PERSONALITY SUBGROUP INFORMATION AS A PREDICTOR OF CAREER SUCCESS: BIG FIVE PERSONALITY PROFILES AND HOLLAND'S OCCUPATIONAL GROUPS

by

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(Under the Direction of Garnett Stokes)

ABSTRACT

The primary purpose of this study was to use the Big Five Personality dimensions in order to predict career success using profile level judgments of personality in addition to scale level measurements. In other words, would profile level judgments provide a better understanding of career success over scale level predictions? In addition, would differing personality "profiles" emerge as successful when the relationship between personality and career success were investigated within differing occupational groups as categorized by Holland's typology, and would subgroup membership once again provide incremental predictive validity of career success among different occupations? The profile that predicted both subjective and objective success was characterized by individuals who were extremely extraverted and emotionally stable, and had moderately high levels of agreeableness and openness to experiences. The profile that predicted salary was characterized by high levels of extraversion, but low levels of emotional stability and moderately low levels of agreeableness and conscientiousness. Explanation of the lack of significant findings for the number of promotions is provided. The addition of subgroup information based on the Big Five personality dimensions did not add significant incremental validity over individual personality dimensions to the

prediction of objective or subjective career success, however implications and importance of the use of personality profiles is discussed. Only three out of the six hypotheses predicting subjective career success among Holland's occupations were tested due to insignificant sample sizes among three of the occupational groups. Possibility of using a different taxonomy that is based on more narrowly defined occupational characteristics is suggested. In sum, the current study made the first step in attempting to bridge some of the identified knowledge gaps within the personality and career success literature. While not all research questions can be answered within a single investigation, the current study contributed unique information to the growing body of literature relating personality to career success. The results of this study supported the notion that dispositional characteristics play a key role in organizational behavior, and that personality should definitely be included in models of career success.

INDEX WORDS: Personality, Big Five, Profiles, Holland's, Career Success

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DEDICATION

I would like to dedicate my dissertation to all of the members of my immediate family. Without their love and support (both emotional and financial) I would not be where I am today. My parents, Dr. Alberto and Luiza Barroso, have always said that I could accomplish anything I set my mind to. I did not always believe them, but they never gave up on me. They have continuously shown their love for me no matter what I did, and I truly believe I would not be who I am today without them. My two sisters, Luciana Barroso and Renata Sandweg, have been the best sisters anyone could ask for. The are truly my best friends. They were always there for me when I needed someone to talk to and they could always make me laugh when I was too stressed out. Their support was priceless. Muito obrigado. Eu amo todos voces. Beijinhos.

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CHAPTER 1

INTRODUCTION

What is it that makes one person more successful than another? Over the years, psychologists have increasingly tried to answer this question by performing studies that have attempted to identify the antecedents of career success. As a result, a variety of career success models have emerged. Comprehensive models of career success have included a number of individual (e.g., demographic, human capital, and motivational variables) as well as organizational variables (e.g., firm size, industry sector, and geographic location; Seibert, Crant, & Kraimer, 1999). However, most of the research into the antecedents of career success has largely examined human capital attributes (e.g., training, work experience, education) and demographic factors (e.g., age, sex, marital status, number of children; Judge, Higgins, Thoresen, & Barrick, 1999).

Among the demographic factors examined, some have been shown to help individuals attain success, while others have been shown to hinder an individual's pursuit of success (Jaskolka, Beyer, & Trice, 1985; Judge, & Bretz, 1994). More specifically, several studies have found that greater education, tenure, or age contribute to the attainment of greater salary or higher organizational status, which are accepted measures of career success, while being female and nonwhite might hinder one's salary or status attainment (Jaskolka, Beyer, & Trice, 1985). Judge, Cable, Boudreau, and Bretz, (1995) found that being married with a spouse who was not employed outside the home as well as being male also contributed to greater career success.

Other variables such as educational attainment, educational content (i.e., individual's major field of study), job tenure, hours worked per week, organizational size, and organizational success among other things have also been found to be related in some way to an individual's general measure of career success (Judge, Cable, Boudreau, & Bretz, 1995).

Although much can be gained from past research on what predicts career success, several researchers agree that the research has been limited due to its focus on ability, achievement, and organizational characteristics (Whitely, Dougherty, & Dreher, 1991; Judge & Bretz, 1994; Judge, Higgins, Thoresen, & Barrick, 1999). Although these classes of influences have provided important insights into the determinants of career success, a recent review of the career success literature suggested that few studies have taken a more comprehensive, personological approach (Tharenou, 1997).

