

A COMPARISON OF PERSONALITY TRAITS AND JOB SATISFACTION
BETWEEN NON-MANAGING PROFESSIONALS AND MANAGERIAL PERSONNEL

BY

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The purpose of this study was to compare the personality traits and job satisfaction of non-managing professionals and managerial personnel. The study proposed to answer the following questions:

1. Are there differences in job satisfaction between managerial personnel and non-managing professionals?
2. Are there relationships among job satisfaction and personality needs for either non-managing professionals and managerial personnel?

Five paired groups of 10 managerial personnel subjects and 20 non-managing professional subjects were studied: lawyers, engineers, scientists, financial accountants and data processors. Each subject included in the study had had at least five years of appropriate professional experience.

Discriminant function analyses were run on personality and job satisfaction data for professional group and its corresponding managerial personnel group, and all managerial personnel groups combined. Each of the 10 functions yielded significant results. Significant relationships were found among job satisfaction scores and the personality needs for each of the groups. However, there was little consistency across relationships. Both managerial personnel and non-managing professionals were satisfied with their jobs, although managerial personnel somewhat more so. Both managerial personnel and non-managing professionals also were characterized by higher needs levels than normal populations in Achievement, Endurance, Harmavoidance, Nurturance, Order, and Understanding. Conversely, they had lower needs levels in Aggression, Autonomy, Impulsivity, Play, and Social Recognition. They were about average in Exhibition and Affiliation. The managerial personnel had above average needs levels in Dominance while the non-managing personnel were average.

No factors consistently discriminated among all groups. It appears therefore that relationships among job satisfaction and personality traits are unique for each of the five career fields studied. Accordingly, general statements about job satisfaction and personality traits cannot be made, nor can general statements be made about these factors in regard to differentiating among managerial personnel and non-managing professionals.

CHAPTER I INTRODUCTION

The two essentials of power are motive and resource. The two are interrelated. Lacking resource, motive lies idle. Lacking either one, power collapses. Because both resource and motive are needed, and because both may be in short supply, power is an elusive and limited thing. (Burns, 1978, p. 12)

Power and responsibilities in any business organization lie with its managers. Managers are responsible for finding workable solutions to labor problems, production fluctuations, financial burdens and increasing demands of society. Their authority gives them control of the resources of their organizations. These resources include people, physical objects (e.g. machines) and money. Managers, by definition, are charged to direct these resources to solve the problems that confront their organizations.

Influence, power and responsibility in a company are determined by position held in the management hierarchy. The higher a manager's position, the broader the authority over company resources. Also, the higher a manager's position, the more the manager directs organizational decisions. For example, the head (e.g. president) of a

company is responsible for its overall organizational goals and direction, which in turn influence all segments of the organization. Those at the other extreme are the production line employees. They are responsible for only small parts of products and have little control over company matters beyond their own behaviors.

Power and responsibility often serve to fulfill individual needs, especially in the cases of management personnel. In fact, the need for these two qualities is characteristic of managers (Burns, 1978). Individual needs of recognition, achievement and self-esteem are fulfilled often by virtue of being a manager (Rotondi, 1976). Further, an individual's need to guide and direct can also be fulfilled by being a manager.

Fulfilling individual needs, in turn, usually meets the organization's needs. Some organizational needs met by managers are 1) finding solutions to organizational problems, 2) directing personnel, 3) using equipment efficiently and 4) effective use of finances. The company has "direction" for its resources as long as managers are there to provide effective guidance. However, problems develop when there are too few effective managers to fulfill the needs of the organization.

In the future many more business leaders will be needed because businesses are becoming more complex. This complexity usually results from the fluctuating and

unpredictable economy on which businesses rely. Complexity also occurs because businesses must cope with personnel and public problems such as those created by unions and consumers' rights organizations. Businesses are also having to learn to integrate technological advances at faster rates. Thus one solution to the growing complexities of businesses is to employ more managers to monitor and solve increasing problems.

Although businesses will have to recruit more managers, the traditional sources (usually business college graduates, or employees just below "firstline" supervisors) are in limited supply. That is, there is a finite supply of traditional sources from which to select (Rawls and Rawls, 1971). To help fill this growth in organizations' managerial needs, recruits from other sources such as scientists, engineers and lawyers will have to become managers.

Background of the Problem

Professionals' Need to Manage

One of the less-traditional sources of managers is non-managing professionals (NMP). NMPs are professionals such as scientists, engineers and lawyers within a company. In some ways, functioning as a scientist, engineer or lawyer is incompatible with being a manager. For example, NMPs desire autonomy to pursue independently the

objectives of their jobs. This autonomy is in fact a major portion of the basis for their career choices (Ritti, 1968). However, autonomy is significantly reduced if a management position is taken. Becoming a manager means accepting more of the goals and directions of the organization, thereby reducing individual autonomy. Thus, NMPs seeking autonomy, as demonstrated by their career choices, typically do not seek management positions (Greenwald, 1978).

The maximum organizational status an NMP can most often reach is below that of manager. For example, status position can be equated with rank in one of several categories. The categories are positions in organizational hierarchy, level of salary and task responsibilities. Currently managers usually reach higher ranks in each of these categories than do NMPs.

An NMP also has a more limited hierarchy through which to be promoted than does a manager. There are usually only few rewards, achievements and positions that an NMP can obtain beyond those inherent in the position. Conversely, a manager has a hierarchy which ends only at the top position of his or her organization. An NMP can, for example, become the "top research scientist" while a manager can become the Chief Executive Officer (CEO) or the Chairman of the Board. The CEO or Board Chairman receives the highest salary and has the broadest and most

important task responsibilities in the company. Neither of these positions is traditionally part of an NMP's career path.

Although salary and task responsibility may function as "status" categories for managers, they tend not to be status categories for NMPs. Salary and task responsibilities for NMPs are usually not openly communicated to the rest of the company or to the public. In fact the more prestigious the task for NMPs, the more likely that their information is confidential.

NMPs who have risen to the apex of their professional hierarchies often want to become managers since they have high status needs. Becoming managers allows them to continue to fulfill their status needs.

The acquisition of a management position may provide further benefit to an NMP. The loss of autonomy is replaced by control. This control typically covers goal setting and resource usage. As Greenwald (1978) states:

Professionals frequently require managerial positions to assure themselves decision-making latitude in their research, enabling them to decide the direction in which their project will go and to formulate low to middle-level technical policy. They often feel that they will not receive credit for their achievements unless they occupy sufficiently high managerial positions. Moreover, the importance of extensive resources in some fields of science may also motivate pure professionals to seek supervisory roles. Scientists hoping to make outstanding contributions in their fields often require large staffs, generous budgets, and costly hardware. (p. 166)

Although NMPs may want to manage, they often have few chances to learn, see or experience effective manager leadership, and their educations have not provided them with management skills. Instead, their careers have focused on highly technical information and their supervisory responsibilities are marginally managerial in nature. Instead of being managed, they have tended to work on collegial bases. Although this is acceptable for an NMP's work role, it provides little training for management leadership.

Needed Research in Personality Characteristics of Leaders

Traditionally, leadership studies have evaluated degrees of manager effectiveness by identifying traits or styles associated with effective manager performance. As Finder and Pinto (1974) state:

Since the turn of the century, two themes have been recurrent in management research. One approach is represented by the early work of Kurt Lewin and his associates which focused attention on the personal characteristics of leaders. As pointed out by Campbell, et al. (1970), the net result of this "trait" research is a list of attributes characterizing the effective manager which includes almost the entire spectrum of human virtue.

The other theme has developed from the Ohio State research on the behavioral styles of managers. Managerial effectiveness is a matter of outputs rather than inputs such as traits and so a more meaningful approach to the study of effective management should involve an emphasis on managerial behavior.
(p. 257)

Most research on leadership has concentrated on one approach or the other, with current studies focusing primarily on leadership styles. This emphasis has dominated and diminished trait and personality studies of leadership. Durand and Nord (1976, p. 427) state that "the strength of the reaction against 'trait approach' appears to have suppressed the study of personality factors even though they are part of an interaction in leadership." However, Palmer (1974) notes that future research should continue to identify personality dimensions which determine management effectiveness. The study of personality variables therefore has a valid place in leadership and management research.

Brousseau (1978, p. 235) states that "an individual's affective and behavior responses to his work depend not only on the characteristics of his job, but also on certain aspects of his personality, such as his need for growth." Therefore, there needs to be a "fit" between personality and job characteristics (Peters and Champaux, 1978) since personality is a major influence on career satisfaction and job effectiveness.

Need for Study

If NMPs have the desire to assume management positions in order to fulfill their needs (e.g. achievement, self esteem), a basis for training must be found to assure that

NMPs develop management effectiveness. Management skills, as mentioned previously, are not typically a part of an NMP's background knowledge. Therefore, one of the problems of developing a training program for NMPs is what to do for NMPs who want to become managers. Personality traits have been shown to be important for functioning well in job positions, and many personality traits have been identified that assist managers in becoming more effective. However, those traits which NMPs possess or lack in comparison to managers are not evident. If NMPs differing characteristics can be identified, programs can be developed to help them become effective managers.

If NMPs have unique needs in becoming managers, consultants or business career counselors should determine those needs so that they can facilitate NMPs' career developments. More importantly, consultants or career counselors must know individuals' needs before they can be of maximum use to those individuals. Further, if needs are identified, consultants or career counselors can learn to provide ways to help develop NMPs into managers. When NMPs are made more aware of goals and characteristics expected, they are more likely to achieve them. Providing counseling and consultation to NMPs can help this transformation. NMPs will gain greater understandings of themselves, and that is the first step in their self-developments (Tannebaum, Weschler, and Massariah, 1961).

