irregular patterns of sound production, which Rousey suggests is a manifestation of the ongoing vicissitudes in object relationships, as well as unresolved conflicts which had their origins in the child's first year of life.

Rousey (1995) suggests that difficulties with consonants and the functioning of the speech mechanism are also reflections of the child's negotiation of the Oedipal phase, as well as those issues related to the development of a stable sense of self and others, one of the tasks of Mahler's libidinal object constancy phase (Rousey, 1995). As an example, Rousey points out that the tongue thrust swallow, a phenomenon where the tongue protrudes outward rather than being retracted during the act of swallowing, is normal in infants and disappears around the age when the Oedipal struggle is typically resolved. It follows, according to Rousey, that the presence of the tongue thrust pattern in adolescents and adults is symptomatic of Oedipal issues which have yet to reach adequate resolution.

Rousey (1995) points out that there are relatively few difficulties with normal speech development during the latency period, which he suggests parallels the submerging of infantile conflicts in the interest of learning, a hallmark of this developmental period. Rousey adds that the disappearance at this time of a formerly manifested speech problem represents a transference of the earlier conflict's symptom to some other aspect of the child's cognition or behavior.

Rousey has also drawn parallels between his theory of speech development and the psychosexual stages of infantile sexuality, particularly as they have been articulated by

Erikson (cited in Rousey, 1995). Rousey traces the emergence of various consonant sounds as they correspond with the appearance and resolution of the normal crises which facilitate the development of infantile sexuality. From this perspective, suggests Rousey, the mastery or lack of mastery of specific speech sounds at particular age periods reflects more than just the success or failure of the cognitive and motoric maturation required to produce such sounds, but rather, may also reflect unresolved traumas originating within particular psychosexual stages of development. It follows then, according to Rousey, that the identification of a particular speech problem allows inferences to be made regarding the specific stage of psychosexual development in which the trauma supposedly occurred. For example, Rousey suggests that the Oral Respiratory-Sensory Stage is represented by the sounds m,p,f,h,y,l,n and t, the Oral Biting Stage by b,f,k,g and d, the Anal-Expulsive Stage by ch and j, the Anal-Retentive Stage by s,r,sh and z, and the Phallic Stage by th, v,z and th (Rousey, 1974, 1995). Children who are able to successfully negotiate these stages, Rousey adds, should have none, or only transitory speech problems (Rousey, 1974).

Finally, Rousey explicates his theory of speech development by utilizing the concepts of defense mechanisms and defensive behavior as conceptualized by Wallerstein and

Kernberg (cited in Rousey, 1995). From this perspective, Rousey suggests that it is possible to uncover, not only the psychologically based factors responsible for speech errors and variations in speech quality, but also those psychological factors which underlie distortions in auditory perception.

First, in discussing defensive behavior and speech sounds, Rousey explains that speech disturbances fall into one of three general classes; substitution of one sound for another, omission of a sound which would normally be present, or distortion of a consonant or vowel (Rousey, 1974, 1995). The occurrence of one of these disturbances, according to Rousey's theory, indicates the use of defensive behavior which may be understood as a compromise symptom of an unresolved psychological conflict. Examples of such defensive behavior would include the following: the substitution of the /f/ for the voiceless /th/ suggests a situation involving a psychologically absent father which is rooted in the ninth to tenth month of development; the /L/ sound is swallowed, producing what is termed a 'dark L,' signifying psychological deprivation from maternal objects around the sixth to eighth month of development; a female adolescent's voice sounds breathy, which suggests a probable attempt to suppress sexual drives; the voice quality of a male child between the ages of three to five is hoarse, suggesting that in his struggle to negotiate the Oedipal

phase he is attempting to identify with his perceived aggressor by phonating at a pitch below the capability of his larynx. Rousey adds that if an individual's verbalized pitch range is less than what would normally be expected, the presence of depression may possibly be inferred, and that if this disparity is significant enough, a greater than average chance for self-destructive behavior may be indicated.

To make inferences regarding the presence of defense mechanisms, as well as additional defensive behaviors, Rousey (1995) utilizes the perception of auditory stimuli through the use of a hearing test he devised which samples an individual's auditory localization of a simultaneously and binaurally presented pure tone. Barring significant hearing loss or other auditory abnormalities, such tones would be expected to be heard in either both ears or in some part of the subject's head. Rousey has discovered, however, that such is not always the case, and that individuals report such tones as emanating from a variety of locations. Rousey suggests that such abnormal localization signifies the presence of defense mechanisms, in much the same way that particular responses to stimuli on projective tests, such as the Rorschach, may do likewise. The following are examples of defense mechanisms and defensive behaviors which Rousey suggests may become manifested through sound localization. Projection is evident when the individual

reports hearing the binaurally presented sound as coming from a distance of greater than two feet from outside of the head. Rousey adds that severely disturbed individuals may report the sounds as emanating from the walls, trees, and so forth. Denial is indicated when the tone is heard in only one ear and there is no evidence of profound unilateral hearing loss. The defense of splitting is suggested when the tone is heard outside of the head, but at a distance of no more than two feet. The defensive behavior of somatization is indicated when the tone is heard as coming from somewhere in the individual's body other than the ears or head. For example, ulcer patients, says Rousey, frequently report the tone as emanating from somewhere inside their stomachs. Individuals with organic damage, reports Rousey, particularly at the level of the mid-brain, frequently manifest their confused mental state by identifying the location of the tone as being all around their heads, while individuals with manic thought processes often report the tone as moving within, around and away from their heads.

#### Speech and Hearing Behavior Assessment in Applied and Research Settings

As mentioned earlier, numerous studies have been conducted by Rousey and others which provide evidence that the analysis of speech and hearing behavior is a reliable



and valid means of assessing personality functioning and overall psychological health (e.g., Rousey & Moriarty, 1965; Rousey, 1974). The following studies are representative of this body of research, and further delineate the inferences which Rousey suggests may be made from speech and hearing behavior.

Sehdev and Rousey (1974) compared data generated from the RAP with the data derived from more conventional assessment instruments, including the Wechsler Intelligence Scale for Children, the Bender-Gestalt Test, the Thematic Apperception Test and the Rorschach Inkblot Test. The authors discovered significant areas of agreement between the two assessment approaches in the areas of screening for brain dysfunction, assessing level of thought organization, determining the adequacy of object relations and in uncovering personality styles. The authors conclude that use of the RAP may prove particularly advantageous in situations calling for rapid, inexpensive and less intrusive assessment techniques, such as in community mental health clinics, as well as being useful as an adjunctive assessment device to be used in conjunction with more traditional batteries.

In two separate studies, Kernberg and Rousey (1974) and Fleming and Rousey (1974) utilized variations in speech sounds to document changes which occurred during the course of psychotherapy. The authors reported that the before-

after speech sound examinations were highly correlated with clinical observations of the subjects' psychological functioning, and that specifically, the post-therapy speech examination accurately reflected the subjects' overall improvement.

In a longitudinal study, Moriarty (1974) examined the normal development and coping styles of thirty-two children, focusing particularly upon how speech is related to sources of vulnerability. She utilized data from her subjects' speech behavior beginning at the time of infancy. In agreement with Rousey's theory, Moriarty concluded that speech is particularly vulnerable to environmental pressures, as well as to internal and external conflicts, and that disturbances in speech articulation frequently have a psychological basis tied to specific conflicts and developmental periods. She further suggests that such disturbances function as outlets for tension reduction, as well as serving as indicators of potential problems in the child's relationship with its parents, of possible difficulties with impulse control, and of possible inefficiency in the child's use of his or her cognitive potential.

Mehrhof and Rousey (1971) analyzed speech behavior to investigate if specific articulation problems could identify the tendency to engage in destructive behavior directed towards self or others. The authors successfully predicted

such a tendency with twenty-two of the twenty-four subjects included in their study, leading them to suggest that articulation errors are potentially useful predictors of destructive behavior. Similarly, Filippi and Rousey (1974) analyzed the speech behavior of 239 children and determined that specific speech deviations were highly correlated with children in their study who exhibited tendencies towards violent and destructive behavior.

LaFon and Rousey (1970) used speech behavior to determine if the presence of specific speech substitutions are significantly related to disturbances in paternal and child relationships. The results of their study suggested that such a relationship is highly probable.

Norris (1974) has conducted research which explores the relationship between sound omissions and the presence of mental retardation. His study suggests that the assessment of speech behavior may be a potentially useful tool in screening for mental retardation. In a similar vein, Decker and Rousey (1974) conducted research which focused upon a specific speech distortion which Rousey's theory suggested would be related to neurological dysfunction. Their results suggested a strong correlation between the distortion and neurological impairment.

Levy (1974) utilized the assessment of speech behavior within the educational setting to gain a better understanding of the psychological and emotional needs of

emotionally disturbed children, and suggests that such assessment may be a valuable tool for educators who work with these populations. Similarly, Sehdev and Rousey examined speech behavior to detect potential underachievement in school children (cited in Rousey, 1974). Their results indicated a strong relationship between underachievement and specific speech deviations. The authors suggest that the assessment of speech behavior may be a valuable tool for the early detection of academic underachievement.

The utility of analyzing speech and hearing behavior as an aid in the selection process for specific educational programs has also been explored. Rousey (1974) examined the speech and hearing behavior of prospective psychiatric residents, paying particular attention to the adequacy of their early object relations, impulse control and expression of affect. Rousey reports that in seventeen out of nineteen cases, he was able to make specific and accurate inferences regarding the applicants' personality functioning and psychological health, which were substantiated through the final selection process and their subsequent performance as residents. Rousey and Mitchell (1974) were able to utilize the analysis of speech and hearing behavior to identify successful candidates for a Clinical Pastoral Education program. The authors suggest that a speech examination

could be a useful screening tool in such programs' selection processes.

Dr. David Morrison, the founder and director of Morrison and Associates, began his collaboration with Dr. Rousey when he, Dr. Morrison, was the director of the Menninger Foundation's Center for Applied Behavioral Sciences. Dr. Morrison, working closely with Dr. Rousey, utilized the latter's assessment techniques of speech and hearing behavior in the consultations he conducted with professionals from various fields. Dr. Morrison highly endorsed Dr. Rousey's methods at Menninger, adding that the findings which Dr. Rousey derived from his assessment techniques almost always supported those of his own staff (Ferlemann, 1974). The collaboration between Drs. Morrison and Rousey continued after Dr. Morrison left Menninger to found Morrison and Associates, and the administration of the RAP, as well as Dr. Rousey's personal analysis of the data, remains a vital part of each executive consultation conducted by Dr. Morrison and his staff. Dr. Morrison has commented that his respect and appreciation for the utility of the RAP as an assessment device has only grown over the approximately twenty years he has employed it as part of his test battery (D. E. Morrison, personal communication, May 5, 1994).

### Research Questions

The current study will address the following research questions.

#### Question I

Will the complete test battery used by Morrison and Associates in their executive consultations significantly differentiate between the high versus the low functioning groups of executives?

#### Question II

Will data from the RAP, by itself, significantly differentiate between the high versus the low functioning groups of executives?

#### Question III

Will object relations prove to be a significant variable in differentiating between the high versus low functioning groups of executives?

#### Question IV

Will reality testing prove to be a significant variable in differentiating between the high versus the low functioning groups of executives?

## Question V

Will the profile which characterizes the high functioning executive in the current study be essentially congruent with the profile of the effective leader as articulated in the body of leadership research?

Chapter III will describe how the subjects were selected for the current study, the statistical treatment of the data, and the measures used. It will also include the hypotheses to be tested.

## CHAPTER III

### METHOD

As mentioned earlier, the current study is a systematic replication and elaboration upon a previous study conducted by Rousey, Morrison and Deacon (1993) that examined those factors which contribute to differentiating levels of functioning in executives. The current study differs from its predecessor in the following ways: it reduces the categories of executive functioning from three to two; it eliminates potential criteria contamination in the selection of subjects through a blind selection process and the use of independent raters; it increases the number of subjects in each category of executive functioning while reducing the time frame from which subjects were selected; it provides a more complete statistical treatment of the data; it provides an additional validation procedure for the RAP by utilizing data from that instrument to independently differentiate between the two groups of executives; it utilizes RAP-generated data to construct personality profiles of high and low functioning executives.



### Selection of Subjects

The data used in this study was generated from executive consultations which took place at Morrison and Associates, an executive consultation and development service located in Palatine, Illinois. The clients who participated in the consultations were mid to upper-level executives employed in a number of major business firms and organizations located both locally and nation wide. They did so either at their own request or that of their superiors in order to facilitate their dealing with specific issues arising within their workplace, for their general personal development, or both.

Dr. Morrison and his staff had conducted approximately 800 executive consultations since moving to Palatine in 1978 to the time of this study. The author used data only from those consultations which took place from 1988 onward in an effort to avoid potential time-related confounding variables. The author selected his samples from the approximately 300 consultations which took place during this six year period, choosing two groups of 60 subjects each who were representative of the two levels of executive functioning comprising the dichotomized dependent variable. All of the data used was taken from the subjects' records at the Morrison and Associates office, with no personal contact being made with the subjects themselves.

### Procedure for Subject Selection

In regards to the selection of subjects, the author first identified all those executives whose consultations had taken place during the past six years. The groups of high and low functioning executives were selected from this pool of approximately 300. To make the selections, the author reviewed each consultation file, which contains all of the executive's biographical information, work and family histories, the interview and test data, and the results and interpretations of that data. During the examination of the executives' records, however, the author was careful to review only the biographical information and work and family histories, thus avoiding the criteria contamination which would result from a knowledge of the subjects' test data. The criteria used by the author to differentiate between high and low levels of functioning were similar to those used by Rousey, Morrison and Deacon (1993) in their original study, and are as follows.

#### High Level of Functioning

All four of the criteria listed below had to be present for an executive to be included in the high functioning group. Furthermore, if any of the criteria used to differentiate the low functioning group were indicated in a subject's record, they were excluded from the high level group. The high level criteria include:

1. The executive is perceived by his or her colleagues and superiors as possessing strong leadership and/or managerial skills.
2. The executive is perceived by his or her colleagues and superiors as being a high performer and as being successful within the organization.
3. The executive, in his or her self-evaluation, believes that he or she is a success within the organization and is generally satisfied with his or her work performance.
4. The executive is perceived by his or her colleagues and superiors as being able to engage in functional and healthy relationships within the workplace.

#### Low Level of Functioning

The criteria listed below were used to differentiate low-functioning executives. If any of the criteria which were used to differentiate the high-functioning group were present, the executive was excluded from the low level group. However, all four of the criteria used for the low level group did not have to be present for an executive to be included in that group, as each criterion was considered serious enough by itself to indicate significant problems with functioning in the work place.

1. The executive is perceived by his or her colleagues and superiors as having serious problems with his or her work performance.
2. The executive is perceived by his or her colleagues and superiors as having serious problems with his or her interpersonal relationships within the workplace, which has led to problems with the executive's work performance.
3. The executive is at risk of being involuntarily terminated from his or her position as a direct result of his or her work performance problems.
4. The executive is known to have a serious mental illness, including but not limited to alcohol and drug abuse, which has had a serious negative affect upon his or her work performance.

The author was able to select 60 subjects who met the criteria for each level of functioning, creating a total subject pool of 120 subjects. Of the 120 subjects, 108 were male and 12 were female. Their mean age was 43.

The author then utilized independent raters to provide an interrater reliability check on the criteria used to differentiate levels of functioning and the author's selection of subjects. The same information which the

author reviewed to differentiate level of functioning was given to three independent raters from twelve randomly selected executives' files, six from each of the two levels of functioning, as well as information from three additional files which served as practice cases. One of the raters had a primarily business-oriented background, while the other raters' backgrounds were in psychology. The criteria for success versus failure were individually explained to the raters. They then did three practice ratings to make certain that they understood the criteria and their application. All three of the independent raters' ratings were in complete agreement with those of the author, providing an interrater reliability index of 100 percent, or a 1.0 positive correlation.

#### Analyses of the Data

The author provided Dr. Rousey with a list of all 120 subjects selected for the study. The list was coded to ensure that Dr. Rousey would have no knowledge of the subjects' identities so as to avoid criteria contamination. Dr. Rousey keeps the RAP data on file for all of the executive consultations conducted at Morrison and Associates and was therefore able to retrieve the RAP data for all 120 subjects chosen for the study and produce summaries of the data for each subject.

The dependent variable in the study is level of executive functioning, which has been dichotomized into high and low levels of functioning. The independent variables are defined by the measures employed in Morrison and Associates' test battery, which includes data from the RAP.

The following statistical procedures were utilized in the analyses of the data. Two separate stepwise discriminant analyses were conducted. The first analysis utilized the author's original grouping of high versus low level of executive functioning as determined by the subjects' work and family histories. The dependent variables for both discriminant functions were those measures from the Morrison and Associates test battery which yielded continuous data, a total of twenty-two measures. Of these twenty-two measures, only one measure, pitch-range, was data from the RAP, as the majority of RAP data is categorical in nature.

The second analysis utilized a grouping of high versus low level of executive functioning as determined by data derived solely from the RAP. The RAP data used to achieve this grouping consisted of those specific indicators of personality functioning which, according to the theory underlying the RAP and Dr. Rousey's clinical experience, may be construed to be the most significant indicators of psychopathology (C.L. Rousey, personal communication, November 11, 1994). These indicators, per Dr. Rousey's

theory, should therefore make the most significant contributions to differentiating between levels of executive functioning. The five RAP indicators most indicative of psychopathology are as follow: having two or more articulation problems, which indicates difficulties with object relations; having four or more borderline responses on the sound localization test, which indicates that the individual requires a high degree of external structure to function effectively; having bipolar responses on the sound localization test, which suggests the presence of a thought or affective disorder; having voice problems which are significant, such as impotent, weak, immature, which indicates problems with drive expression; having only a one-tone pitch range, which indicates a serious level of depression.

RAP data were also analyzed using cross tabulations with Chi-square to examine the relationships between the high and low levels of executive functioning in the personality areas examined by the RAP. This was done for both the author's original grouping and the RAP-based grouping of the subjects. The results of these analyses were used to determine which comparisons were significant at the .05 level. The data from the significant comparisons were then used by Dr. Rousey to produce computer-generated descriptions, or profiles, of the personality functioning of

the subjects from each level of functioning and each corresponding area of personality functioning.

Profiles were also constructed using the non-RAP data from the the Morrison and Associates test battery, which were believed to be characteristic of the successful executive. The author then compared and contrasted the RAP and non-RAP profiles with other such profiles derived from the body of leadership and management research.

#### Measures Used in the Current Study

The following measures were used to assess cognitive functioning; the Similarities, Comprehension and Picture Arrangement Subtests from the Wechsler Adult Intelligence Scales (WAIS), the Embedded Figures Test and the Halstead Booklet Category Test. (It should be noted that Morrison and Associates have continued using the WAIS as opposed to the WAIS-R in an effort to provide continuity within their test battery, as the WAIS-R was not in wide use when they began their consultation service.)

The following measures were used to assess personality functioning; the RAP, the TAT (card one for male subjects, cards one and two for female subjects), the Beck Depression and Hopelessness Scales, and the Bellak check list, a subjective rating form completed by Dr. Morrison at the conclusion of each executive consultation. The Bellak check list provides a scaled assessment of twelve areas of ego



functioning (Bellak, 1993). These twelve areas are as follow: reality testing; judgment; sense of reality; regulations and control of drives, impulses, affects; object relations; thought processes; adaptive regression in the service of the ego; defensive functioning; stimulus barrier; autonomous functioning; synthetic integrative functioning; mastery/competence. Dr. Morrison also includes two scaled scores for the assessment of influence and consistency as part of the Bellak check list. It is important to note that Dr. Morrison incorporates all the data from the executive consultations when completing the ratings on the Bellak check list, including data from the RAP. As such, the Bellak ratings represent a compilation and summary of all the available data.

#### Hypotheses to be Tested

The following hypotheses were tested. They are presented in the alternative directional form.

H<sub>1</sub>: The complete test battery used by Morrison and Associates in their executive consultations will significantly differentiate between the high versus the low functioning groups of executives.

H<sub>2</sub>: Data derived solely from the RAP will significantly differentiate between the high versus the low functioning groups.

H<sub>3</sub>: Object relations will prove to be a significant variable in differentiating between the high versus the low functioning groups of executives.

H<sub>4</sub>: Reality testing will prove to be a significant variable in differentiating between the high versus the low functioning groups of executives.

H<sub>5</sub>: The profile which characterizes the high functioning executive in the current study will be essentially congruent with the profile of the effective leader as articulated in the body of leadership research.

Chapter IV will present demographic data, results of the analyses of the data, and an examination of how those results address the hypotheses to be tested.

## CHAPTER IV

### RESULTS

#### Introduction

The results of the data analyses and how those results relate to the hypotheses to be tested will be presented in this chapter. The analyses presented and discussed include two stepwise discriminant analyses as well as cross tabulations with Chi-square. Subject demographic data will also be presented. Data were analyzed using SPSSX 4.1 for IBM OS/MVS.

#### Demographic Information

As mentioned earlier, the current study had a subject pool of 120 executives, 60 in each of the two groups comprising levels of functioning. Of the 120 subjects, 108 were male and 12 were female. Their mean age was 42.67. One-hundred nine of the subjects were currently married while eleven were not. Five of the subjects had never been married, ninety-six had been married once, sixteen had been married twice, while three of them had been married three times. Twenty-one of the subjects had no children, eleven

had one child, fifty had two children, twenty-four had three children, eight had four children, and six had five children. There were no significant differences between the groups on the above mentioned variables.

### Statistical Methods

It was this author's aim to use the data generated from the current study to determine if the measures in Morrison and Associates' test battery, as well as the RAP data standing alone, could significantly discriminate between the two levels of executive functioning. The author also wished to determine which of the measures would most significantly discriminant between these groups.

To achieve these research aims, the author had to be able to examine numerous variables simultaneously so as to determine their respective contributions to discriminating between the two groups. To do so, the author utilized the statistical procedure of discriminant analysis, which is typically used for two principle purposes: describing the major differences among groups, and for the classification of subjects into groups on the basis of a battery of measurements (Stevens, 1992). Stevens also suggests that discriminant analysis is highly useful due to its parsimony of description and its clarity of interpretation.

Discriminant analysis is a multivariate statistic which

is able to reveal the major differences between groups by using the uncorrelated linear combinations of the original variables, which are the discriminant functions (Stevens, 1992). Since the discriminant functions are assumed to be uncorrelated, they provide an additive partitioning of the between association (Stevens, 1992).

The author utilized stepwise discriminant analysis. In the stepwise procedure, the first uncorrelated variable which enters the analysis provides the maximum discrimination between the groups, while the next variable is the one which adds the most to further discriminating between them, and so on, until all of the variable which meet the accepted criterion values have been included (Stevens, 1992). The variables included in the last step of the analysis therefore represent the best possible combination of predictor variables for discriminating between the groups. Wilk's lambda was used as the criterion of selection for the process of discrimination.

The author's interpretation of the discriminant functions includes an examination of the discriminant function-variable correlations as well as the standardized coefficients. The former provide information regarding the underlying constructs which the discriminant function represents, while the latter provide information regarding which variables are redundant (Stevens, 1992). The author also examined canonical discriminant functions, group

centroids and the percentage of correctly classified cases to test the significance of the discriminant function.

For non-continuous data, the author utilized cross tabulations with Chi-square which yielded Pearson Correlations and significance levels.

### Analysis of the Data

#### First Discriminant Analysis: Original Grouping

First to be addressed is the issue of the equality of variance-covariance matrices. Tests for equality of group covariance matrices using Box's M resulted in significant differences between the groups, as shown in Table 1. This means that the assumption of homogeneity of covariance matrices is challenged in this analysis, which urges caution in generalizing the results of the current study to other populations.

TABLE 1

#### BOX'S M TEST OF EQUALITY: ORIGINAL GROUPING

GROUP LABEL	RANK	LOG DETERMINANT		
FAILURE (0)	12	5.4360		
SUCCESS (1)	12	-4.0980		
POOLED WITHIN-GROUPS COVARIANCE MATRIX	12	4.8094		
BOX'S M	APPROXIMATE F	DEGREES OF FREEDOM	SIG.	
262.47	2.7290	78,	14202.9	0.0000

Next to be reviewed are the results of the steps of the stepwise analysis, as shown in Table 2.