NMPs can become more effective managers by increasing their self-developments.

If NMPs are to take more expanded roles in business, clearer understandings of their population characteristics are necessary. This enlarged understanding should help the selection and identification of NMPs with the greatest potentials to be effective managers. If effective managers are selected from NMPs and assigned to areas in which they excell, companies should benefit from their involvements.

Purpose of the Study

The two purposes of this study were 1) to investigate the differences in personality needs and job satisfaction between normanaging professional and managerial personnel and 2) to determine how job satisfaction scores correlate with personality scores. Detecting these personality differences serves two goals. First, NMPs' unique needs, and how these needs are related to job satisfaction, are identified. Once this is accomplished, specific training programs can be developed to facilitate NMPs' acquisition of managerial roles. Also, career counselors and consultants will be more effective in their interactions with NMPs. Secondly, there will be a greater understanding of NMPs in general. With greater understanding, business leaders can make more productive uses of NMPs as managers.

NMPs can be selected and placed in managerial positions for which they would be most effective.

Null Hypotheses

This study will test the following hypotheses:

- 1) There are no differences in personality needs and job satisfaction between non-managing professionals and managerial personnel.
- 2) There are no differences in personality needs and job satisfaction among subgroups non-managing professionals and their corresponding managerial personnel groups.
- 3) There are no relationships between job satisfaction and personality needs for either non-managing professionals or managerial personnel.

Definition of Terms

Non-Managing Professionals

Non-managing professionals (NMPs) are defined as scientists, engineers, lawyers, financial accountants and data processing personnel who have been with their respective companies five years or longer and who do not supervise other employees.

Managerial Personnel

Managerial personnel (MP) are defined as employees who oversee first line, or higher, supervisors in the organization.

Scientists

Scientists are employees who have college degrees in physics, biology and/or chemistry and are conducting research in one of these areas.

Engineers

Engineers are employees who have college degrees in engineering science and who are involved primarily in the application of engineering science.

Lawyers

Lawyers are employees who have degrees in law and who are involved primarily with legal matters.

Financial Accountants

Financial accountants are employees who have degrees in accounting and who are involved primarily with summarizing and recording business transactions.

Data Processing Personnel

Data processing personnel are employees who have degrees in computer science and who are involved primarily in computer science activities.

CHAPTER II
REVIEW OF THE RELATED LITERATURE

Need for Managers

Several authors support the increasing need for managers in business. Rawls and Rawls (1971) state:

The dwindling supply of managers is one of the major outcomes of the rapid industrial expansion in the United States. The need for able managers now far exceeds the supply, and the deficit appears to be growing. (p. 24)

McClelland and Burnham (1975) asserted the same point. They indicated that there is a shortage of managers, and in response to this shortage some companies will have to take less qualified managers.

Two other trends have been noted that are increasing the need for more managers. First, Howard (1978) states that one out of three managers is turning down promotions, which is reducing the reservoir of managerial talent. Second, companies fail to develop the managerial talent they currently have. This failure to develop managers can extend to the top of an organization. For example, Costello (1977) felt that many companies are failing to groom successors for chief executives.

The base of the management hierarchy is shrinking as the need for managers is increasing. Many managers are unwilling to move upward in the organization and thus are not being developed to their potentials. If the need for more managers is to be met, new sources will have to be found from which to recruit managers.

Murray's Personality Theory

The Personality Research Form (PRF) was the inventory used to examine the personality differences between the NMPs and MPs. The personality theory from which the PRF was formulated was developed by H.A. Murray (1938), and described in his book, Exploration in Personality. Further examination of this theory for its completeness and usefulness to this study was needed.

In general, Murray's personality theory is concerned with the subconscious of the human personality (Ewen, 1980). The emphasis of the theory on the subconscious processes is indicative of the influence Freud had on Murray (Stagner, 1974). Other aspects of the theory are also aligned with Freudian theory. An example is the importance of needs as motivational forces and how these forces determine the personality.

Murray's theory postulates that people are motivated to maximize instinctual gratification, while also minimizing punishment and guilt (Maddi, 1972). This motivation

represents the central issue of personality theory. Humans have a desire to satisfy tension producing drives. These drives are the needs. More specifically, needs can be defined as a "construct standing for a force in the brain region which energizes and organizes our perceptions, thoughts, and actions thereby transforming an existing unsatisfying situation in the direction of a particular goal" (Ewen, 1980).

Murray (1938) states that a need is a "hypothetical process the occurrence of which is imagined in order to account for certain objective and subjective facts" (p. 54). Ewen (1980) observed that Murray inferred the existence of needs from overt sources. Some of these overt sources would be frequent and intense patterns of behavior, the results of the behavior and the expression of satisfaction or dissatisfaction with the results. Murray (1938) also specified that these needs not only have a qualitative or directional aspect which differentiates one need from another, but also an energetic or qualitative force that varies in strength.

There are two forms of needs, biological and mental. Ewen (1980) identified some biological needs: hunger, thirst, sex, oxygen, deprivation, elimination of bodily wastes and avoidance of painful external conditions. The mental needs are subsequently derived from these biological ones.

In evaluating Murray's theory, Stagner (1974) concluded that it is probably futile to either try to compile a comprehensive list of all categories of needs important to human beings, or to try to reduce all goal seeking to a single category. What we need, he said, is a working list of needs. This will enable research on personality to progress. Maddi (1972) supports the credibility of Murray's theory. He states that Murray "pioneered the modern emphasis upon the empirical measurement and validation of concrete peripheral characteristics present in the peripheral theory of personality" (p. 447). Maddi also emphasizes the huge amount of data relating to Murray's list of needs that Murray and his staff collected.

Murray's theory is broad in applicability. The population used as a base was normal, not pathological (Maddi, 1972). Murray placed great importance on validating and measuring his theory. Three prominent inventories have been developed from Murray's theory: Personality Research Form, Edwards Personal Preference Schedule and the Adjective Check List. This theory was an adequate and useful base to use in this study for comparing personalities of NMPs and management personnel.

The Definition of NMPs

The term professional has such a diverse number of meanings that it is pointless to cite the numerous ways that the concept has been operationalized. It is sufficient to list characteristics of ideal professionals which have been commonly and consistently used in research literature.

Kerr, Von Glinow and Schriesheim (1977) identified six characteristics used most often and generally acknowledged to be of theoretical importance:

- 1) Expertise, normally stemming from prolonged specialized training in a body of abstract knowledge.
- 2) Autonomy, a perceived right to make choices which concern both means and ends.
- 3) Commitment to the work and the profession.
- 4) Identification with the profession and fellow professionals.
- 5) Ethics, a felt obligation to render services without concern for self-interest and without becoming emotionally involved with the client.
- 6) Collegial maintenance of standards, a perceived commitment to help police the conduct of fellow professionals. (p. 332)

This consensual definition appears to describe the five groups for the study. However, a qualification must be made for the subsamples of engineers. Kerr et al.

(1977) in their review state:

Most engineers lack autonomy, commitment to technical specialty, collegial maintenance of standard and identification with profession associated with professionals. They also lack an effectively neutral and

altruistic ethic of services. Finally, although the occupation does contain a "body of abstract knowledge" as required by the consensual definition, a high percentage of practicing engineers have undergone little or no graduate training. (p. 339, 340)

However, engineers with advanced graduate degrees do fit the consensual definition much better. Greenwald (1978) established that engineers with advanced degrees have career orientations which are as strongly professional as pure scientists'. Peter (1957) determined that engineers with Ph.D.s are interested primarily in scientific and technical achievement as opposed to promotion which is often the goal of engineers with only bachelor's degrees.

The consensual definition of professionals describes scientists and lawyers, financial accountants and data processing personnel. The definition is also descriptive of engineers with advanced degrees. These five groups were therefore included in the population of NMPs.

NMPs and Their Relationship to Management

NMPs' Desire to Manage

Business organizations put great emphasis on their employees taking managerial roles. Levinson (1980) observes that in the United States, with its great social mobility and competitive economy, intense competition for position in the organizational hierarchy is stimulated

and fostered by higher management. He states that "people in many specialties must shift from these specialties into managerial ranks to attain success within the [organization] structure" (p. 500). Kerr et al. (1977) emphasized that companies reward, and promotional structures support, the managerial role.

If NMPs can be shown to have a need to achieve, it can be concluded that there is some personal "pressure" for them to be managers. Hall and Glasgow (1979) concluded that the direction people take to fulfill their achievement needs may differ, but the desire to achieve is a basic part of every person's psychological makeup. Hines (1973) stated:

While it has not been established if high achievers are over or under-represented in the professions, it seems reasonable to suggest that high standards, clearly defined goals and opportunities for recognition would attract at least the normal need for achievement distribution. (p. 313)

NMPs would include at least some members who have high achievement needs. To fulfill these needs in a business organization, NMPs will most likely desire a management position.