TABLE 2

## SUMMARY TABLE: DISCRIMINANT ANALYSIS, ORIGINAL GROUPING

VARIABLE	V.IN	WILKS' LAMBDA	SIG.	VAR. LABEL
BELLAK-J	1	.5372	.0000	PRAG. APP./MAST.
BELLAK-G	2	.4540	.0000	ABIL. EXPR.EMO.
BELLAK-D	3	.3878	.0000	THOUGHT PROCESS
BELLAK-C	4	.3332	.0000	SYNTHESIZING
BELLAK-H	5	.3204	.0000	STIM. BARRIER
BELLAK-I	6	.3091	.0000	CREATIVITY
BELLAK-N	7	.2975	.0000	CONSISTENCY
WAIS-COM	8	.2839	.0000	WAIS-COMP.
BECK-DI	9	.2776	.0000	BECK DEPRESS.IN.
WAIS-SIM	10	.2715	.0000	WAIS-SIM.
BELLAK-F	11	.2639	.0000	DRIVES
BELLAK-L	12	.2586	.0000	SUPEREGO/VALUES

Each step shows the point at which the variable was included in the analysis, the resulting Wilk's lambda and the observed significance level. Table 2 also shows that there were twelve significant variables which were found to maximally discriminate between the groups of executives, all of which were significant at less than the .0005 level.

An examination of the status of the variables in the final analysis of the stepwise procedure provides

information regarding the individual contribution of each variable towards the discrimination between the groups.

Table 3 provides this information. The F to remove

TABLE 3

STATUS OF VARIABLES INCLUDED IN THE FINAL STEPWISE PROCEDURE  
OF DISCRIMINANT ANALYSIS OF ORIGINAL GROUPING

VARIABLE	TOLERANCE	F TO REMOVE	WILKS' LAMBDA
WAIS-SIM	0.7184	1.5867	0.2657
WAIS-COM	0.5908	3.7829	0.2757
BECK-DI	0.8260	2.2335	0.2687
BELLAK-C	0.4993	7.0075	0.2903
BELLAK-D	0.3569	22.351	0.3599
BELLAK-F	0.7133	2.2586	0.2688
BELLAK-G	0.5919	11.252	0.3096
BELLAK-H	0.6936	2.0911	0.2680
BELLAK-I	0.5398	6.2390	0.2869
BELLAK-J	0.6461	22.339	0.3599
BELLAK-L	0.5768	1.1681	0.2639
BELLAK-N	0.5252	2.7983	0.2712

represents the degree of unique discriminating power possessed by each variable. The larger the F to remove, the greater the contribution of that variable to the discrimination between the groups. As may be observed from Table 3; Thought Processes, Pragmatic Application/Mastery,



the Ability to Experience and Express Emotions, Synthesizing, and Creativity, all from the Bellak check list, are the variables which provide the greatest amount of unique contribution to discriminating between the groups.

Table 4, conversely, lists the variables which were not included in the final stepwise procedure. These variables, which will be more thoroughly addressed in the next chapter, were largely extraneous to the construction of the discriminant model.

TABLE 4

VARIABLES NOT INCLUDED IN THE FINAL STEPWISE PROCEDURE OF  
DISCRIMINANT ANALYSIS OF ORIGINAL GROUPING

VARIABLE	TOLER.	MIN. TOLER.	F TO ENTER	WILKS' LAMDA
WAIS-PA	0.7241	0.3426	0.9531	0.2542
HALSTEAD	0.8677	0.3556	0.3870	0.2568
EMBFIG	0.7843	0.3564	0.7748	0.2550
BECK-H	0.5763	0.3568	0.3034	0.2586
BELLAK-A	0.6153	0.3495	0.1513	0.2579
BELLAK-B	0.5258	0.3229	0.1667	0.2585
BELLAK-E	0.3958	0.2845	0.8090	0.2585
BELLAK-K	0.5130	0.3558	0.4312	0.2584
BELLAK-M	0.3922	0.3233	0.4760	0.2583
PITCH-R	0.7438	0.3360	0.1630	0.2585

Interestingly, Table 4 shows that the majority of the non-Bellak variables dropped out of the analysis, while only three were included in the final selection, indicating the relative significance of the discriminating power of the Bellak variables.

The standardized coefficients provide additional information regarding the relative weight of each variable's contribution to the discrimination between the groups, and are listed in Table 5. The greater the magnitude of the variable coefficient, regardless of its sign, the greater

TABLE 5  
STANDARDIZED CANONICAL DISCRIMINANT FUNCTION COEFFICIENTS:  
ORIGINAL GROUPING

VARIABLE	FUNC 1
WAIS-SIM	0.2255
WAIS-COM	0.3770
BECK-DI	-0.2481
BELLAK-C	0.5440
BELLAK-D	-1.0317
BELLAK-F	-0.2685
BELLAK-G	0.6129
BELLAK-H	-0.2623
BELLAK-I	-0.4965
BELLAK-J	0.7666
BELLAK-L	0.2167
BELLAK-N	0.3466

its relative contribution to the discriminant score. Also, as mentioned earlier, the standardized coefficients provide information regarding which of the variables are redundant, or in other words, which variables have shared variability (Stevens, 1992). Table 5 indicates that the Bellak variables, Thought Processes and Pragmatic Application/Mastery are most likely not redundant.

Since standardized function coefficients are not affected by relationships with other variables, it is necessary to examine the within groups structure matrix and the discriminant function-variable correlations to determine how the discriminant function is related to variables within groups. This examination also provides information regarding which of the variables are most representative of the underlying constructs of the function (Stevens, 1992). This information is found in Table 6.

Comparing the information from Table 6 with that of Table 5 reveals that the within groups discriminant function-variable correlations are considerably smaller than the standardized coefficients. This suggests that the discriminant function is considerably less related to variables within the groups as opposed to between them. It also appears that the following Bellak variables; Pragmatic Application/Mastery, Synthesizing, The Ability to Express and Experience Emotion, and Object Relations, are

most representative of the underlying constructs of the function.

TABLE 6

## WITHIN-GROUP STRUCTURE MATRIX: ORIGINAL GROUPING

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VARIABLE	FUNC 1
BELLAK-J	0.5481
BELLAK-C	0.4694
BELLAK-G	0.4636
BELLAK-K	0.4320
BELLAK-A	0.2767
BELLAK-B	0.2440
BELLAK-L	0.1959
BELLAK-I	0.1731
BELLAK-N	0.1716
BELLAK-M	0.1644
BECK-DI	-0.1465
BELLAK-E	0.1245
PITCH-R	0.1107
BECK-H	-0.0956
WAIS-PA	-0.0820
BELLAK-H	0.0761
BELLAK-D	0.0710
WAIS-SIM	0.0444
BELLAK-F	-0.0332
HALSTEAD	0.0290
EMBFIG	-0.0278

---

Next, the significance of the discriminant model will be evaluated, beginning with the information presented in Table 7. The eigenvalue represents the ratio of the between groups sums of squares compared to the within groups sums of squares. The eigenvalue is directly related to the canonical correlation. The canonical correlation is a

TABLE 7  
CANONICAL DISCRIMINANT FUNCTIONS:  
ORIGINAL GROUPING

FUNC.	EIGNV.	PERCENT OF VAR.	CUM. PERCENT	CAN. CORR.
1	2.8677	100.00	100.00	0.8611

AFTER FUNC.	WILKS' LAMDA	CHI-SQUARED	D.F.	SIG.
0	0.2586	83.865	12	0.0000

measure of the degree of association between the discriminant scores and group differentiation and represents the proportion of variance which is accounted for by the

discriminant function. As the canonical correlation in Table 7 indicates, 86 percent of the variance is shared variance between the groups. When the canonical correlation is squared ( $\eta^2$ ), the result represents the proportion of total variance which is attributable to between group differences. For this analysis, approximately 74 percent of the total variance may be attributed to differentiation between the groups.

Wilk's lambda, which is the ratio of the within-groups sums of squares compared to the total sums of squares, represents the total variance in the discriminant scores which is not accounted for by group differentiation. For this analysis, approximately 26 percent of the difference between groups is not explained by the discriminant function.

The raw Wilk's lambda may also be transformed into a variable which has a Chi-square distribution and a significance level. In this study, the Chi-square value is 83.87 with 12 degrees of freedom and a corresponding significance level of less than .0005. This statistic suggests that there are significant differences between the means of the two groups on the discriminant function.

The significant differences between the two groups may also be observed by examining the group centroids, which are presented in Table 8.

TABLE 8

## GROUP CENTROIDS: ORIGINAL GROUPING

GROUP	FUNCTION
FAILURE (0)	-1.5763
SUCCESS (1)	1.7673

An examination of the percentage of cases correctly classified provides another check on the significance of the discriminant function. This information is presented in Table 9.

TABLE 9

DISCRIMINANT ANALYSIS CLASSIFICATION RESULTS:  
ORIGINAL GROUPING

ACTUAL GROUP	NO. OF CASES	PREDICTED GROUP MEMBERSHIP	
		FAILURE (0)	SUCCESS (1)
FAILURE (0)	52	49 94.2%	3 5.8%
SUCCESS (1)	37	2 5.4%	35 94.6%
PERCENT OF "GROUPED" CASES CORRECTLY CLASSIFIED:		94.38%	

The classifications are achieved by the assigning of each case to the group it most closely resembles based upon the canonical discriminant function and the assumption of equality of covariance matrices. The overall percent of correctly classified cases is 94.38 percent. This number may represent an inflation of the actual hit rate for a variety of reasons. First, discriminant analysis, particularly of the stepwise type, capitalizes and maximizes chance separation among the groups (Stevens, 1992). Also, as already mentioned, data from the current study indicate that the equality of covariance matrices may not be assumed.

Given these caveats, however, it is interesting to note the similarities in the patterns of classification of cases as shown in Table 9. Despite a discrepancy in the number of cases in the actual groups, the predicted group membership classifications maintained very similar ratios for the failure versus the success grouping, that is, a 94.2 percent and a 94.6 percent hit rate, or correct classifications, and a 5.8 percent and a 5.4 percent miss rate, or incorrect classifications. This would appear to suggest that, despite the above mentioned caveats, the discriminant function is able to significantly, as well as consistently discriminate between the groups in the current population.



### Addressing the Hypotheses

The hypotheses to be tested will now be addressed using the data from the first discriminant analysis, which was based upon a model using the author's original grouping of cases.

There is strong evidence supporting alternative hypothesis number one, that the Morrison and Associates test battery is able to significantly differentiate between the high versus the low functioning groups of executives, based upon tests of significance of the first discriminant analysis.

There is evidence supporting alternative hypothesis number three, that object relations is a significant variable in differentiating between the high versus the low functioning groups of executives, as object relations was determined to be one of the more significant underlying constructs of the discriminant function.

There is little apparent evidence supporting alternative hypothesis number four, that reality testing is a significant variable in differentiating between the high versus the low functioning groups of executives. However, while they were not central constructs of the discriminant function, an examination of the discriminant function-variable correlations suggest that the Bellak variables of reality testing and reality sense, which together represent the construct of reality testing, may be construed as at

least minor constructs underlying the discriminant function. As such, the alternative hypothesis regarding reality testing receives only limited and qualified support.

There is strong evidence supporting alternative hypothesis number five, that a profile of the successful executive as defined in the current study will be essentially congruent with the profile of the successful leader as articulated in the body of leadership research. This profile will be more thoroughly discussed in the next chapter.

#### Second Discriminant Analysis: Rap-based Grouping Comparison of RAP-based Grouping with Original Grouping

The second discriminant analysis utilizes a model of executive functioning based upon data derived solely from the RAP. That is, the success versus failure groupings of executive functioning used in this discriminant analysis were constructed using the five principle RAP indicators of psychopathology discussed in the preceding chapter. Before proceeding to the results of the second discriminant analysis, it is important to examine the comparison of the RAP-based grouping of executives with that of the author's original grouping, which is illustrated in Table 10.

TABLE 10

## RAP-BASED GROUPING VERSUS ORIGINAL GROUPING OF CASES

		ORIGINAL GROUPING	
		FAILURE (0)	SUCCESS (1)
<u>RAP-BASED GROUPING</u>	SUCCESS	10	42
	FAILURE	50	18
CHI-SQUARE	VALUE	DF	SIG.
PEARSON	34.7511	1	.0000

As Table 10 indicates, the number of hits of the RAP-based grouping was 92 out of 120, creating a hit rate of approximately 77 percent. This statistic was significant at less than the .0005 level. The information in Table 10 strongly suggests that the RAP is a significant discriminator between the levels of executive functioning, lending support for alternative hypothesis number two.

#### Results of Second Discriminant Analysis

Beginning again with the issue of the equality of variance-covariance, the information in Table 11 indicates that, as in the first discriminant function, the assumption

of homogeneity of covariance matrices across groups may not be made, thus urging caution in generalizing to other populations.

TABLE 11

## BOX'S M TEST OF EQUALITY: RAP-BASED GROUPING

GROUP LABEL	RANK	LOG DETERMINANT	
SUCCESS (0)	10	4.3382	
FAILURE (1)	10	0.1424	
POOLED WITHIN-GROUPS COVARIANCE MATRIX	10	5.5310	
BOX'S M	APPROXIMATE F	DEGREES OF FREEDOM	SIG.
269.92	4.0028	55,	7386.9 0.0000

Next to be reviewed are the results of the steps of the stepwise analysis, which are presented in Table 12.

The information in Table 12 indicates that in the RAP-based analysis, there were ten significant variables which were found to maximally discriminate between the groups of executives, all of which were significant at less than .0005 level.

TABLE 12

## SUMMARY TABLE: DISCRIMINANT ANALYSIS, RAP-BASED GROUPING

VARIABLE	V.IN.	WILKS' LAMBDA	SIG.	VAR. LABEL
BELLAK-K	1	.7561	.0000	OBJECT RELATIONS
BELLAK-M	2	.6867	.0000	INFLUENCE
BELLAK-A	3	.6161	.0000	REALITY TESTING
PITCH-R	4	.5568	.0000	PITCH RANGE
BELLAK-L	5	.5221	.0000	SUPEREGO/VALUES
BELLAK-H	6	.4979	.0000	STIMULUS BARRIER
BELLAK-J	7	.4730	.0000	PRAG.APP/MASTERY
BELLAK-F	8	.4572	.0000	DRIVES
WAIS-PA	9	.4430	.0000	WAIS-PIC. ARR.
BELLAK-G	10	.4321	.0000	DEFENSES

An examination of the final analysis of the stepwise procedure provides information regarding the status of the variables at that point in the analysis. Table 13 provides that information. As is indicated by the magnitudes of the F to remove, the Bellak variables; Influence, Stimulus Barrier, Reality Testing, and Values/Superego, are the variables which provide the greatest amount of unique contribution to discriminating between the groups. None of these variables are the same as those from the first discriminant analysis, suggesting that, at this point in the analysis, the two models used for grouping level of executive functioning were different enough to cause

TABLE 13

STATUS OF VARIABLES INCLUDED IN THE FINAL STEPWISE PROCEDURE  
OF DISCRIMINANT ANALYSIS OF RAP-BASED GROUPING

VARIABLE	TOLERANCE	F TO REMOVE	WILKS' LAMBDA
WAIS-PA	0.8691	1.7412	0.4448
BELLAK-A	0.5349	6.1142	0.4768
BELLAK-F	0.8039	2.8363	0.4528
BELLAK-G	0.5454	1.4996	0.4430
BELLAK-H	0.6803	6.5001	0.4796
BELLAK-J	0.5977	2.7548	0.4522
BELLAK-K	0.4332	1.0248	0.4395
BELLAK-L	0.5306	5.4589	0.4720
BELLAK-M	0.5149	17.117	0.5574
PITCH-R	0.8555	3.7108	0.4592

significant changes among the selection and relative importance of the variables serving as the discriminant functions.

Table 14 lists the variables which were not included in the final stepwise procedure and which were largely extraneous to the construction of the second discriminant model. Again, as in the first discriminant model, the majority of non-Bellak variables have dropped out of the analysis, indicating the relative significance of the discriminating power of the Bellak variables.

TABLE 14

VARIABLES NOT IN THE FINAL STEPWISE PROCEDURE OF  
DISCRIMINANT ANALYSIS OF RAP-BASED GROUPING

---

VARIABLE	TOLER.	MIN. TOLER.	F TO ENTER	WILKS' LAMBDA
WAIS-SIM	0.8668	0.4329	0.1666	0.4319
WAIS-COM	0.8042	0.4333	0.5141	0.4321
HALSTEAD	0.8734	0.4331	0.1419	0.4310
EMBFIG	0.8155	0.3877	0.3567	0.4294
BECK-DI	0.9078	0.4305	0.8740	0.4256
BECK-H	0.8736	0.4088	0.1262	0.4320
BELLAK-B	0.3952	0.3952	0.1821	0.4319
BELLAK-C	0.3455	0.3455	0.2412	0.4320
BELLAK-D	0.5933	0.4303	0.8922	0.4255
BELLAK-E	0.5752	0.4323	0.8610	0.4257
BELLAK-I	0.5568	0.4325	0.1780	0.4320
BELLAK-N	0.3586	0.3586	0.2415	0.4303

---

Table 15 provides information about the standardized coefficients. Data from this table suggest that the Bellak variables; Influence, Values/Superego, and Stimulus Barrier, contribute significantly to the discrimination between the groups. The data also indicate that Influence is most likely not a redundant variable, while Values/Superego and Stimulus Barrier likely have shared variance. Again, these variables are not the same as those from the first discriminant analysis.

TABLE 15

STANDARDIZED CANONICAL DISCRIMINANT FUNCTION COEFFICIENTS:  
RAP-BASED GROUPING

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VARIABLE	FUNC 1
WAIS-PA	-0.2410
BELLAK-A	0.5560
BELLAK-F	0.3170
BELLAK-G	0.2829
BELLAK-H	-0.5068
BELLAK-J	0.3625
BELLAK-K	0.2634
BELLAK-L	-0.5301
BELLAK-M	0.8768
PITCH-R	0.3490

---

Table 16 contains the information needed to examine the within groups structure matrix and the discriminant function-variable correlations. Comparing the information from Table 16 with that of Table 15 reveals that most of the within groups discriminant function-variable correlations are considerably smaller than the standardized coefficients, suggesting that, overall, the second discriminant function is considerably less related to variables within the groups as opposed to between them. Two notable exceptions, however, were the discriminant function-variable correlations for the Bellak variables Object Relations and Pragmatic Application/Mastery, which were both larger than



TABLE 16

## WITHIN-GROUP STRUCTURE MATRIX: RAP-BASED GROUPING

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VARIABLE	FUNC 1
BELLAK-K	0.4953
BELLAK-G	0.4926
BELLAK-A	0.4495
BELLAK-J	0.4406
BELLAK-C	0.3997
BELLAK-B	0.3519
BELLAK-M	0.3189
PITCH-R	0.2586
BELLAK-N	0.2466
WAIS-COM	0.2439
BELLAK-D	0.2398
BELLAK-E	0.2044
BELLAK-F	0.1887
BELLAK-I	0.1780
BELLAK-L	0.1642
BECK-DI	-0.1079
BECK-H	-0.0916
EMBFIG	0.0788
HALSTEAD	-0.0677
WAIS-SIM	0.0466
BELLAK-H	0.0462
WAIS-PA	-0.0059

---

their standardized coefficients. This suggests, conversely, that the contribution of these two variables may be more closely linked to within group differences as opposed to between group differences. Again, these findings are discrepant with the first discriminant analysis.

The significance of the second discriminant analysis will now be examined. Beginning with the information contained in Table 17, it is observed that the eigenvalue and the related canonical correlation are lower than in the first discriminant analysis. None the less, approximately 75 percent of the variance is shared variance between the groups in the second discriminant analysis. The canonical correlation squared ( $\eta^2$ ) is .5679, indicating that approximately 57 percent of the total variance may be attributed to differentiating between the groups.

TABLE 17

CANONICAL DISCRIMINANT FUNCTIONS:  
RAP-BASED GROUPING

FUNC.	EIGNV.	PERCENT OF VAR.	CUM. PERCENT	CAN. CORR.
1	1.3145	100.00	100.00	0.7536

AFTER FUNC.	WILK'S LAMBDA	CHI-SQUARED	D.F.	SIG.
0	0.4321	52.870	12	0.000

Table 17 also indicates that Wilk's lambda, which represents the total variance in the discriminant scores which is not accounted for by group differentiation, was 0.4321, indicating that approximately 43 percent of the difference between groups is not explained by the second discriminant function. This is considerably greater than the 26 percent figure from the first discriminant analysis. None the less, the transformed Wilk's lambda of the second discriminant analysis has a Chi-square value of 52.87, which is significant at less than the .0005 level.

An examination of the group centroids, presented in Table 18, reveals that, while significantly different, they are less so than in the first discriminant analysis.

TABLE 18

## GROUP CENTROIDS: RAP-BASED GROUPING

GROUP	FUNCTION
SUCCESS (0)	1.5645
FAILURE (1)	-0.8162

The percentage of cases correctly classified is now examined as a further check of the significance of the

second discriminant function. This information is presented in Table 19.

TABLE 19

DISCRIMINANT ANALYSIS CLASSIFICATION RESULTS:  
RAP-BASED GROUPING

ACTUAL GROUP	NO. OF CASES	PREDICTED GROUP MEMBERSHIP	
		SUCCESS (0)	FAILURE (1)
SUCCESS (0)	33	25 75.8%	8 24.2%
FAILURE (1)	57	7 12.3%	50 87.7%
PERCENT OF "GROUPED" CASES CORRECTLY CLASSIFIED: 83.33%			

In the second discriminant analysis, the overall percent of correctly classified cases is 83.33 percent. For the same reasons that were articulated in the discussion of the first discriminant analysis, this number may represent an inflation of the actual hit rate. The information in Table 19 suggests that, based upon the percentages of hits and misses, the model of functioning based upon RAP data was a somewhat more sensitive screen for indicators of pathology

as opposed to indicators of psychological health. This would also appear to be indicated by the data in Table 10, where it may be observed that the RAP-based grouping of executive functioning 'misclassified' 18 subjects, or 15 percent of the total population, as low functioning, as opposed to its 'misclassifying' only 10 subjects, or 8 percent of the total population, as high functioning, again, suggesting that the RAP-based grouping seemed more sensitively for psychopathology than did the original grouping.

This makes theoretical sense, since the RAP data used to achieve the grouping used in the second discriminant analysis consisted of predictors of psychopathology. Also, as will be discussed more thoroughly in the next chapter, the RAP is theoretically able to screen for underlying psychopathology which may or may not be manifested behaviorally, while actual behavior was the criterion used by the author to differentiate between levels of executive functioning.

### Addressing the Hypotheses

The hypotheses to be tested will now be addressed using data from the second discriminant analysis.

There is strong evidence to support alternative hypothesis number two, that data derived solely from the RAP is able to significantly differentiate between the high

versus the low functioning groups of executives, as evidenced by the tests of significance of the second discriminant analysis and by the high level of congruence between the original grouping and the RAP-based grouping of subjects.

There is partial support for alternative hypothesis number three, that object relations is a significant variable in differentiating between the high versus the low functioning groups of executives, since object relations, while identified as an underlying construct of the discriminant function, may be more closely linked to within group differences as opposed to between group differences.

There was support for alternative hypothesis number four, that reality testing is a significant variable in differentiating between the high versus the low functioning groups of executives, as the data indicates that reality testing contributes significantly to discriminating between the groups.

There was support for the alternative hypothesis number five, that a profile of the successful executive as defined by the current study will be essentially congruent with the profile of the successful leader as articulated in the body of leadership research. Again, this profile will be more thoroughly discussed in the next chapter.

### Analysis of RAP Categorical Data

As mentioned in the previous chapter, the majority of the data from the RAP is categorical in nature. Therefore, cross tabulations with Chi-square were used to determine which of these data were significant. What follows is a listing of the areas of personality functioning assessed by the RAP and which of those areas were found to be significantly different across both groupings of executive functioning, the author's original grouping and the RAP-based grouping.