NMPs often express the desire to manage. Greenwald (1978) investigated professionals and determined that NMPs value managerial functions. He used a questionnaire survey mailed to one thousand scientists and engineers in the San Francisco area. Approximately 72% of the sample

completed and returned the questionnaires. He found that professionals in all career categories are relatively likely to feel dissatisfied with their career choices when they spend very little or no time at all in management or administration. The strongest relationship occurs among "pure professionals," those with high professionalism and low careerism scores. "Pure professionals" who spend very little or no time managing are more than twice as likely to feel dissatisfied (with their career) as those who spend a moderate amount or a great deal of time in this pursuit. Nineteen percent of the "pure professionals" who spend any time at all in management were dissatisfied, compared with 46.9 percent of those who do not manage. This difference was significant at the .02 level. Greenwald (1978) concluded that

Past investigators have overlooked the possibility that while professionals do have some special needs, they also have needs which they share with non-professionals. Dedicated professionals, for example, may value professional recognition over entry into management but they specifically seek managerial status as a form of such recognition. (p. 166)

In a field study of advanced graduate engineers, Harlow (1973) found similar results. She investigated engineers' preferences for upward mobility. Her sample, 54 advanced graduate engineers, completed a job satisfaction and promotional preference (desiring the immediate supervisor's position) questionnaire. The

relationship was significant at the .05 level. Nearly one half of the sample had an intense desire for a management position.

NMPs will be, and are now, acquiring management positions. These positions fulfill some of their achievement needs. These management positions are the mark of success in an organization. The whole reward structure of a business revolves around the managerial positions.

Differences between NMPs and Management Personnel

There appear to be some relatively established differences between NMPs and management personnel. Hines (1973) found, in comparing middle managers with engineers and accountants on achievement motivation, that both engineers and accountants expressed a higher need for achievement. Although these groups also included some managers, the study still lends support to the fact there are differences between these groups.

Harrell and Harrell (1973) compared personality scores of master's of business administration students who were planning to be general managers or engineers. General managers were higher on intensity and sincerity than were engineers. Waters and Roach (1976) conducted a study more applicable to NMPs. They compared higher and lower level managers to technical specialty personnel. The technical specialty personnel group consisted of employees in data processing, underwriting and adjustment

of an insurance firm. Using a discriminant function analysis the two levels of managers were differentiated from technical/specialists on the basis of job satisfaction with work and supervision.

Although none of these studies directly compare NMPs and management personnel, they all suggest the possibility that personality differences exist between NMPs and management personnel. Personality is a potential field to find differences between NMPs and management personnel.

Management, Leadership and Personality

The number of leadership theories have been more detrimental than a help to managers (Hinrichs, 1970). Managers are unable to take these theories and apply them effectively to their work. There are too many theories and controversial issues between theories to make an effective choice and learn to use a theory effectively. Hall and Donnell (1976) state:

There is a gap between paying homage to theorists and actually incorporating their principles in management, the gap between discovery and application--these may be due to a third gap, credibility. The nature of psychology and sociology run counter to both intuition and motives of managers. (p. 78)

Hinrichs (1970) concurs in an extensive review of industrial psychology. He explains that the long standing malaise of industrial psychology has been a plethora

of data and a paucity of generalized research, insights and theory.

If research is to become more applicable, areas in which research can be directly applied need to be discovered. Determining the personality differences between NMPs and MPs is one of these areas. The desire of NMPs to manage was discussed in a previous section. The importance of determining personality characteristics is presented here.

In general, there is a need for renewed study in the role of personality in leadership. Durand and Nord (1976) report that the strength of the reaction against the "trait approach" appears to have suppressed the study of personality factors, even though personality is a determinant of leadership. Leadership personality is not being extensively studied. Sisson, Arthur, Fierro and Gazda (1978) found in their review of research over a 15 year period that there was a "paucity of existing literature related to success factors (in leadership)" (p. 198). Hinrichs (1970), in his review of the leadership research in the field of industrial psychology from 1960 to 1970, determined that few studies had been conducted which investigated ability and personality factors.

There is a growing interest in the role of personality in the work environment. Brousseau (1978) stated:

Recently, several groups of researchers have reported findings which indicate that an individual's affective and behavioral responses to his work depend not only on the characteristics of his job, but also on certain aspects of his personality. . . . These [authors] illustrate the importance of fit between a person's personality and the job characteristics. (p. 235)

In respect to the role of personalities in managing, Palmer (1974) proposes that "future research should continue to look for those personality dimensions that determine management effectiveness" (p. 294). Personality still has an important role in the exploration and discovery of the field of leadership.

More specifically, personality has been found to have an effect on work performance. Miller (1979) states that the "most common cause of management stress is a mismatch of personality and jobs" (p. 51). If one performs poorly, this performance will most likely have a negative effect on the individual. Maccoby (1970) supports this by stating:

Work stimulates feeling and attitudes that can lead either in the direction of human development or of psychopathology. If a job contributes to an individual's development, it will strengthen our society; if it does not, both the individual and society will suffer. (p. 509)

Managers must be selected so that their personality and behavior will match the position or managerial situation. Tiffon and McCormick (1958) believed that individual differences are important to businesses. They are a direct determinant of work performance. Steers (1975) found personality to represent a significant

moderating force on the relationship between task goals and performance. If personality is related to, or is a causal factor in work performance, personality is an area worth researching. The investigation of how NMPS differ on personality traits from management personnel can provide useful information about NMPS while adding to the understanding of leadership.

CHAPTER III METHODOLOGY

Overview

The purpose of this descriptive research study was to investigate possible differences in personality needs and job satisfaction among NMPs and MPs. In addition, the relationship of job satisfaction to personality was investigated. The causes of any personality or job satisfaction differences were not investigated as a part of this study.

The personality traits investigated were the 14 included in the Personality Research Form (PRF): achievement, affiliation, aggression, autonomy, dominance, endurance, exhibition, harmavoidance, impulsivity, nurturance, order, play, social recognition and understanding. Definitions and characteristics of these needs are elaborated upon in Appendix A. Job satisfaction was measured by the Minnesota Satisfaction Questionnaire (MSQ). There were three satisfaction scales: Extrinsic, Intrinsic and General Satisfaction.

There were five NMP groups: scientists, engineers, lawyers, financial accountants and data processing.

personnel. Each group consisted of 20 subjects. There were five MP groups: scientists, engineers, lawyers, financial accountants and data processing personnel. These five groups correspond to the five NMP groups. There were 10 subjects in each MP group. Within these 10 groups, the 14 personality traits and the job satisfaction scores were examined for significant correlations. The related MP and NMP groups were compared for differences on the personality traits and the measures of job satisfaction. Each subject was given a packet containing the PRF, the MSQ and a short biographical questionnaire (Appendix C).

Selection of Subjects

The subjects were selected from a large manufacturing business in St. Louis, Missouri. Divisional managers of the firm were asked to identify subordinates who had employees suitable to the classification of the NMP and MP subject groups. These managers were provided descriptions of the desired employees and encouraged to request additional information about the purposes and procedures of the study.

The managers provided a list of employees that could be classified into the NMP or MP subject groups. If the nomination process provided too few employees to fill the sample groups, all managers previously contacted were asked to identify more potential subjects.

After the list of candidates was completed, a semi-random selection of subjects was made to determine who was to be included in the study. The subjects for each category were placed in a random ordered list. This list was followed in selecting subjects until each group had its full membership. If a group was unable to reach full membership because some subjects were unable to participate, further nominations were sought from managers for that group.

There was one criterion each subject had to meet to be included in the study: five years at the same or similar position. This requirement was to assure that only those individuals who have "solidified" their careers were selected. For the NMPs, this requirement aided in the selection of the subjects who would be approaching the top of their hierarchy. It was assumed that subjects with at least this tenure were making decisions about whether they wanted to enter a management position.

A special requirement was also placed on engineers. Only engineers with graduate degrees were selected. Engineers with graduate degrees are more likely to identify themselves as professionals than are those with only bachelor's degrees.

Instrumentation

The instrumentation consisted of three items: a personality inventory, a job satisfaction questionnaire and a biographical information sheet.

Personality Inventory

The Personality Research Form (PRF), 1965, Form A, was selected to measure the 14 personality needs. It was developed by Douglas N. Jackson (1974), and is published by Research Psychologists Press, Inc.

The inventory scales of the PRF were developed from Murray's need system. For each scale a definition was prepared, based to a great extent on Murray's work. This definition serves to orient item writing for each scale. One important distinction between the PRF's needs and Murray's needs is that the PRF's needs are bipolar, while Murray's are directional. This explicit bipolarity in the PRF scales had made some of Murray's variables superfluous. For example, there is no alienation scale in the PRF. The negative pole of affiliation measures this need (Jackson, 1974). Therefore, in interpreting the PRF scales, both low and high scores signify characteristics which serve to differentiate one subject from another. Of the 22 original scales developed, those judged to be most relevant to a wide variety of areas of human functioning have been included in the standard shorter forms (Forms A and B). The test manual defines each trait (Appendix A).

The responses for the statements in the inventory are in a true-false format. Examinees respond to statements as they apply to themselves. An example of a question is "I never go near the edge of cliffs or steep places." Half of the questions for each scale are oriented to each extreme of the continuum being measured.

Using the Kuder-Richardson Formula 20, reliabilities for the scales ranged from .66 (Understanding) to .85 (Dominance). Test-retest reliabilities, with one week between assessments, ranged from .74 (Social Recognition) to .90 (Harmavoidance) (Bentler, 1964).

Support for the validity of the PRF was obtained by convergent and discriminant validity studies. In one convergent validity study, the independent criteria were peer ratings (Jackson, 1974). The validity coefficients were .42 for achievement, .75 for affiliation, .73 for aggression, .60 for autonomy, .75 for dominance, .35 for endurance, .51 for exhibition, .40 for harmavoidance, .65 for impulsivity, .72 for nurturance, .68 for order, .53 for play, .57 for social recognition and .58 for understanding.

A multimethod factor analysis was used to provide discriminant validity (Jackson and Guthrie, 1968). The analysis used 202 subjects' self ratings, peer ratings and PRF scores. The PRF scales loaded on 18 factor defined relevant scales. Jackson described in the PRF

manual the reasoning for using this method to obtain discriminant validity.

The demonstration of convergent and discriminant validity represents a kind of acid test for a personality inventory. Unfortunately, rule of thumb methods were not considered entirely adequate for evaluating the unique capacity of each PRF scale to relate to suitable criteria. For a number of reasons, classical linear factor analysis was not considered entirely adequate either. Therefore, a procedure was developed (Jackson, 1966) which focuses entirely upon variance common to two or more methods of measurement. This procedure, termed multimethod factor analysis, accomplishes this by orthogonalizing those portions of the multitrait-multimethod correlation matrix common to a given method of measurement. This results in a correlation matrix in which only heteromethod validity coefficients appear, the monomethod values having been replaced with zeros. Thus, method variance common only to a single method of measurement cannot intrude to determine common factors. When a principle component factor analysis and rotation of axes to simple structure is performed, resulting factors may be interpreted as being due primarily to the correlation of traits across different methods of measurement, rather than to artifacts of the method of measurement. (1974, p. 25)

Loesch and Weikel (1976) have stated that the PRF has been subjected to extensive and sophisticated research and has been found to be psychometrically sound.

Further, the PRF has shown itself to be an adequate discriminator among different occupational groups. Skinner and Jackson (1977) investigated the selection of military applicants for 14 different positions with the use of the PRF. They found four significant discriminant functions that differentiated between these groups. These four

functions accounted for 74.24% of the dispersion between the groups. Pihl and Spiers (1977) reported findings using four professional groups: psychologists, physiotherapists, social workers and occupational therapists. Not only did these four groups significantly differ from each other on their PRF scores, but the professionals significantly differed from the normal population. Further, the PRF constructs and the Strong Vocational Interest Blank (SVIB) scales were factored into seven jointly defined factors. Siess and Jackson (1970) stated that the "SVIB can be interpreted in terms of personalogical constructs" (p. 34). The results indicate that need patterns can be satisfied by certain occupational roles. The PRF thus provides adequate reliability, validity, and differentiation between occupations for the purposes of this study.

Job Satisfaction Questionnaire

The questionnaire selected to measure job satisfaction was the Minnesota Satisfaction Questionnaire (MSQ), (University of Minnesota, 1977), short-form. This instrument was developed by the Industrial Relations Center of the University of Minnesota.

The short-form MSQ consists of 20 five-point Likert format questions, ranging from very satisfied to very dissatisfied. The questions were drawn from the 100 questions included in the long form MSQ. Items selected

for the short-form correlated highly with the 20 MSQ long-form scales. A factor analysis provided two subscales. These were labeled Extrinsic and Intrinsic Satisfaction. The questionnaire provides three scores: general, extrinsic and intrinsic satisfaction.

In general, reliability for the MSQ has been high. For internal consistency the coefficients range from .84 to .91, for intrinsic satisfaction; .77 to .82, for extrinsic satisfaction and .87 to .92 for general satisfaction. Using test-retest the general satisfaction scale yielded .89 over a one-week period and .70 over a one year period.

MSQ validity is supported by a comparison of seven different occupational groups on job satisfaction. The groups included assemblers, clerks, engineers, janitors, machinists and salesmen. The occupational group differences in mean satisfaction scores were statistically significant for each of the three scales in the MSQ. Those individuals with high needs and having high reinforcement of those needs were predicted to be the most satisfied. Those individuals with high needs and low reinforcement of those needs would be the least satisfied. The results were in the predicted direction on seven of the scales for the long-form MSQ. The MSQ, therefore, showed adequate reliability and validity to be used as a measure of job satisfaction for this research.

Biographical Questionnaire

The third instrument subjects received was the biographical questionnaire (BQ) (Appendix C). The BQ collected general information about each subject.

Data Collection

An introductory letter was mailed to each subject (Appendix B). The letter was followed by a telephone call during which questions were answered and an individual introduction session was scheduled. The introduction session consisted of delivering the assessment packet and explaining the procedures and directions. Each session was scheduled at the convenience of the subject. If subjects wished not to participate they were allowed to withdraw from the study.

Each item of the assessment packet was self administered. The packet consisted of the PRF, the MSQ, the BQ and a return envelope. Each subject returned the items by mail after completing them.

Data Analyses

The 14 personality needs and three job satisfaction scores for the separate NMP subgroup and their corresponding MP group were tested for significant differences. Significant differences were examined between the MP group

as a whole, and the separate NMP subgroups. Analyses of variance were used to determine if significant differences existed. If significant differences were found, Tukey's Honestly Significant Difference (HSD) method was used to determine where the differences occurred. The 14 personality traits were also tested for significant correlation with the 3 job satisfaction scores within each subgroup. An alpha level of .05 was used for all statistical tests.

Limitations

As with most other studies of this nature, there were some limitations which arose out of the conditions under which the study was made. The size of the sample, the nature of the data and the statistics used are all factors to consider. In order that the data be understood, it is proper that these limitations be stated.

- 1) The subjects are not randomly selected from the population. A selection error may occur because of the subjects selected. The effects also may be inherent to the specific company selected.
- 2) The effects may be due to the geographical region selected. The differences may be found only in the St. Louis region. Errors

may occur because of differences other than being an NMP or MP.

- 3) There are many personality traits which could be used in a study like this one. The fact that only 14 traits were selected for the study is a limitation to the findings.
- 4) There may be differences between NMPs and MPs' personality traits by tenure in a position or age. This study examined a restricted section of the population, i.e. only subjects with a tenure of five years or more.

CHAPTER IV RESULTS OF THIS STUDY

The purpose of this study was to investigate the relationships among job satisfaction and personality traits for MPs and NMPs in five career fields.

Discriminant functions were computed for each of the 10 comparisons to be made among MPs and NMPs. These statistics used the stepwise method. They were computed to select factors which differentiate between groups, with consideration of correlations with other factors. Only factors which added significantly to the differentiation beyond those basic factors selected were used.

Results of Data Analyses

Table 1 shows the means and standard deviations for both MP and NMP lawyers on the MSQ and the PRF. The MPs showed greater satisfaction on each of the three MSQ scales. Further, their responses to each scale were more homogeneous as evidenced by smaller standard deviations.

Table 1
Means and Standard Deviations for Lawyers

	Managerial Personnel n=10		Non-Managing Professional n=20	
	\bar{X}	Std. Dev.	\bar{X}	Std. Dev.
Job Satisfaction				
General	81.30	9.25	75.25	10.65
Internal	51.50	3.44	48.50	4.31
External	21.90	5.55	19.45	6.02
Personality Traits				
Achievement	15.00	2.67	15.15	2.25
Affiliation	14.10	2.38	16.10	1.41
Aggression	5.70	1.95	6.15	2.46
Autonomy	7.40	3.63	8.15	2.43
Dominance	15.30	3.09	13.50	3.12
Endurance	14.10	2.38	14.40	2.82
Exhibition	11.90	3.98	12.40	3.22
Harmavoidance	10.90	4.12	10.35	4.80
Impulsivity	7.40	3.92	8.10	2.92
Nurturance	11.90	2.47	14.90	2.49
Order	11.50	2.92	12.35	4.82
Play	9.10	3.31	11.10	1.89
Social Recognition	10.50	3.27	11.65	2.85
Understanding	13.00	2.58	14.50	2.65

The PRF needs mean scores of MPs ranged from 5.70 (Aggression) to 15.30 (Dominance) while those for NMPs ranged from 6.15 (Aggression) to 16.10 (Affiliation). The NMPs had higher needs level on 12 of 14 scales, all but Dominance and Harmavoidance. The greatest mean score difference was for the Nurturance scale ($d=3.00$) while the smallest difference was for the Achievement scale ($d=.15$). The patterns of dispersion were more balanced for this instrument as the MPs had larger standard deviations for eight of the scales while the reverse was true for the other six scales.

Table 2 shows the MSQ and PRF means and standard deviations for both MP and NMP engineers. The MPs showed greater satisfaction on all scales, although the external job satisfaction scores differed by only .10. The MPs' responses had less dispersion on the general and internal scale as shown by the smaller deviations. The opposite was found on the external scale.

The PRF needs mean scores of MPs ranged from 4.20 (Aggression) to 17.30 (Affiliation) while those for NMPs ranged from 4.80 (Aggression) to 15.55 (Achievement). The MPs had higher need levels on 9 of the 14 scales, all except Aggression, Autonomy, Endurance, Impulsivity, and Play. The greatest mean score difference was for the Dominance scale ($d=4.00$) while the smallest difference was for the Understanding scale ($d=.15$). The MPs responses were

Table 2
Means and Standard Deviations for Engineers

	Managerial Personnel n=10		Non-Managing Professional n=20	
	\bar{X}	Std. Dev.	\bar{X}	Std. Dev.
Job Satisfaction				
General	77.20	6.12	75.65	9.00
Internal	48.30	2.67	46.00	5.66
External	21.10	4.38	21.00	3.81
Personality Traits				
Achievement	16.00	1.15	15.55	2.24
Affiliation	17.30	1.49	14.10	2.83
Aggression	4.20	2.57	4.80	3.21
Autonomy	5.20	2.30	7.20	3.41
Dominance	15.50	3.31	11.50	4.03
Endurance	13.90	2.73	14.80	3.50
Exhibition	11.10	2.64	10.30	3.89
Harmavoidance	11.70	2.91	8.65	3.62
Impulsivity	5.60	3.37	6.90	3.52
Nurturance	14.80	2.04	13.35	3.22
Order	13.50	2.42	12.55	4.33
Play	8.40	2.95	9.90	3.49
Social Recognition	13.10	2.69	9.65	4.96
Understanding	14.50	2.32	14.35	3.10

the most homogeneous, as shown by smaller standard deviations on all 14 scales.