#### RAP Categories of Personality Functioning

As mentioned in the previous chapter, the RAP utilizes speech errors, pitch range, voice quality, and hearing behavior to generate inferences regarding personality functioning. To do so, the RAP analyzes raw speech and hearing data and then uses the results to generate a series of number-coded statements regarding the specific area of personality functioning being assessed by that specific data. These coded statements, in turn, are used to produce a computer generated profile in narrative form for the corresponding areas of personality functioning.

The categories of personality functioning assessed by the RAP are as follow: Object Relations; Expression of Aggression and Competition; Superego; Identity; Reality Testing/Adaptability; Self Destructive Potential; Mood/The Ability to Express and Experience Emotion; Organicity;

Somatization; Learning Potential. The RAP also makes specific inferences regarding ego-defense structure, the handling and expression of drives, and the presence and severity of depression.

As part of the analysis of the data for the current study, the author performed cross tabulations with Chi-square on each number-coded item from the RAP in each area of personality functioning assessed by the instrument. The author performed this analysis using both the author's original grouping of executive functioning, as well as that of the RAP-based grouping. As mentioned in the preceding chapter, profiles of personality functioning were then generated from those comparisons which were significant at the .05 level. These profiles were then compared across levels of functioning, across the original and the RAP-based grouping, and with profiles from the body of leadership research.

Table 20 indicates in which of the areas of personality functioning there were significant differences between the high and low functioning groups, and with which grouping, the original or the RAP-based, these differences occurred.

As the information in the Table 20 indicates, there were significant findings in nine areas of personality functioning when the RAP-based grouping of level of functioning was used, as opposed to significant findings in six areas when the original grouping was used. Furthermore,



TABLE 20

AREAS OF RAP-BASED PERSONALITY FUNCTIONING WHERE SIGNIFICANT DIFFERENCES WERE OBTAINED: ORIGINAL AND RAP-BASED GROUPING

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(X=PRESENT) (O=ABSENT)

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AREA OF PERSONALITY FUNCTIONING	ORIGINAL GROUPING		RAP-BASED GROUPING	
	SIG. DIFF.	NO. OF STATE.	SIG. DIFF.	NO. OF STATE
OBJECT RELATIONS	X	6	X	13
EXPRES. OF AGG.	O	-	X	2
SUPEREGO	O	-	O	-
IDENTITY	X	1	X	1
REALITY TESTING	X	4	X	15
SELF DESTR. POTEN.	X	1	X	2
MOOD	O	-	X	3
ORGANICITY	O	-	X	1
SOMATIZATION	X	2	X	3
LEARNING POTENTIAL	X	1	X	1

---

the information in the table also indicates that the RAP-based grouping resulted in considerably more statements

being generated from the data than did the original grouping, that is, 41 as opposed to 15. This discrepancy might be accounted for if the majority of the psychopathology, and its RAP indicators, were relatively evenly distributed throughout the subject pool. If this indeed were the case, then the RAP-based grouping would theoretically be more sensitive to those indicators by merit of its being based upon those RAP predictors which most clearly infer the presence of psychopathology.

This potential explanation gains some support from the observation that, of the twenty speech articulation errors used by the RAP to identify psychopathology, only one, the substitution of B for V, was significant (at the .018 level using cross tabulation with Chi-square) in a comparison with the original grouping. (This articulation error, according to RAP theory, signifies an inability to adequately separate from one's family of origin, leading to difficulties in future object relations.) When the same twenty articulation errors were compared with the RAP-based grouping, however, the result, as mentioned above, was a greater incidence of significant findings as well as a larger number of generated statements, which again, suggests that the RAP-based grouping created a more sensitive screen for detecting RAP inferred psychopathology.

In the next chapter, the author will provide a detailed discussion of each success and each failure profile

for the areas of personality functioning where significant differences were obtained. This will be done for both the original and the RAP-based groupings.

#### Sound Localization Data

As mentioned in Chapter II, the hearing data used in the RAP is derived by presenting the subject with a series of six binaurally produced tones, played through headphones, and then asking the subject to identify the location of the tones. There were eight possible locations and combinations of locations which could be used to identify the origin of the tones. They are as follow: 1-both ears; 2-one ear; 3-outside the head, less than two feet; 4-outside the head, greater than two feet, no specific location; 5-outside the head, greater than two feet, specific location; 6-movement; 7-somatization response; 8-movement and somatization response.

As was discussed in Chapter II, each location response provides information regarding a variety of personality functions. Also, each of the six tones has a unique pitch frequency, which, according to RAP theory, taps into different aspects of drive expression, ego defense structure, and personality functioning. Guided by RAP theory, the author made several combinations of the eight sound localizations in order to maximize variance between groups and then performed cross tabulations with Chi-square.

The comparisons were made with the original grouping of level of functioning. The results are presented in Table 21 and Table 22.

The information in Table 21 indicates that, when the tone localizations were dichotomized as being either in the head or outside the head, the only significant tone was tone three, at the level of .0007. As the information in Table 22 indicates, when the tone localizations were dichotomized as coming from either both ears or from any of the other seven locations, there were two significant tones, tone three and tone six, which were significant at the .0017 and .0213 levels, respectively.

According to RAP theory, tone three, the most statistically significant of the six tones, is most representative of the synthesizing and integration of aggressive drives, while tone six is most representative of creativity and the highest levels of ego functioning. The sound localization data, therefore, would appear to be congruent with RAP theory, since it would be expected that successful executives would possess high capacities for synthesizing and integrating their aggressive energies, as well as being able to engage in highly creative thinking.

The analyses of tone localization, therefore, lend support for alternative hypothesis number two, that data derived from the RAP will significantly differentiate between the high and low functioning levels of executives,

TABLE 21

CROSS TABULATIONS WITH CHI-SQUARE BETWEEN ORIGINAL GROUPING  
AND SOUND LOCALIZATION GROUPING (1&2) AND (3 THROUGH 8)

	TONES					
	1	2	3	4	5	6
PEARSON	2.048	1.291	11.377	2.131	.681	3.755
D.F.	1	1	1	1	1	1
SIG.	1.524	.2557	.0007	.1443	.4089	.0526

TABLE 22

CROSS TABULATIONS WITH CHI-SQUARE BETWEEN ORIGINAL GROUPING  
AND SOUND LOCALIZATION GROUPING (1) AND (2 THROUGH 8)

	TONES					
	1	2	3	4	5	6
PEARSON	2.539	1.250	9.786	2.626	2.539	5.301
D.F.	1	1	1	1	1	1
SIG.	.1110	.2635	.0017	.1050	.1110	.0213

as well as partial support for alternative hypothesis number five, that the profile which characterizes the high functioning executive in the current study will be essentially congruent with the profile of the effective leader as articulated in the body of leadership research.

The next chapter will include a more detailed discussion of how the data from the current study addresses each of the hypotheses to be tested. The RAP profiles for the areas of personality functioning where significant results were obtained will also be presented. The author will then review those aspects of the current study which could potentially limit its generalizability to other populations. Finally, the author will make suggestions regarding future research efforts in this area.

## CHAPTER V

### DISCUSSION

#### Introduction

The author will now present a more detailed discussion of how the current study addresses the hypotheses to be tested. The author will also present and discuss the profiles of executive functioning which were generated from both the RAP and non-RAP data, and compare and contrast those profiles with those derived from the body of leadership research as reviewed in Chapter II. Also in this chapter is a discussion of the potentially limiting factors of the current study. This chapter will conclude with suggestions regarding future research in this area.

#### Discussion of the Hypotheses to be Tested

Alternative Hypothesis Number One: The Complete Test Battery Used by Morrison and Associates in Their Executive Consultations Will Significantly Differentiate Between the High Versus the Low Functioning Groups of Executives

The current study provides considerable support for alternative hypothesis number one, that the Morrison and Associates test battery significantly differentiates between

successful and unsuccessful executives. The criteria for success and failure, as defined for the current study, were presented in Chapter III. Using these criteria, the Morrison and Associates test battery appears able to significantly distinguish between those successful executives who: are perceived by colleagues and superiors as possessing strong leadership skills; are high performers within the organization; perceive themselves as being successful and are satisfied with their performance; and are able to engage in healthy relationships at work. The successful executives are in contrast to the unsuccessful executives who: are perceived by colleagues and superiors as having serious problems with their work performance; have problematic relationships at work; have a mental illness, including drug or alcohol abuse, which is seriously impairing their work performance; are at risk of being fired due to problems with work performance.

The support for alternative hypothesis number one is derived primarily from the tests of significance from the two discriminant analyses performed. These tests included the canonical correlation,  $\eta^2$ , Wilk's lambda, the Chi-square transformation of Wilk's lambda, the examination of group centroids and the number of cases correctly classified. All these statistics, as observed in the preceding chapter, accounted for a large percentage of variance between groups and were highly significant (at the



less than .0005 level). Furthermore, the number of cases correctly classified, 94.38 percent, is extremely high, even after taking into account the possible inflation of this number for reasons which will be discussed later in this chapter.

The author has pointed out that both discriminant analyses provided support for alternative hypothesis number one, even though the model for the second analysis was built upon RAP-based grouping of levels of executive functioning. This is due to the discriminants in the second analysis being the same measures from the Morrison and Associates test battery which were used in the first analysis. Furthermore, despite the grouping of level of functioning being slightly different in the second analysis, the battery was none the less able to significantly discriminate between the groups.

The above results strongly suggest that the Morrison and Associates test battery is a highly useful tool for identifying those individuals who are likely to be superior performers in the workplace, as well as those who are likely to become at risk for derailment. As such, these results provide additional evidence that leadership is able to be both measured and predicted, and that organizations may reduce their incidence of executive failure by incorporating such a testing procedure into their management selection process.

Alternative Hypothesis Number Two: Data Derived Solely from  
the RAP Will Significantly Differentiate Between the High  
Versus the Low Functioning Groups of Executives

It was established through the results of the first discriminant analysis that the original grouping of the levels of executive functioning appeared to be quite accurate, leading to highly significant results. Another check on the accuracy of the original grouping of subjects was the high interrater reliability coefficient, 100 percent, with complete agreement between the author and all three outside raters.

It follows then, that the RAP-based grouping, which correctly classified 92 out of 120 subjects for a hit rate of approximately 77 percent, should be considered a reliable method of differentiating between levels of executive functioning. Furthermore, as mentioned above, all the tests of significance from the second discriminant analysis were significant at less than the .0005 level, providing further evidence that the RAP-based grouping of executive functioning was significantly accurate when compared to the original grouping. Finally, it should again be mentioned that data from the RAP was utilized in the completion of the Bellak Check List ratings. It is reasonable to suggest, therefore, that RAP data contributed to the Bellak measures' ability to discriminate between levels of executive functioning. These considerations lend support to

alternative hypothesis number two, that the RAP, by itself, is able to significantly differentiate between the high versus the low functioning groups of executives.

Further support for alternative hypothesis number two comes from the RAP sound localization data. As mentioned in Chapter IV, two tones were significant in the analysis with the original grouping of executives, tone three and tone six. Their highest levels of significance were .0007 for tone three, and .0213 for tone six.

According to RAP theory, tones one and two, the low frequency tones, tap into and represent the aggressive and sexual drives. Tones three and four, the mid-frequency tones, represent the integration and synthesizing of the aggressive and sexual drives in the service of the ego. Tones five and six, the high frequency tones, primarily reflect higher ego functioning, including creativity (Rousey, 1995).

It is particularly interesting then, that tones three and six were the most significant of the six tones, and that tone three was the most significant. This result appears to be congruent with RAP theory, as it would be expected that high functioning executives would be able to successfully integrate and synthesize their aggressive drives in the service of the ego and that the most successful executives would be able to experience more sophisticated levels of ego functioning, as characterized by high levels of creativity.

This notion finds support in the literature which has characterized high functioning leaders and managers as being able to successfully negotiate and integrate their aggressive drives (Zaleznik & Kets de Vries, 1975; Kernberg, 1979) and as being able to engage in high levels of creative thinking (Bennis & Nanus, 1985; Levinson, 1979)

Finally, substantial support for alternative hypothesis number two may be derived from the RAP-based profiles of executive functioning, which will be presented later in this chapter.

It should be noted that despite the evidence which suggests that the RAP is a valid and reliable discriminator of levels of executive functioning, the RAP did not, by itself, differentiate between levels of executive functioning as accurately as did the author's method of reviewing the subjects' work and family histories. This would not appear, however, to diminish the importance of the RAP's contribution to the current study or to future research in this area.

One reason is that the RAP, in demonstrating a significant ability to discriminate between the groups of executives, added to the incremental validity of the Morrison and Associates test battery. It should also be remembered that RAP data was incorporated into the Bellak measures used in both discriminant analyses. It is reasonable to assume, therefore, that RAP data contributed

to the ability of the Morrison and Associates test battery to differentiate between levels of executive functioning, as was demonstrated in both discriminant analyses. Also, since the RAP is based upon objective speech and sound hearing behavior, it avoids the potential confounding variables associated with rater subjectivity. The RAP also made unique contributions to delineating and describing the areas of personality functioning which were indicated as being representative of successful versus unsuccessful executives. These contributions are reflected in the RAP personality profiles which are presented below.

Finally, it is important to bear in mind that the original grouping of executive functioning was based upon work and family histories, that is, the executives' actual behavior at work and at home. The RAP's 77 percent agreement with the original grouping, therefore, represents the amount of congruence between the RAP predictors of psychopathology and that behavior of the executives which indicated problems in the work place. It is quite possible that some of the executives included in the study had learned to effectively compensate for or mask their psychological flaws, and were thus able to avoid those behaviors which would indicate the presence of underlying psychopathology. This notion gains support from studies of executive derailment, which suggest that the psychological flaws of executives and managers may go undetected until an

event such as a promotion, new assignment, or transfer exposes them (Lombardo & McCauley, 1988). The RAP, however, would theoretically be able to identify underlying psychopathology even when it is not manifested behaviorally and thus remains undetected. As such, it would appear to be a highly useful tool in predicting potential executive derailment, particularly as executives encounter transitional experiences which expose their vulnerabilities.

Viewed in this light, the RAP may be a more accurate indicator of psychopathology within the current sample than the data describing its ability to discriminate between levels of executive functioning might suggest. The RAP, therefore, might be more properly viewed as an indicator of underlying psychopathology, which, depending upon environmental factors, may or may not become manifest through outward behaviors.

Alternative Hypothesis Number Three: Object Relations Will  
Prove to be a Significant Variable in Differentiating  
Between the High Versus the Low Functioning  
Groups of Executives

The term object relations may be broadly construed as the relationships individuals have with real or imagined others, as well as their relationships between their internal and external object worlds (Greenberg & Mitchell, 1983). It is this author's belief, a belief echoed

throughout much of the writings about leadership (e.g., Bennis & Nanus, 1985; De Pree, 1989; Yammarino & Bass, 1990), that the ability to foster and maintain healthy interpersonal relationships is critical for the successful leader or executive. This assertion, which is tested in alternative hypothesis number three, receives support from the current study.

Partial support for the importance of object relations in successful executive functioning is derived from the results of both discriminant analyses, where object relations was found to be a key underlying construct in discriminating between the successful and unsuccessful groups of executives. However, the statistical support for the role object relations plays in differentiating between the groups is somewhat attenuated since the measure for object relations, Bellak-K, was possibly linked more closely to within group differences as opposed to between group differences, as was indicated in the second discriminant analysis. The second discriminant analysis also indicates that Bellak-K has some degree of shared variability with Bellak-G, which is described below.

Bellak-G is a measure of the psychological defenses which protect the individual from anxiety arousing stimuli or other dysphoric unconscious or preconscious psychic material (Bellak, 1993). It would appear reasonable to assume that psychological defenses would be closely linked

to the ability to foster and maintain healthy relationships, and that an overly rigid defensive structure would have a negative effect upon ones' ability to do so. Indeed, the literature provides considerable support for the notion that successful leaders and managers possess flexible and adaptable ego defenses which assist them in developing and maintaining healthy relationships with others (e.g., Hogan & Hogan, 1991; Kaplan, 1993; Kernberg, 1979; Levinson, 1970; Zaleznik, 1966). It is understandable, then, why these two measures, Bellak-K and Bellak-G, might have shared variability across the groups of executive functioning, thus making it more difficult to separate their relative contributions to differentiating between the groups of executives.

As mentioned in Chapter IV, the one articulation error which was significant (at the .018 level) in a comparison across groups within the original grouping, was the substitution of B for V. According to RAP theory, this error infers difficulty in separating from ones' family of origin, which may lead to difficulty in object relations outside of the family (Rousey, 1995). In the case of the executive, this problem area may be manifested as difficulty identifying with ones' business or corporate family, which may possibly result in the executive having difficulty functioning as a team player, a frequently cited cause of executive derailment (Lombardo & McCauley, 1988). This



finding would therefore appear to provide additional support for the importance of object relations in differentiating between levels of executive functioning.

Additional support for alternative hypothesis number three may be derived from the RAP and non-RAP profiles of personality functioning, which will be reviewed later in this chapter.

Alternative Hypothesis Number Four: Reality Testing Will  
Prove to be a Significant Variable in Differentiating  
Between the High versus the Low Functioning  
Groups of Executives

There is considerable support in the body of leadership research for the idea that reality testing is an important attribute for successful leaders and executives (e.g., Hay, 1990; Hendrick, 1990; Lombardo, Ruderman & McCauley, 1988). It was also related to the author by David Deacon, a consultant at Morrison and Associates, that he and his fellow consultants believed reality testing to be one of the most critical factors in differentiating between the successful versus the unsuccessful executive, based upon their years of experience performing executive consultations (D. Deacon, personal communication, May 5, 1994). This author therefore wished to single out reality testing as a potential factor in differentiating between successful and unsuccessful executives in the current study.

Several measures from the Morrison and Associates test battery purport to tap into the construct of reality testing. They are; Bellak-A from the Bellak check list, which measures inner and outer reality testing, and Bellak-B from the Bellak check list, which assesses disturbances in ones' sense of self as well as the sense of reality or unreality of the world (Bellak, 1993). It has also been suggested that the Comprehension Subtest from the WAIS is a measure of reality testing, although it is more widely viewed as a measure of judgment and common sense, or practical knowledge (Ogdon, 1977).

Data from the first discriminant analysis provided only partial support for alternative hypothesis number four. The WAIS Comprehension subtest appeared to contribute only minimally to differentiating between the groups of executives and the Bellak A and B variables appeared to be only minor underlying constructs of the discriminant function.

Data from the second discriminant analysis provided stronger support for alternative hypothesis number four, as Bellak-A made a unique and significant contribution to discriminating between the levels of executive functioning.

In addition to data from the discriminant analyses, the RAP-based profiles, which will be presented later in this chapter, provide substantial evidence that good reality testing was characteristic of the executives in the high

functioning group, while impaired reality testing was more characteristic of the executives in the low functioning group.

Alternative Hypothesis Number Five: The Profile Which Characterizes the High Functioning Executive in the Current Study Will be Essentially Congruent with the Profile of the Effective Leader as Articulated in the Body of Leadership Research

Alternative hypothesis number five, that the profile which characterizes the successful executive in the current study will closely resemble the profile of the effective leader as articulated in the body of leadership research, will first be examined by using the data from the two discriminant analyses described in Chapter IV to construct a profile of the successful executive as defined in the current study. This profile will then be contrasted with the profile of the successful executive as defined in the body of leadership research. The profile derived from the body of research will be presented first, followed by that of the current study.

#### Cognitive-based Factors

The cognitive factors which the body of research suggests are characteristic of the successful executive are:

superior intelligence (Ghiselli, 1959; McDaniel, 1991); practical, common sense intelligence, or 'street smarts' (Wagner & Sternberg, 1990); and high levels of cognitive complexity and cognitive flexibility (e.g., Hay, 1990; Hendrick, 1990; Jaques & Clement, 1991).

The results of the current study suggest that the high functioning executive is likely to possess the cognitive attributes of: good practical knowledge and common sense judgment; good reality testing; and good planning ability as related to social intelligence.

The areas of congruence in the cognitive functioning of successful executives identified by past research and those of the current study include, an overall superior level of intelligence, and particularly, a high degree of practical knowledge or common sense intelligence. These findings provide some support for alternative hypothesis number five.

It was not possible to search for other areas of congruence in the cognitive functioning between these two groups due to the Morrison and Associates test battery including only three (out of eleven) WAIS subtests. There was limited information available, therefore, about the executives' patterns and levels of intellectual functioning. It may be noted, however, that the high functioning group of executives did slightly better than the low functioning group on all three WAIS subtests administered, but not significantly better. The estimated Full Scale I.Q. for the

high functioning group, based upon the median age of 43, was 128, while the estimated Full Scale I.Q. of the low functioning group was 125, placing the executives of both groups within the superior range of intellectual functioning. This finding is congruent with prior research which suggests that overall intelligence is not a reliable predictor of executive performance at upper levels of management, since most top-level executives possess a superior level of intelligence (e.g., Baehr & Orban, 1989). Thus, while this information provides support for alternative hypothesis number five, it does not assist in differentiating between the levels of executive functioning, as both groups demonstrated superior intellectual abilities.

#### Personality-based Factors

The more important personality-based factors characteristic of the high functioning executive as articulated in the body of research include: a high energy level and a strong work ethic (Bray, 1992; Hogan & Hogan, 1991); strong competitive drives (Kotter, 1990; Sobchik & Lobanova, 1989) which are balanced by the ability to function as a team player (Piotrowski & Armstrong, 1989); strong achievement needs balanced by strong and flexible ego functioning (Kaplan, 1993; Piotrowski & Armstrong, 1989); the ability to engage in healthy interpersonal relationships (Bennis & Nanus, 1985; Yammarino & Bass, 1990); the ability

to empathize and exhibit compassion (Bass, 1985; De Pree, 1989, Yammarino & Bass, 1990); accurate reality testing as related to ego functioning (Hay, 1990); and a willingness and ability to examine oneself introspectively so as to gain insight into ones' motivations and behavior and thus to be able to learn from ones' failures and mistakes (Bass, 1981; Bennis & Nanus, 1985; Clover, 1990).

The results of the current study suggest that the high functioning executive is likely to possess the following personality characteristics: the ability to think logically, without undue interference from primary process material (as related to ego functioning); the desire to achieve mastery over ones' environment; the belief that one is competent enough to achieve ones' personal goals; the ability to negotiate unconscious drives and impulses in a healthy and adaptive manner; the ability to freely experience and express emotions; the ability to deal with ones' own psychological and emotional conflicts; the ability to be creative and expressive; the ability to experience healthy and stable interpersonal relationships; a high level of superego functioning which results in high personal standards; accurate inner and outer reality testing (as related to ego functioning); and a high degree of sensitivity to environmental stimuli.

There would appear to be considerable areas of congruence between the personality-based characteristics of

these two profiles, lending further support for alternative hypothesis number five. Broadly speaking, high functioning executives, both as defined by the body of research and the current study, possess a constellation of personality factors which allow them to: effectively negotiate their own emotional and psychological landscapes; relate compassionately and empathically with others; engage in healthy and stable relationships; and achieve a high level of mastery over their environmental challenges and demands.

The results of the current study also underscore the importance of the role which personality variables play in determining leadership potential, and as such, provide additional support for the notion that the study of personality variables is an important and integral part of leadership research.

It may be suggested then, that the high functioning executives in the current study appear to possess both the cognitive and personality attributes which would enable them to engage in behaviors which the literature suggests are most representative of successful leaders and managers. These include; being motivated to attain high levels of mastery and achievement (Clark & Clark, 1990; Kaplan, 1993), exhibiting high energy levels and working extremely hard at their jobs (Bray, 1982), being sensitive to and satisfying the needs of subordinates (Hollander & Offerman, 1990), empowering and encouraging subordinates to achieve their

ultimate potential (Bennis & Nanus, 1985; De Pree, 1989), and engaging in an active and on-going process of introspection so as to gain insight into their own behavior and to learn more effectively from their mistakes (Bass, 1990; McCall, Lombardo & Morrison, 1988).

The above comparison of the cognitive and personality attributes of the current study's population with those of the leaders and managers in past studies reveals a significant degree of similarity between the two. This would appear to place the current study in a line of continuity with prior leadership research.

The author now turns to the RAP-based profiles of personality functioning.