Table 3 shows the PRF and MSQ means and standard deviations for both MPs and NMP research scientists. The MPs showed greater satisfaction and greater dispersion of response on the General and Internal scales and less on the External scale, as indicated by the MSQ standard deviations.

The PRF needs mean scores of MPs ranged from 4.80 (Aggression) to 16.60 (Achievement) while those for NMPs ranged from 3.90 (Aggression) to 15.85 (Achievement). The MPs had higher need levels on eight scales: Achievement, Aggression, Autonomy, Dominance, Endurance, Exhibition, Impulsivity, and Understanding. The NMPs had higher need levels on five scales: Affiliation, Harmavoidance, Order, Play, and Social Recognition. They had no difference in levels on the Nurturance scale. The greatest mean score difference was for the Exhibition scale ($d=3.00$). The pattern of dispersion was fairly balanced as the MPs had larger standard deviations for eight of the scales while the reverse was true for the other six scales.

Table 4 shows the PRF and MSQ means and standard deviations for both MP and NMP data processors. The MPs showed greater satisfaction on each of the three MSQ scales, although their responses to each scale were less homogeneous as shown by greater standard deviations.

Table 3

Means and Standard Deviations for Research Scientists

	Managerial Personnel n=10		Non-Managing Professional n=20	
	\bar{X}	Std. Dev.	\bar{X}	Std. Dev.
Job Satisfaction				
General	78.60	12.96	77.35	9.89
Internal	49.00	8.31	48.65	6.09
External	21.40	5.19	23.45	13.98
Personality Traits				
Achievement	16.60	3.10	15.85	2.32
Affiliation	13.60	4.01	14.50	3.89
Aggression	4.80	2.39	3.90	2.13
Autonomy	7.60	3.41	6.15	2.43
Dominance	11.90	3.93	10.65	4.37
Endurance	16.10	1.79	14.40	2.33
Exhibition	11.70	4.08	8.70	3.89
Harmavoidance	10.10	3.54	10.30	4.73
Impulsivity	6.80	3.52	6.20	2.53
Nurturance	13.60	2.76	13.60	3.27
Order	11.40	4.58	13.30	3.57
Play	7.80	1.93	8.65	3.01
Social Recognition	8.90	3.63	9.95	4.70
Understanding	13.70	3.23	12.70	2.68

Table 4

Means and Standard Deviations for Data Processors

	Managerial Personnel n=10		Non-Managing Professional n=20	
	\bar{X}	Std. Dev.	\bar{X}	Std. Dev.
Job Satisfaction				
General	80.60	10.71	77.45	8.02
Internal	50.60	6.42	48.45	4.91
External	21.60	4.53	20.70	4.19
Personality Traits				
Achievement	15.90	3.51	15.50	2.06
Affiliation	14.80	3.91	14.75	2.53
Aggression	5.00	2.62	5.25	2.61
Autonomy	7.00	3.59	7.10	3.34
Dominance	12.40	5.04	10.35	4.34
Endurance	13.70	3.71	13.70	3.34
Exhibition	9.50	4.88	10.95	3.72
Harmavoidance	9.60	4.86	11.80	2.65
Impulsivity	9.50	4.48	8.55	3.38
Nurturance	13.90	3.28	14.45	3.39
Order	12.30	4.16	11.80	4.19
Play	9.70	2.95	9.30	3.36
Social Recognition	10.70	5.06	10.85	4.45
Understanding	13.80	3.26	14.05	2.95

The PRF needs mean scores of the MPs ranged from 5.00 (Aggression) to 15.90 (Achievement). The MPs had higher need levels on six of the 14 scales: Achievement, Affiliation, Dominance, Impulsivity, Order, and Play. They had lower need levels on seven scales: Aggression, Autonomy, Exhibition, Harmavoidance, Nurturance, Social Recognition, and Understanding. The Endurance scale had no difference in need levels for both groups. The greatest mean difference was for the Harmavoidance scale ($d=2.20$). The MPs showed more dispersion of responses on all but three scales: Nurturance, Order and Play. This was shown by the difference in standard deviation.

Table 5 shows the PRF and MSQ means and standard deviations for both MP and NMP financial employees. The MPs showed greater satisfaction on each of the three MSQ scales. Further, their responses to each scale were more homogeneous as evidenced by smaller standard deviations.

The PRF needs mean scores of MPs ranged from 4.60 (Aggression) to 15.20 (Achievement) while those for NMPs ranged from 5.95 (Aggression) to 15.50 (Affiliation). The NMPs had higher need levels on all but Harmavoidance, Impulsivity, Understanding, and no difference on the Achievement scale. The greatest mean score difference was for the Nurturance scale ($d=1.75$). This instrument showed a similar pattern of dispersion of responses as indicated by the standard deviations. The MPs were more homogeneous

Table 5

Means and Standard Deviations for Financial Employees

	Managerial Personnel n=10		Non-Managing Professional n=20	
	\bar{X}	Std. Dev.	\bar{X}	Std. Dev.
Job Satisfaction				
General	80.70	9.96	76.05	12.41
Internal	49.20	6.30	47.50	6.38
External	23.40	2.72	21.15	5.90
Personality Traits				
Achievement	15.20	2.49	15.20	2.80
Affiliation	14.50	2.59	15.50	2.59
Aggression	4.60	3.03	5.95	3.52
Autonomy	5.70	2.21	6.65	3.22
Dominance	10.60	3.72	10.70	4.61
Endurance	12.80	2.35	13.80	2.44
Exhibition	8.90	2.88	9.50	4.10
Harmavoidance	13.10	2.92	12.25	4.28
Impulsivity	7.90	3.63	7.60	3.90
Nurturance	13.20	1.81	14.95	2.37
Order	12.50	4.67	14.30	2.98
Play	9.30	3.23	10.30	2.68
Social Recognition	10.40	3.10	12.00	3.46
Understanding	12.80	2.74	12.10	3.80

on 11 of the 14 scales, less homogeneous on the Order and Play scales, and equally homogeneous on the Affiliation scale.

Table 6 shows the discriminant function between managers combined as one group and NMP lawyers using the scales from the MSQ and PRF. The discriminant function was significant at the .05 level of probability. The PRF need levels were the most significant factors in the function. Five of the six factors were personality needs. The one job satisfaction scale selected, external, had the lowest weighted coefficient (.24). The variable with the greatest weight was Play (.88).

Table 7 shows the discriminant function between all managers combined as one group and NMP engineers using the scales from the MSQ and the PRF. The discriminant function was significant at the .05 level of probability. The major discriminators were the three job satisfaction scales. Only two need scales were selected, Exhibition and Harmavoidance. The factor with the greatest weight was general job satisfaction (-4.20).

Table 8 shows the discriminant function between all managers combined as one group and NMP research scientists using the scales from the MSQ and the PRF. The discriminant function was significant at the .05 level of probability. All of the five factors selected were personality need scales. No job satisfaction scales were selected. The factor with the greatest weight was Understanding (.80).

Table 6

Discriminant Function Between Managers
and Non-Managing Professional Lawyers

Eigenvalue	D.F.	Wilks Lambda
.51	6	.66*

* $p < .05$

Variable	Coefficient
External Job Satisfaction	-.24
Autonomy	.60
Impulsivity	-.33
Nurturance	.53
Play	.88
Understanding	.40

Table 7

Discriminant Function Between Managers
and Non-Managing Professional Engineers

Eigenvalue	D.F.	Wilks Lamda
.39	5	.72*

* $p < .05$

Variable	Coefficient
General Job Satisfaction	-4.20
Internal Job Satisfaction	3.33
External Job Satisfaction	1.95
Exhibition	.63
Harmavoidance	.79

Table 8

Discriminant Function Between Managers
and Non-Managing Professional Research Scientists

Eigenvalue	D.F.	Wilks Lamda
.23	5	.81*

* $P < .05$

Variable	Coefficient
Achievement	-.70
Dominance	.70
Harmavoidance	.78
Impulsivity	.61
Understanding	.80

Table 9 shows the discriminant function between all managers combined as one group and NMP data processors using the scales from the MSQ and the PRF. The discriminant function was significant at the .05 level of probability. All of the five selected were personality need scales. No job satisfaction scales were used. The factor with the greatest weight was Dominance (1.00).

Table 10 shows the discriminant function between all managers combined as one group and NMP financial employees using the scales from the MSQ and PRF. The discriminant function was significant at the .05 level of probability. Of the seven scales selected, none were job satisfaction scales. The scale with the greatest weight was Play (.62).

Table 11 shows the discriminant function between MP lawyers and NMP lawyers using the MSQ and PRF. The discriminant function was significant at the .05 level of probability. Six personality need scales were selected and one job satisfaction scale. The scale with the greatest weight was Dominance (.92).

Table 12 shows the discriminant function between MP engineers and NMP engineers using the scales of the MSQ and the PRF. The discriminant function was significant at the .05 level of probability. Four personality need scales were selected. No job satisfaction scales were chosen. The greatest weights were in the Affiliation and Dominance scales, .76 for each.