#### RAP-based Profiles of Executive Functioning

What follows is a detailed description of the RAP-based profiles of personality functioning. As explained in Chapter IV, these profiles are derived from the raw speech and sound hearing data which are used to generate coded statements corresponding to specific inferences about various areas of personality functioning. The author then determined which of these statements were statistically significant for both sets of groupings, the author's and the RAP-based grouping.

What is presented below are the statements which were generated for both the success and the failure groups, in



each area of personality functioning, for both sets of groupings. The failure profiles reflect the statements which were generated from the low functioning groups of executives, while the success statements were generated from the high functioning groups of executives. The statements are followed by commentary from the author. It should be noted that the RAP indicates psychological health primarily through the absence of indicators of psychopathology, which is the reason there are so few specific statements in the success profiles listed below. The absence of failure statements in a specific area of functioning, therefore, infers psychological strengths.

#### RAP-A: Object Relations

##### Original Grouping

##### Failure profile

Statement one. These individuals have difficulty separating from their families of origin. This could result in their having difficulty becoming adequately attached to their corporate families, unless their respective organizations actively foster strong symbiotic ties.

Statement two. These individuals may act out impulsively when they are required to synthesize and integrate ideas, values, emotions, etc. A high level of environmental structure may reduce, but will not eliminate such acting out behavior. They are also at risk of turning

to addictive substances or food to provide themselves with a sense of order when integrating, organizing or synthesizing.

Statement three. These individuals experience problems with listening and paying attention to others. This problem may be either a reactive or a chronic phenomenon.

Statement four. These individuals may defend against passive tendencies by exhibiting overly assertive and competitive behavior.

Statement five. These individuals have difficulty with relationships because others feel that they do not pay attention to them. This problem is exacerbated when creativity or sexuality is involved.

Statement six. These individuals experience difficulty having relationships with more than one person at a time unless the relationships occur within some type of 'familial' context.

#### RAP-based Grouping

##### Failure profile

(Statements one, two, three, five and six from the original grouping failure profile are shared by the RAP-based grouping failure profile. The statements listed below are unique to the RAP-based failure profile.)

Statement one. These individuals may become disruptive and/or hyperactive in school, social, home or work settings due to experiencing intrusive thoughts or impulses.

Statement two. These individuals get along best with others when they are in highly structured environments where all the rules are known.

Statement three. These individuals may experience difficulties in their relationships due to their frequent somatic complaints, which may be difficult for others to tolerate.

Statement four. When these individuals are confronted with their own or others' aggression, they may experience bizarre perceptions and ideas which impair their ability to relate to others.

Statement five. When these individuals attempt to integrate and synthesize ideas, values, emotions, etc., they may experience bizarre perceptions and ideas which impair their ability to relate to others.

Statement six. When these individuals are confronted with issues involving sexuality or creativity, they may experience bizarre perceptions and ideas which impair their ability to relate to others.

Statement seven. These individuals may experience severe emotional inhibition which impairs their ability to relate to others.

#### Commentary

The above statements suggest that the executives in the failure group, across both groupings, experience a

significantly wider range of difficulties with their interpersonal relationships compared to the executives in the success groups, as evidenced by the nineteen combined failure statements from both groupings.

It is interesting to note that statements from both groupings infer that difficulties with object relations may arise due to problems with synthesizing and integrating ideas, values and emotion. This is congruent with RAP theory as well as those results of the current study generated from the analysis of sound localization data. As was mentioned earlier, tone three was the most significant of the six tones in the sound localization test, and RAP theory suggests that tone three primarily represents the ability to synthesize and integrate aggressive drives (Rousey, 1995).

In a similar vein, failure statements from the RAP grouping infer that difficulties with object relations may also occur due to problems with reality testing. This is also congruent with RAP theory and with data generated from the current study's second discriminant analysis, since in the RAP-based analysis, reality testing was determined to be a significant underlying construct in discriminating between levels of functioning.

It is not surprising that the RAP-generated profiles would infer that difficulties with object relations would be associated with other psychological difficulties as well,

such as with synthesis, integration, and reality testing. It is this author's experience that deficits in any number of areas of psychological functioning create a strong potential to negatively impact one's ability to relate to others in a meaningful way. This author further suggests that such negative patterns of relating to others tend to exacerbate the difficulties experienced in those areas of psychological functioning which may already be problematic for the individual. This then creates a negative pattern, where the problematic areas responsible for creating difficulties in object relations are in turn made worse by the decrease in the quality of interpersonal relationships. This pattern appears to born out in the RAP-based profiles of functioning, as evidenced by the high degree of interrelatedness of the failure statements across the areas of personality functioning.

The above results provide support for alternative hypothesis number two, that RAP-generated data, by itself, will significantly differentiate between levels of executive functioning, as well as for alternative hypothesis number three, that object relations will prove to be a significant variable in differentiating between levels of executive functioning. The above results also provide limited support for alternative hypothesis number four, that reality testing will prove to be a significant variable in differentiating between levels of functioning.

It is should also be noted that the original grouping generated six statements compared to the RAP-based grouping of thirteen, suggesting that the RAP-based grouping was a more sensitive screen for RAP indicators of psychopathology compared to the original grouping.

RAP-B: The Ability to Express Aggressive and Competitive  
Drives (Oedipal Issues)

Original Grouping

(No significant findings.)

RAP-based Grouping

Failure profile

Statement one. These individuals experience high levels of competitiveness and aggression which are deeply rooted within their character structures. They exhibit a pattern of difficulty differentiating right from wrong which tends to distort their perceptions in many areas of their lives. These individuals have little insight into their behavior and thus have poor prognoses in terms of changing their potentially destructive behavior patterns.

Success profile

Statement one. These individuals also experience high levels of competitiveness and aggression which are rooted within their character structures, but are able to modulate and express such drives in socially acceptable and

appropriate ways. These individuals may be at mild risk for developing problems in the area of relationships, however, and may have a history of more than one marriage.

#### Commentary

These two statements, both from the RAP-based grouping, again suggest that the RAP is a more sensitive screen for underlying pathology than was the original grouping. They also provide support for the validity and internal consistency of the RAP, since the statements are accurately matched with the appropriate levels of functioning. In addition, the statements provide support for alternative hypothesis number two, that RAP data will significantly differentiate between levels of functioning.

These two statements also suggest that difficulties negotiating ones' aggressive drives may lead to difficulties with object relations, reality testing, and superego functioning, which infers that these areas of personality functioning are interrelated.

#### RAP-C: Superego Functioning

##### Original Grouping

(No significant findings.)

##### RAP-based Grouping

(No significant findings.)

## Commentary

The absence of significant findings in either grouping suggests a variety of interpretations. First, it suggests that superego functioning, as measured by the RAP, was not a significant discriminator between the groups of executives. This is incongruent, however, with data from the RAP-based discriminant analysis, where Bellak-L (Values/Superego) was determined to be a significant underlying construct in discriminating between the levels of functioning. This discrepancy might possibly be explained by the Bellak-L measure consisting of data derived from a variety of sources, only one of which was the RAP. The above profile, however, was derived solely from RAP-based data.

There is considerable support in the literature for the notion that healthy superego functioning is characteristic of successful leaders and managers, and that an overly critical superego may lead to excessive guilt and desensitization to the needs of others (e.g., Levinson, 1970; Zaleznik & Kets de Vries, 1975). The findings of the current study, however, suggest that both successful and unsuccessful executives, in both groupings, exhibit healthy superego functioning, since the absence of RAP statements indicates psychological health. The RAP profile of successful executives' superego functioning is therefore congruent with previous research.



This is not the case, however, for the RAP profile describing the superego functioning of unsuccessful executives, since the RAP described them as possessing healthy superego functioning. This finding is incongruent with both the previous research and, as explained above, the results of the current study's RAP-based discriminant analysis. This suggests the possibility that the RAP was unable to accurately measure superego functioning in the sample population. It might also, of course, indicate that there were no significant differences between the groups in terms of superego functioning. This would, however, contradict the findings of the RAP-based discriminant analysis.

It is interesting to note, as was mentioned in the commentary regarding RAP-B, that difficulty negotiating aggressive drives was related to difficulties in differentiating right from wrong, a component of superego functioning. It would have been reasonable to expect, given the apparent interrelatedness of these two areas of personality functioning, that the RAP would have generated at least one failure statement related to superego functioning for the unsuccessful group of executives. Its failure to do so would appear to provide additional evidence that the RAP may have been unable to accurately measure superego functioning in the sample population.

Finally, there is an additional explanation for the above results which should be addressed. It is possible that some of the executives who do, in fact, possess overly harsh superegos, may also utilize compensatory mechanisms which enable them to neutralize or mask the effects of their superego functioning. If this were indeed the case, the RAP might be expected to be able to identify which subjects exhibit overly harsh superegos, as well as which of them utilize compensatory mechanisms, and which mechanisms were used. Additional research would be required to provide support for this explanation, however, as it lies outside the purview of the current study.

#### RAP-D: Identity/Self Awareness

##### Original Grouping

##### Failure profile

Statement one. These individuals tend to be easily influenced by their external environments, which could lead to them having difficulties achieving a solid and integrated sense of self.

##### RAP-based Grouping

##### Failure profile

Statement one. These individuals tend to have poor reality testing, which may make their personalities appear more disorganized than they in fact are.

## Commentary

The above statements provide additional support for alternative hypothesis number two, that RAP data will be able to significantly differentiate between the levels of executive functioning.

These statements also supply additional evidence that the RAP areas of personality functioning tend to be highly interrelated, as executives who have difficulty with identity and self-awareness are also inferred to have substantial difficulties with reality testing. These executives may experience problems in reality testing, in part, due to their difficulties in maintaining adequate differentiation between themselves and their environments, leading to possible confusion and breakdown of interpersonal boundaries. Such problems with boundary maintenance and self-identity may not only give rise to difficulties with reality testing in the first place, but may be exacerbated by them as well.

### RAP-E: Reality Testing

#### Original Grouping

#### Failure profile

Statement one. These individuals tend to have impaired reality testing due to difficulties dealing with aggression or its derivatives.

Statement two. These individuals may suppress or deny environmental demands placed upon them, particularly when those demands involve issues related to sexuality or creativity.

Statement three. When these individuals attempt to integrate or synthesize ideas, values, emotions, etc., they tend to exhibit highly concrete, black or white thinking.

#### Success profile

Statement one. When these individuals synthesize and integrate ideas, values, emotions, etc., their reality testing remains unimpaired.

#### RAP-based Grouping

##### Failure profile

(Statement number two and three from the original grouping failure profile are shared by the RAP-based grouping failure profile. The statements listed below are unique to the RAP-based failure profile.)

Statement one. These individuals may experience impaired reality testing when attempting to synthesize and integrate ideas, values, emotions, etc.

Statement two. These individuals may experience impaired reality testing when dealing with sexuality and creativity.

Statement three. These individuals may fuse their behavior with that of others when dealing with issues requiring synthesis and integration of ideas, values, emotions, etc.

Statement four. These individuals may utilize the ego defense of projection when dealing with aggression and anger.

Statement five. When these individuals are confronted with their own aggression, they may require high levels of environmental structure to help them organize their sense of reality.

Statement six. When these individuals are required to synthesize and integrate ideas, values, emotions, etc., they may require high levels of environmental structure to help them organize their sense of reality.

Statement seven. When these individuals are confronted with aggressive or competitive situations, they may experience serious disorganization in their thinking and/or reality testing.

### Success profile

(Statement one from the original grouping success profile is shared by the RAP-based success profile. The statements listed below are unique to the RAP-based success profile.)

Statement one. These individuals are able to deal with aggression and its derivatives without any impairment in their reality testing.

Statement two. These individuals are able to deal with issues related to creativity and sexuality without any impairment in their reality testing.

Statement three. These individuals are able to differentiate their own internal thoughts and fantasies from those of others.

Statement four. These individuals are able to maintain a capacity for fantasy and magical thinking without any loss of reality testing.

#### Commentary

The above statements provide additional support for alternative hypothesis number two, that the RAP, by itself, will be able to discriminate between levels of functioning, as well as for alternative hypothesis number four, that reality testing will prove to be a significant variable in differentiating between levels of functioning. The disparity between the number of statements generated from the original grouping, four, versus that of the RAP-based grouping, fifteen, again suggests that the latter is a more sensitive screen for RAP indicators of psychopathology.