Table 9

Discriminant Function Between Managers
and Non-Managing Professional Data Processors

Eigenvalue	D.F.	Wilks Lamda
.24	5	.80*

* $p < .05$

Variable	Coefficient
Dominance	-1.00
Exhibition	.81
Harmavoidance	.66
Impulsivity	.33
Understanding	.68

Table 10

Discriminant Function Between Managers
and Non-Managing Professional Financial Employees

Eigenvalue	D.F.	Wilks Lambda
.49	7	.67*

* $p < .05$

Variable	Coefficient
Aggression	.57
Autonomy	.39
Dominance	-.43
Exhibition	-.38
Nurturance	.55
Order	.55
Play	.62

Table 11

Discriminant Function Between Managerial
Personnel Lawyers and Non-Managing Professional Lawyers

Eigenvalue	D.F.	Wilks Lamda
1.64	7	.38*

* $p < .05$

Variable	Coefficient
General Job Satisfaction	-.77
Achievement	.47
Affiliation	.44
Dominance	-.92
Exhibition	.45
Harmavoidance	-.36
Nurturance	.83

Table 12

Discriminant Function Between Managerial Personnel
Engineers and Non-Managing Professional Engineers

Eigenvalue	D.F.	Wilks Lamda
1.57	4	.39*

* $p < .05$

Variable	Coefficient
Affiliation	.76
Dominance	.76
Harmavoidance	.71
Play	-.33

Table 13 shows the discriminant function between MP research scientists and NMP scientists using the scales of the MSQ and PRF. The discriminant function was significant at the .05 level of probability. All six scales selected were personality needs. None were job satisfaction scales. The factor with the greatest weight was Endurance (1.17).

Table 14 shows the discriminant function between MP data processors and NMP data processors using the scales of the MSQ and PRF. The discriminant function was significant at the .05 level of probability. All seven scales used were personality needs. No job satisfaction scale was selected. The factor with the greatest weight was Exhibition (1.97).

Table 15 shows the discriminant function between MP financial employees and NMP financial employees using scales from the MSQ and PRF. The discriminant function was significant at the .05 level of probability. Four scales were used, all of them personality needs. The factor with the greatest weight was Order (.90).

Table 16 presents the correlations of the MSQ and the PRF for MP lawyers. All of the job satisfaction scales were highly correlated. Three personality need scales correlated with the job satisfaction scales. Only one personality need scale for the lawyers correlated significantly with all three job satisfaction scales. All

Table 13

Discriminant Function Between Managerial Personnel Research Scientists and Non-Managing Professional Research Scientists

Eigenvalue	D.F.	Wilks Lamda
.94	6	.52*

* $p < .05$

Variable	Coefficient
Affiliation	-.63
Aggression	.54
Endurance	1.17
Exhibition	.38
Nurturance	.94
Order	-.86

Table 14

Discriminant Function Between
 Managerial Personnel Data Processors
 and Non-Managing Professional Data Processors

Eigenvalue	D.F.	Wilks Lamda
1.19	7	.46*

* $p < .05$

Variable	Coefficient
Dominance	-1.06
Exhibition	1.97
Harmavoidance	1.31
Impulsivity	-.83
Nurturance	-.58
Order	-.54
Understanding	.73

Table 15

Discriminant Function Between
 Managerial Personnel Financial Employees
 and Non-Managing Professional Financial Employees

Eigenvalue	D.F.	Wilks Lamda
.43	4	.70*

* $p < .05$

Variable	Coefficient
Aggression	.62
Harmavoidance	-.51
Nurturance	.67
Order	.90

Table 16

Correlation of Job Satisfaction Scores and Personality
Traits for Managerial Personnel Lawyers

	Job Satisfaction		
	General	Internal	External
Job Satisfaction			
General	1.00	.90*	.97*
Internal	.90*	1.00	.79*
External	.97*	.79*	1.00
Personality Traits			
Achievement	.30	.23	.29
Affiliation	-.29	-.28	-.35
Aggression	-.13	-.11	-.13
Autonomy	.27	.12	.33
Dominance	-.18	-.15	-.24
Endurance	.43	.33	.42
Exhibition	-.52	-.61*	-.42
Harmavoidance	.01	-.08	-.01
Impulsivity	-.33	-.27	-.24
Nurturance	.37	.53	.25
Order	-.41	-.28	-.45
Play	-.58*	-.61*	-.59*
Social Recognition	-.06	-.02	-.06
Understanding	.64*	.53	.61*

* $p < .05$

three were negatively correlated. The Understanding scale correlated significantly with two job satisfaction scales: general and external. Exhibition was correlated with Internal Job Satisfaction. The greatest correlation was the Understanding scale with the General scale (.64).

Table 17 shows the correlation of the scales from the MSQ and the PRF for NMP lawyers. All three scales of the job satisfaction questionnaire were significantly correlated. Six personality need scales were significantly correlated with one or more of the job satisfaction scales. Exhibition was the only scale to be correlated with all three job satisfaction scales. The Endurance scale correlated with the General Job Satisfaction scale and the External Job Satisfaction scale. External Job Satisfaction was significantly correlated with Achievement and Play, General Job Satisfaction with Understanding, and Internal Job Satisfaction with Impulsivity. The greatest correlation was the Exhibition scale and the General scale (.58).

Table 18 shows the correlation of the scales from the MSQ and the PRF for MP Engineers. There were three significant correlations. External Job Satisfaction scale correlated with the General Job Satisfaction (.87), Aggression (-.69), and Impulsivity (-.63). The greatest correlation was the Aggression scale and the External scale (-.69).

Table 17

Correlation of Job Satisfaction Scores and Personality Traits
for Non-Managing Professional Lawyers

	Job Satisfaction		
	General	Internal	External
<hr/>			
Job Satisfaction			
General	1.00	.87*	.92*
Internal	.87*	1.00	.66*
External	.92*	.66*	1.00
Personality Traits			
Achievement	.37	.26	.41*
Affiliation	.26	.16	.27
Aggression	-.02	.13	-.05
Autonomy	.05	.11	.02
Dominance	.16	-.35	.02
Endurance	.44*	.28	.49*
Exhibition	.58*	.56*	.52*
Harmavoidance	-.31	-.53	-.10
Impulsivity	.34	.44*	.17
Nurturance	.28	.14	.26
Order	.03	.15	-.04
Play	-.31	-.05	-.42*
Social Recognition	-.19	.03	-.34
Understanding	.42*	.27	.40

* $p < .05$

Table 18

Correlation of Job Satisfaction Scores and Personality
Traits for Managerial Personnel Engineers

	Job Satisfaction		
	General	Internal	External
Job Satisfaction			
General	1.00	.53	.87*
Internal	.53	1.00	.08
External	.87*	.08	1.00
Personality Traits			
Achievement	-.20	-.11	-.15
Affiliation	.04	-.25	.23
Aggression	-.46	.31	-.69*
Autonomy	-.39	-.52	-.09
Dominance	.11	.25	-.04
Endurance	-.30	-.35	-.21
Exhibition	-.42	-.37	-.32
Harmavoidance	.40	.13	.39
Impulsivity	-.52	.06	-.63*
Nurturance	-.08	-.05	-.07
Order	.05	-.09	.01
Play	-.19	-.07	-.19
Social Recognition	-.08	-.39	.10
Understanding	-.05	.12	-.04

* $p < .05$

Table 19 shows the correlation of the scales from the MSQ and the PRF for NMP engineers. All three scales of the job satisfaction questionnaire were significantly correlated. Three personality need scales were correlated with the Job Satisfaction scales. The Dominance scale correlated with General (.46) and Internal (.45) scales. Impulsivity correlated with Internal (.44) and External with Nurturance (-.52). The greatest correlation was the Nurturance scale and the External scale (-.52).

Table 20 presents the correlation of the scales of the MSQ and the PRF for MP Research Scientists. The three scales of the job satisfaction questionnaire were significantly correlated with each other. Only three personality need scales correlated with the job satisfaction scales. Dominance correlated with General (.57) and Internal (.64), Impulsivity with Internal (.60), and Understanding with External (-.60). The greatest correlation was the Dominance scale with the Internal scale (.64).

Table 21 shows the correlation of the scales of the MSQ and the PRF for the NMP Research Scientists. Within the job satisfaction questionnaire, the internal scales significantly correlated with the general scale. Four personality need scales correlated with the job satisfaction scales. Social Recognition correlated with both General (.50) and Internal (.45). Both the Exhibition scale correlated with the Internal scale (.52). The

Table 19

Correlation of Job Satisfaction Scores and Personality
Traits for Non-Managing Professional Engineers

	Job Satisfaction		
	General	Internal	External
Job Satisfaction			
General	1.00	.90*	.80*
Internal	.90*	1.00	.48*
External	.80*	.48*	1.00
Personality Traits			
Achievement	-.12	-.07	-.12
Affiliation	-.13	-.11	-.10
Aggression	.24	.31	.11
Autonomy	.32	.30	.33
Dominance	.46*	.45*	.33
Endurance	-.20	-.18	-.16
Exhibition	.16	.16	.15
Harmavoidance	-.37	-.27	-.36
Impulsivity	.31	.44*	.07
Nurturance	-.22	-.01	-.52*
Order	-.24	-.35	-.04
Play	.23	.17	.14
Social Recognition	.02	-.04	.13
Understanding	.03	.08	.00

* $p < .05$

Table 20

Correlation of Job Satisfaction Scores and Personality
Traits for Managerial Personnel Research Scientists

	Job Satisfaction		
	General	Internal	External
Job Satisfaction			
General	1.00	.94*	.89*
Internal	.94*	1.00	.69*
External	.89*	.69*	1.00
Personality Traits			
Achievement	.18	.37	-.11
Affiliation	.06	.31	-.33
Aggression	-.11	-.04	-.17
Autonomy	-.07	-.26	.26
Dominance	.57*	.64*	.39
Endurance	-.27	-.16	-.41
Exhibition	-.15	-.22	-.06
Harmavoidance	.17	.14	.16
Impulsivity	.52	.60*	.33
Nurturance	.03	.24	-.34
Order	-.16	-.01	-.35
Play	.23	.15	.32
Social Recognition	.14	.39	-.25
Understanding	-.41	-.23	-.60*

*p .05

Table 21

Correlation of Job Satisfaction Scores
and Personality Traits for Non-Managing
Professional Research Scientists

	Job Satisfaction		
	General	Internal	External
<hr/>			
Job Satisfaction			
General	1.00	.86*	.09
Internal	.86*	1.00	-.11
External	.09	-.11	1.00
Personality Traits			
Achievement	.25	.29	-.54*
Affiliation	.37	.29	-.08
Aggression	-.17	.01	.02
Autonomy	-.08	-.13	.00
Dominance	.24	.24	-.29
Endurance	.31	.07	-.28
Exhibition	.33	.52*	-.12
Harmavoidance	.31	.24	.37
Impulsivity	-.35	-.05	.16
Nurturance	.13	.19	-.10
Order	.22	.07	-.18
Play	.01	.15	-.01
Social Recognition	.50*	.45*	.32
Understanding	-.01	-.06	-.49*

* $p < .05$

Achievement scale and the Understanding scale had a negative correlation with the External scale (respectfully, $-.54$, $-.49$). The greatest correlation was the Achievement scale with the External scale ($-.54$).

Table 22 presents the correlation of the scales of the MSQ and the PRF for MP Data Processors. All the job satisfaction scales were significantly correlated with each other. Five personality need scales significantly correlated with the job satisfaction. Aggression and Order were negatively correlated with all three job satisfaction scales. Endurance was negatively correlated with General and Internal Job Satisfaction. Exhibition was negatively correlated with Internal Job Satisfaction. The greatest correlation was the Endurance scale with the Internal scale ($-.72$).

Table 23 shows the correlation of the scales of the MSQ and the PRF for NMP data processors. The job satisfaction scale intercorrelations showed that the General scale was significantly correlated with the Internal and External scales. However, the Internal and External scales were not significantly correlated. Only one personality need scale significantly correlated with the job satisfaction scales, Harmavoidance. It was negatively correlated with all three satisfaction scales, the greatest being the general scale ($-.60$).

Table 22

Correlation of Job Satisfaction Scores and Personality
Traits for Managerial Personnel Data Processors

	Job Satisfaction		
	General	Internal	External
Job Satisfaction			
General	1.00	.94*	.94*
Internal	.94*	1.00	.78*
External	.94*	.78*	1.00
Personality Traits			
Achievement	.00	-.02	-.02
Affiliation	.21	.16	.34
Aggression	-.64*	-.68*	-.57*
Autonomy	-.21	-.10	-.37
Dominance	-.46	-.47	-.44
Endurance	-.65*	-.72*	-.51
Exhibition	-.48*	-.56*	-.37
Harmavoidance	.16	.28	.08
Impulsivity	.42	.21	.56*
Nurturance	-.06	.07	-.03
Order	-.65*	-.58*	-.64*
Play	.16	.00	.38
Social Recognition	-.11	-.16	.06
Understanding	-.04	-.07	-.04

* $p < .05$

Table 23

Correlation of Job Satisfaction Scores and Personality
Traits for Non-Managing Professional Data Processors

Job Satisfaction	Job Satisfaction		
	General	Internal	External
General	1.00	.84*	.74*
Internal	.84*	1.00	.28
External	.74*	.28	1.00
Personality Traits			
Achievement	.08	.12	.04
Affiliation	.06	.15	-.07
Aggression	-.02	.07	-.11
Autonomy	-.09	-.24	.09
Dominance	-.05	.10	-.14
Endurance	.25	.27	.11
Exhibition	.34	.37	.18
Harmavoidance	-.60*	-.49*	-.48*
Impulsivity	.22	.21	.15
Nurturance	.11	.19	-.05
Order	-.05	.04	-.07
Play	-.09	-.04	-.11
Social Recognition	.13	.17	.09
Understanding	-.04	-.07	-.04

* $p < .05$

Table 24 shows the correlation of the scales on the MSQ and the PRF for the MP financial employees. All the intercorrelations of the job satisfaction questionnaire were significant and in the positive direction. Only two personality need scales were significantly correlated with the satisfaction scales. The Exhibition scale negatively correlated with the Internal scale (-.54). The Harmavoidance scale had a negative correlation with the External scale (-.56), this being the greatest correlation.

Table 25 presents the correlation of the scales of the MSQ and the PRF for NMP financial employees. All intercorrelations of the job satisfaction scales were positive and significant. Nine personality need scales were correlated with job satisfaction scales. Aggression, Dominance, Impulsivity, and Play were negatively correlated with all three job satisfaction scales. Harmavoidance and Order were positively correlated with all three scales. Affiliation and Exhibition were both negatively correlated with the General and External scales. Social Recognition correlated with the Internal scale (-.41). The greatest correlation was Aggression and Internal Job Satisfaction (-.61).

Hypotheses Tested

The hypotheses used for this study were selected to investigate differences between the five NMP groups and two different groupings of managers; altogether as one

Table 24

Correlation of Job Satisfaction Scores and Personality
Traits for Managerial Personnel Financial Employees

	Job Satisfaction		
	General	Internal	External
Job Satisfaction			
General	1.00*	.99*	.94*
Internal	.99*	1.00*	.92*
External	.94*	.92*	1.00
Personality Traits			
Achievement	.05	.08	-.10
Affiliation	.11	.00	.06
Aggression	-.03	-.11	.12
Autonomy	.17	.29	.15
Dominance	.15	.14	-.07
Endurance	.38	.33	.21
Exhibition	-.45	-.54*	-.35
Harmavoidance	-.45	-.43	-.56*
Impulsivity	.04	-.02	.11
Nurturance	-.24	-.24	-.15
Order	.01	.07	-.06
Play	-.30	-.35	-.15
Social Recognition	.04	-.02	.11
Understanding	.46	.43	.41

* $p < .05$

Table 25

Correlation of Job Satisfaction Scores and Personality Traits for Non-Managing Professional Financial Employees

	Job Satisfaction		
	General	Internal	External
<hr/>			
Job Satisfaction			
General	1.00	.91*	.80*
Internal	.91*	1.00	.69*
External	.80*	.69*	1.00
<hr/>			
Personality Traits			
Achievement	.00	-.07	.04
Affiliation	-.44*	-.34	-.41*
Aggression	-.55*	-.61*	-.49*
Autonomy	-.23	-.24	-.13
Dominance	-.47*	-.38*	-.48*
Endurance	-.07	.05	-.16
Exhibition	-.45*	-.32	-.49*
Harmavoidance	.40*	.41*	.41*
Impulsivity	-.50*	-.45*	-.46*
Nurturance	.07	.25	-.08
Order	.42*	.42*	.45*
Play	-.56*	-.47*	-.51*
Social Recognition	-.34	-.41*	-.24
Understanding	-.16	-.11	-.12

* $p < .05$

group or in separate career fields. The second area of interest was what relationships are there between job satisfaction and personality needs for NMPs and MPs.

Hypothesis 1: There are no differences in personality needs and job satisfaction between NMPs and MPs.

The discriminate functions for each NMP group (e.g. lawyers, engineers, research scientists, data processors and financial accountants) and the managers grouped together as a whole were significant; thus hypothesis 1 is rejected.

Hypothesis 2: There are no differences in personality needs and job satisfaction among subgroups (e.g. lawyers, engineers, research scientists, data processors, and financial employees of NMPs and their corresponding MP groups).

The discriminate functions for each of the separate career groups were significant; thus Hypothesis 2 is rejected.

Hypothesis 3: There are no relationships among job satisfaction and personality needs for either NMPs or MPs.

There were significant correlations in all subgroups; therefore, Hypothesis 3 is rejected.

CHAPTER V
DISCUSSION, RECOMMENDATIONS AND IMPLICATIONS

Discussion

The results of this study show differences between MPs and NMPs within each of the five occupational subgroups. There also were significant correlations among some of the personality traits and job satisfaction scores.

Although there were significant results, a limitation was present in the study which may have affected the results and affected the generalizations. Prior to collecting the data, one company had initially agreed to provide all of the participants. However, they were unable to provide a sufficient number of subjects. Consequently, four additional companies were contacted to provide the remainder of the subjects. The results may have been affected by these differences in companies.

The results of this study also show that most of education is an important factor in that it is related to degree of professionalism. Education has been shown to be an important trait in professional engineers (Kerr et al., 1977). As a result, this study only selected those engineers with at least a master's degree. The data processing NMPs and the financial accountant NMPs were not restricted

to this degree and had a lower amount of education than did the engineers, lawyers, and research scientists. They had stronger opposite weights on several factors in their discriminate functions with managers: Dominance, Harmavoidance, and Impulsivity. They showed no differences in job satisfaction, while lawyers and engineers did. The data processing and financial accountant NMPs differed from the other groups and are possibly at the career oriented end of the professional versus vareer oriented scale, as is true of engineers without graduate degrees.

Although all ten discriminant functions were significant, no single personality trait or job satisfaction score differentiated between managers and non-managers in all ten functions. However, there were factors that discriminated for several groups. Dominance was a significant factor in 6 of the 10 functions. Harmavoidance was selected as a factor in 5 of the 10 functions. Exhibition was a discriminator in 4 of the 10 functions.