The above statements also provide additional evidence for the interrelatedness of these areas of personality

functioning. Statements from both groupings infer that executives who experience difficulties with reality testing may also experience difficulties in the areas of dealing with aggression, synthesizing and integrating ideas, values and emotions, and maintaining adequate ego boundaries. Conversely, statements from the success profiles infer that these executives are able to adequately integrate and synthesize ideas, values and emotions, deal with aggressive drives and maintain high levels of creativity, with no disturbances in their reality testing or ego boundaries.

The high number of RAP statements generated from this category of functioning (nineteen) suggests that reality testing, (along with object relations, which also generated nineteen statements) is a particularly important discriminator between levels of executive functioning. This is congruent with the body of research, which suggests that accurate perception and good reality testing are crucial attributes for successful leaders and managers (e.g., Hay, 1990; Lombardo, Ruderman & McCauley, 1988). It also provides validation for the assumption of the Morrison and Associates staff that good reality testing is one of the most critical indicators of executive potential (D. Deacon, personal communication, May 5, 1994).

## RAP-F: Self-Destructive Potential

Original Grouping

## Failure profile

Statement one. These individuals exhibit behavior which is self-destructive in a psychological or emotional sense.

RAP-based Grouping

## Failure profile

Statement one. These individuals are at risk for suicide or other serious self-destructive actions.

## Success profile

Statement one. These individuals are at little risk for suicide.

## Commentary

The above statements appear to illustrate both the RAP's ability to discriminate between levels of functioning, as well as the RAP-based grouping's greater sensitivity to RAP indicators of psychopathology compared to that of the original grouping. The statements also suggest that executives in the failure groups are at risk of engaging in behaviors which may be psychologically, emotionally and physically harmful to them.



RAP-G: Mood/The Ability to Express and Experience Emotions

Original Grouping

(No significant findings.)

RAP-based Grouping

Failure profile

Statement one. These individuals experience severe emotional inhibition and are able to experience only the most blatant emotional responses in themselves or others.

Statement two. These individuals experience slowed thinking as a result of their severe emotional inhibition.

Success profile

Statement one. These individuals are unlikely to be perceived by others as being depressed.

Commentary

These statements provide additional support for alternative hypothesis number two, that data from the RAP will significantly differentiate between levels of executive functioning. They also suggest, again, that the RAP-based grouping was a more sensitive screen for psychopathology than was the original grouping. These statements also suggest that executives who have difficulty experiencing and expressing emotions are also likely to have problems with object relations and with maintaining cognitive flexibility. This again provides evidence for the interrelatedness of

these areas of personality functioning, as well as the interface between personality and cognition.

Of particular note is the interrelatedness between the ability to experience and express emotions and the ability to experience healthy relationships, as indicated in the above profiles. This finding makes sense, psychologically speaking, as the ability to carry on healthy interpersonal relationships requires the ability to both express and receive a wide range of emotionally laden communication.

#### RAP-H: Organicity

##### Original Grouping

(No significant findings.)

##### RAP-based Grouping

###### Failure profile

STATEMENT ONE: These individuals exhibit a borderline organization which leads them to acting impulsively, particularly when synthesizing and integrating ideas, values, emotions, etc.

###### Commentary

This statement suggests that the RAP is able to differentiate between the levels of executive functioning in the area of organicity, providing support for alternative hypothesis number two.

The above statement implicates organicity with a borderline personality organization since, according to RAP theory, a borderline personality organization may be the result of a mild brain dysfunction which impedes the process of object internalization necessary for the development of higher levels of ego functioning (Rousey, 1995). This may in turn give rise to the impulsive acting out and emotional lability which characterizes those individuals with a borderline level of personality functioning.

#### RAP-I: Somatic Complaints

##### Original Grouping

##### Failure profile

Statement one. These individuals experience somatic complaints, but tend to deny that they do so.

Statement two. These individuals experience somatic complaints, particularly when synthesizing and integrating ideas, values, emotions, etc.

##### RAP-based Grouping

##### Failure profile

(Statement number one from the original grouping failure profile is shared by the RAP-based failure profile. The following statement is unique to the RAP-based failure profile.)

Statement one. These individuals experience somatic complaints which may be similar to those of their parents'.

#### Success profile

Statement one. These individuals have little potential for psychosomatic problems.

#### Commentary

The above statements provide additional support for alternative hypothesis number two, that the RAP is able to significantly differentiate between levels of executive functioning.

They also suggest that executives who manifest their psychological and emotional problems through somatic symptoms are also more likely to rely heavily upon the relatively less adaptive ego defense of denial and to experience difficulties with integration and synthesizing ideas, values and emotions. According to RAP theory, these individuals use their psychosomatic symptoms to bind their high levels of anxiety (Rousey, 1995).

#### RAP-J: Learning Potential

##### Original Grouping

##### Failure profile

Statement one. These individuals may be experiencing impaired learning capacity due to problems in reality testing and/or due to the presence of a thought disorder.

### RAP-based Grouping

#### Failure profile

(Shares statement one from the original grouping failure profile. No additional statements.)

#### Commentary

The above statement appears to suggest that good reality testing is an important prerequisite for maximizing learning potential, providing additional support for alternative hypothesis number four, that reality testing will prove to be a significant variable in differentiating between levels of functioning. It also provides additional support for alternative hypothesis number two, that the RAP will significantly differentiate between the groups of executives.

This statement underscores the interrelatedness between these areas of personality functioning, as well as the interdependency of personality and cognitive-based factors. It also provides additional support for the assumption that good reality testing is a critical factor in differentiating between levels of executive functioning.

Summary of Data from RAP-based Profiles of  
Personality Functioning

The information presented above appears to provide considerable support for alternative hypothesis number two, that RAP-generated data, by itself, will significantly differentiate between levels of executive functioning, as well as for alternative hypotheses three and four, which are, respectively, that object relations and reality testing will prove to be significant variables in differentiating between levels of executive functioning.

The RAP profiles also suggest strong support for alternative hypothesis number five, that the profile which characterizes the high functioning executive will be essentially congruent with the profile of the effective leader as articulated in the body of leadership research. As was demonstrated repeatedly across the RAP areas of personality functioning, successful executives were characterized by: being able to develop and maintain healthy interpersonal relationships; being able to successfully negotiate their aggressive impulses; being able to successfully integrate and synthesize their ideas, feelings and emotions; as having flexible and adaptive ego defenses; as possessing adequate and flexible ego boundaries; as having a strong sense of identity; and as possessing good reality testing. This constellation of personality attributes is highly congruent with the personality

variables identified by prior research as being characteristic of successful leaders and managers (e.g., Bray, 1992; Hogan & Hogan, 1991; Kaplan, 1993; Yamarino & Bass, 1990).

The above RAP-generated statements also suggest that there is a considerable degree of interrelatedness between the RAP areas of personality functioning, and that deficits in one area of functioning may lead to deficits in other areas.

Similarly, the statements suggest that personality and cognition are highly interdependent, and that difficulties in one area may potentially give rise to difficulties in the other.

It is also important to note that the RAP-generated statements exhibited extremely high levels of internal consistency. This was indicated in two ways. First, it accurately matched RAP indicators of psychopathology with the low functioning executive group, and conversely, accurately matched the RAP indicators of psychological health (through positive statements and the absence of failure statements) with the high functioning executive group. Secondly, an examination of the RAP failure statements reveals a high degree of consistency within each area of personality functioning.

The above information also suggests that the RAP-based grouping of executive functioning was considerably more

sensitive to the presence of RAP indicators of pathology than was the original grouping, as evidenced by the original grouping generating a total of 15 statements compared to 41 for the RAP-based grouping.

#### Potentially Limiting Factors of the Current Study

The most seriously limiting factors in the current study are those related to the ratio of sample size to the number of dependent variables used in the discriminant analyses. Stevens (1992) suggests that the subject to variable ratio should be approximately 20 to 1 to insure reliable results, that is, that the same results would be achieved in an independent sample from the same population.

With a sample size of 120 subjects and with 22 variables being used in the discriminant analyses, the current study clearly did not meet the 20 to 1 suggested ratio, suggesting that its results be interpreted cautiously in terms of generalizing them to other populations. This caution is especially called for since discriminant analysis, particularly the stepwise type used in the current study, utilizes a mathematical maximization procedure which may potentially capitalize on chance variance (Stevens, 1992).

Another problem involving the discriminant analyses, and related to the small sample size, was the inability to make the assumption of homogeneity of covariance matrices,



which would also tend to limit the generalizability of the current study's results to other populations.

Another potentially limiting factor involved the data which was available from the Morrison and Associates test battery. For research purposes, it would have been highly useful to have had data from additional measures of cognitive functioning, such as additional subtests from the WAIS, as well as data from additional measures of personality functioning. It would have been particularly desirable to have had data from a standardized personality measure, such as the Minnesota Multiphasic Personality Inventory-2, with which to compare the results from the other personality measures in the battery.

#### Suggestions for Future Research

Perhaps the most important suggestion for future research is that of increasing sample size, particularly for those studies which employ multivariate statistical methods for the analysis of the data. In respect to studies such as the current one, it would be suggested that the subject pool be expanded by including additional, earlier years of executive consultations, even at the risk of adding potential time-related confounding variables to the study.

Since there is the potential for capitalization of chance variance in discriminant analyses, future studies which use this method of analysis might employ either the

jackknife procedure or cross validation on a random subset of the sample to insure that the hit rate of correctly classified cases is not overly optimistic (Stevens, 1992).

As mentioned above, the inclusion of data from a standardized personality measure would be highly useful for future studies, as it would potentially add to the validity and reliability of the results.

As was explained earlier, most of the RAP-generated data is categorical in nature. It would be extremely advantageous, then, if the RAP were able to be standardized and normed so that it could yield continuous data. This would enable it to be subjected to more thorough and rigorous statistical analyses. This would be of particular assistance in providing additional evidence regarding the RAP's validity and reliability.

Finally, this author wishes to underscore the considerable potential which the RAP appears to demonstrate as a measure of personality functioning. The current study is the latest in a series of studies which have tested the validity, reliability, internal consistency and clinical utility of the RAP. The results of these prior studies, as well as the current one, strongly suggest that the RAP is a quick, accurate, and relatively unobtrusive method of measuring personality functioning. The author suggests, therefore, that additional studies be conducted with a

variety of populations, so as to continue the on-going validation process of this instrument.

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## VITA

Mr. Chroniak was born in Middletown, Ohio on September 30, 1954. He attended The Ohio State University in Columbus, Ohio, graduating in 1977 with a Bachelor of Arts Degree in English Literature. He was awarded a Master's Degree in Counseling Psychology from Boston College in Chestnut Hill, Massachusetts, in 1987. Mr. Chroniak has worked as a psychotherapist since 1986, in both in-patient and out-patient mental health facilities in the Boston and Chicago areas. His research interests include the study of personality from the psychodynamic perspective, and the integration of spirituality and psychotherapy. In addition to his work as a psychotherapist, Mr. Chroniak is a classically trained singer and performs opera, oratorio and concert works, as well as liturgical music.

DISSERTATION APPROVAL SHEET

The dissertation submitted by Christopher P. Chroniak has been read and approved by the following committee:

Marilyn Susman, Ph.D., Director  
Associate Professor, Department of Counseling Psychology  
Loyola University Chicago

Jack A. Kavanagh, Ph.D.  
Professor, Department of Counseling Psychology  
Loyola University Chicago

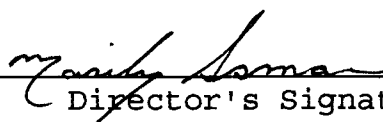
Clyde L. Rousey, Ph.D.  
Lic. Clinical Psychologist/Speech Pathologist/Audiologist  
Drs. Rousey & Rousey, Ltd.; Topeka, Kansas

The final copies have been examined by the director of the dissertation and the signature which appears below verifies the fact that any necessary changes have been incorporated and that the dissertation is now given final approval by the committee with reference to content and form.

The dissertation is, therefore, accepted in partial fulfillment of the requirements for the degree of Ph.D.

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Date

  
Director's Signature