Further definition of professional orientation was shown by the differences between MP and NMPs within each of the different fields. There were high achievement needs within each group, as was suggested by Greenwald (1978). However, there was a low need level in each of the different fields for autonomy as compared to the norms developed by Jackson. The opposite result was expected. The NMPs were suggested to have a high autonomy or at least average scores (Ritti, 1968). Even though there

was support for the concept of a group of people defined as NMPs, there is much to suggest that it is defined differently in each career field. The discriminant functions were radically different in some cases, such as lawyers vs. engineers.

Few personality traits appear to correlate consistently across groups with any of the job satisfaction scores. Several reasons may have caused this. For example, the job satisfaction scores may have had a strong relationship to the working conditions. Also, the measurement may have not been sensitive enough to show any correlation. Finally, individuals with a moderate or low satisfaction score may have left the field, or never entered it. There did seem to be a wide range of scores, so that the first proposition is most likely to be true.

The job satisfaction subscores were not very useful in this study. In almost all subgroups these scores were highly correlated. This suggests that they were measuring one general factor for these groups of subjects. The major exception was the correlation of Internal Job Satisfaction with General and External Job Satisfaction for NMP Research Scientists.

Implications

Although some limitations affected this study, implications can be made from it. The amount of education

is related to the sense of professionalism, regardless of field. This would have implications for all types of career fields such as counseling and education, and certified public accountants inside and outside of the business community. Those persons who function as private practitioners in the community, particularly those who are licensed, may need to have an educational requirement. This requirement, in addition to making sure that these people have a knowledge base, would mean that these people who are licensed are more likely to have accepted the ethics and methods of conduct generally espoused by the profession, further protecting the public.

Those factors which are highly discriminating between the MPs and NMPs are useful in the processes of developing and selecting managers. They can help in developing training programs for different fields and can help in individuals' self knowledge and understanding. They can be used in training programs to select the better candidates for a managerial training program. In developing training programs for NMPs those areas that discriminate them from managerial personnel can be highlighted, explained and used to increase self awareness. Since dominance appeared to be a discriminator for all career fields studied, those people that are low in need for dominance, yet want to manage may benefit from a training program in leadership skills.

Recommendations

The definition of a professional merits further examination because of the lack of consistent discriminating factors between MP and NMPs in each of the occupations studied. The definition needs to be made clearer by examining different professionals and different careers for similarities and differences on a variety of relevant traits. Professionals who function independently from a business organization, such as management consultants, accountants, and engineers also need to be examined for a clearer definition of professionals.

The results of this study on job satisfaction conflict with previous research (Greenwald, 1978). It would have been predicted that satisfaction would have occurred more as a discriminator between MPs and NMPs, particularly since each MP group consisted of professionals who became managers. However, in the 10 functions produced, job satisfaction was selected only three times as a discriminator. Further research needs to be conducted to verify the differences in job satisfaction. Specifically, in which fields and under what conditions do these job satisfaction differences occur?

The differences of the data processing groups from the engineers, lawyers, and research scientists, as already stated, suggests that some fields may just be beginning to develop their identities as professionals. Their

fields of knowledge are expanding, requiring more education to practice in this area. Professional associations are gaining an identity and are organizing their efforts. Data processing is moving toward the professional end of the professional versus career oriented scale. It would be useful to investigate the relationship of amount of education data processors have and their senses of professionalism. It would seem that those with graduate degrees are more likely to be less career oriented and more professionally oriented.

Generally, both the MFs and the NMPS were very satisfied with their jobs, although the MFs were a little more so. MFs and NMPS both characterized by higher need levels than the normal population in Achievement, Endurance, Harmavoidance, Nurturance, Order and Understanding. They had lower need levels in Aggression, Autonomy, Impulsivity, Play and Social Recognition, and about the average need level of Dominance while the NMPS were almost average.

This study found significant differences between MFs and NMPS on personality traits. However, there were few differences in job satisfaction, and little relationship between the job satisfaction scores and personality traits. A better and clearer definition of professionals needs to be developed. Their roles in the business world as well as the community will continue to grow.

APPENDIX A

The traits defined by Jackson (1974) are as follows:

TABLE A

PERSONALITY RESEARCH FORM

<u>Scale</u>	<u>Defining Trait Adjectives</u>
Achievement	striving, accomplishing, capable, purposeful, attaining, industrious, achieving, aspiring, enterprising, self-improving, productive, driving, ambitious, resourceful, competitive
Affiliation	neighborly, loyal, warm, amicable, good-natured, friendly, companionable, genial, affable, cooperative, gregarious, hospitable, sociable, affiliative, good-willed
Aggression	aggressive, quarrelsome, irritable, argumentative, threatening, attacking, antagonistic, pushy, hot-tempered, easily-angered, hostile, revengeful, belligerent, blunt, retaliative
Autonomy	unmanageable, free, self-reliant, independent, autonomous, rebellious, unconstrained, individualistic, ungovernable, self-determined, non-conforming, uncompliant, undominated, resistant, lone-wolf
Dominance	governing, controlling, commanding, domineering, influential, persuasive, forceful, ascendant, leading, directing, dominant, assertive, authoritative, powerful, supervising
Endurance	persistent, determined, steadfast, enduring, unfaltering, persevering, unremitting, relentless, tireless, dogged, energetic, has stamina, sturdy, zealous, durable

Exhibition	colorful, entertaining, unusual spellbinding, exhibitionistic, conspicuous, noticeable, ex- pressive, ostentatious, immodest, demonstrative, flashy, dramatic, pretentious, showy
Harmavoidance	fearful, withdraws from danger, self-protecting, pain avoidant, careful, cautious, seeks safety, timorous, apprehensive, precau- tionary, unadventurous, avoids risks, attentive to danger, stays out of harm's way, vigilant
Impulsivity	hasty, rash, uninhibited, spontaneous, reckless, irrepressible, quick- thinking, mercurial, impatient, in- cautious, hurried, impulsive, fool- hardy, excitable, impetuous
Nurturance	sympathetic, paternal, helpful, be- nevolent, encouraging, caring, pro- tective, comforting, maternal, supporting, aiding, ministering, consoling, charitable, assisting
Order	neat, organized, tidy, systematic, well-ordered, disciplined, prompt, consistent, orderly, clean, metho- dical, scheduled, planful, unvarying, deliberate
Play	playful, jovial, jolly, pleasure- seeking, merry, laughter-loving, joking, frivolous, prankish, spor- tive, mirthful, fun-loving, gleeful, carefree, blithe
Social Recognition	approval seeking, proper, well-be- haved, seeks recognition, courteous, makes good impression, seeks respec- tability, accommodating, socially proper, seeks admiration, obliging, agreeable, socially sensitive, de- sireous of credit, behaves appropri- ately
Understanding	inquiring, curious, analytical, explor- ing, intellectual, reflective, in- cisive, investigative, probing, logi- cal, scrutinizing, theoretical, astute, rational, inquisitive

APPENDIX B

INTRODUCTORY LETTER

Dear _____:

(Subject's Supervisor's name) suggested you would be willing to participate in a research study I am conducting. I am requesting that you complete two short questionnaires: a personality inventory and a job satisfaction questionnaire. In return for your participation I will review the results with you. The advantage to you for participating will be receiving some feedback about yourself as a person. Some information will reaffirm what you already know. The rest may provide you with additional insight into understanding yourself. It is not often that we are able to find out about ourselves.

The instruments are self administered and the average time needed for completion is about one hour. The personality inventory covers a broad range of categories, which are useful in describing our significant personality traits. The job satisfaction questionnaire provides an indication of what people are satisfied with in their jobs.

I will call you within the next week to answer any questions you may have and to establish a mutually convenient time for delivering the questionnaires to you.

Sincerely,

Lynn A. Walker

APPENDIX C

BIOGRAPHICAL QUESTIONNAIRE

1. Name _____
2. Today's date _____ 19 _____
3. Circle one: Male Female
4. Circle one: Caucasian, Afro-American, Hispanic,
other--Specify _____
5. Birth date: _____ 19 _____
6. Circle the number of years of schooling you have
completed:

4,5,6,7,8	9,10,11,12	13,14,15,16	17,18,19,20
grade school	high school	college	graduate or professional school
7. What is your present job title? _____

8. What is your primary function in your present job?

9. How long have you been on your present job? ___years,
___months.
10. How long have you been in this line of work? ___years,
___months.
11. How many people do you supervise? _____

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BIOGRAPHICAL SKETCH

Lynn Artie Walker was born October 9, 1954, to Joseph L. and Artie E. Walker, in Maryville, Missouri. He attended McCluer Senior High School in Florissant, Missouri, and graduated in June 1972.

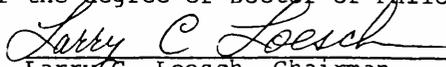
In August, 1972, he entered the University of Missouri-Columbia. He received the degree of Bachelor of Arts in psychology in May, 1976.

In August, 1976, he entered the University of Florida. He achieved the degree of Master of Education in December, 1977.

The author is currently employed as a management consultant for business and industries.

He is married to Debra Renee Walker and has two children: Nolan and Whitney.

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.



Larry C. Loesch, Chairman
Professor of Counselor Education

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.



Robert O. Stripling
Distinguished Service Professor
Emeritus of Counselor Education

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.



Richard J. Anderson
Distinguished Service Professor
Emeritus of Psychology

This dissertation was submitted to the Graduate Faculty of the Division of Curriculum and Instruction in the College of Education and to the Graduate Council, and was accepted as partial fulfillment of the requirements for the degree of Doctor of Philosophy.

August, 1983

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