More specifically, Seibert, Crant, and Kraimer (1999) advocated that there is a strong theoretical rationale to suggest that personality variables should be included in models of career success. Most research on careers view individuals as passive, emphasizing the influence of situations on human behavior (Seibert, Crant, & Kraimer, 1999), yet individual dispositions seem to play a key role in organizational behavior (House, Shane, & Herold, 1996). Bell and Staw (1989) argued that personality could ultimately affect outcomes that appear to be determined by environmental forces through the process of personal control. In addition, Judge, Higgins, Thoresen, and Barrick (1999) agreed stating that little research has entertained the idea that career success may have dispositional causes.

Personality has been found to be an important predictor in many other related domains of organizational behavior including leadership (Lord, deVader, & Alliger, 1986; Mumford, O'Connor, Clifton, Connelly, & Zaccaro, 1993), job performance (Barrick & Mount, 1991), and

job satisfaction (Judge, Locke, Durham, & Kluger, 1998), yet researchers have only recently begun to investigate the relationship between personality and career success. More specifically, most of the previous research in the area of personality within the personnel domain has largely focused on job performance. Job performance and career success are different criteria, however, and it is important for researchers to look beyond personality effects on performance only. Job performance reflects one's level of effectiveness in performing specific job tasks and duties and is measured with respect to a specific job (Greenhaus & Parasuraman, 1993). In contrast, career success represents the material rewards (extrinsic success) as well as the positive emotional state resulting from an appraisal of one's job or career (intrinsic success) that an individual accumulates over a sequence of jobs (Judge et al., 1995). Theoretically one could have two equally high performing employees (possibly in different fields and/or organizations) with two very different measures of both objective and subjective success.

Some researchers have attempted to investigate the relationship between personality and career success, and although those results show personality to be significantly related to career success, the direction and strength of those relationships are not consistent. There are a couple of possibilities as to why there are inconsistent findings in the personality and career success literature.

The first explanation is that all of the research in this area has focused on a variable-oriented approach, and has not focused on the identification of profiles or subgroups (also referred to as "clusters", "subsets", "types" or "typologies") of personality that relate to career success. This identification of profiles or subgroups of personality would answer the question: What "type" of person is most successful?

The word "type" has been used in a variety of ways in the literature. Cattell (1957) has isolated no less than 45 different meanings of the work "type" in psychology. Cattell, Coulter, and Tsujioka (1966) defined it as "the central profile tendency found in a defined subgroup of a population, which is measurable on certain dimensions. The subgroup is not arbitrarily defined but recognized by its constituting an unusual frequency of occurrence and segregation in the general population on a dimension or combination of dimensions" (pp. 290-291). The terms "type", "cluster", "subgroup", and "profile" will be used interchangeably within this paper and will be used to refer to the idea that individuals within a subgroup or type are more similar on a set of dimensions than individuals in different subgroups or types.

Toops (1959) stated that, "the most meaningful thing that can be said of a person is that he or she belongs to a subgroup, the behavioral tendencies of which are known (p.67)." Psychologists have long recognized the importance of classifying individuals by behaviors or traits as a method of studying and understanding human behavior (Owens & Schoenfeldt, 1979; Toops, 1948). Owens & Schoenfeldt (1979) went on to state that this type of classification should be one of the primary responsibilities of applied psychologists.

While the use of subgroup membership as opposed to individual variables has been shown to be a viable method for prediction, most researchers have not directly tested the predictive power differences between the two methods. In fact, the author is only aware of one such study that compared the predictive power of subgroup membership to individual variables (Feild, Lissitz, & Schoenfeldt , 1975). Their conclusion was that each accounted for unique variance in the outcome variables and that the prediction of several criteria was significantly improved by the addition of subgroup membership to individual variables. Feild et. al.'s (1975) study will be discussed in further detail later in this paper.

A second possible explanation as to why there have been inconsistent findings in the personality and career success literature is that even fewer studies have taken into account the differing personality demands of different types of occupations and the fact that different occupations may require different personalities in order to be successful. Hogan and Hogan (1991) reviewed the literature regarding the relationship between personality and success in a set of occupations classified in terms of the Holland types and concluded two things. First, there are indeed clear and sensible links between personality and occupational performance, and second, the pattern of personality variables associated with occupational success depends on the occupation. In addition, the results of a recent meta-analysis of the relationship between the five-factor model of personality and interest in Holland's occupational types indicate that, although personality is not a substitute for vocational interest, there is a significant relationship between several of the Big Five personality dimensions and particular occupational types (Barrick, Mount, & Gupta, 2003).

Given that personality has predicted differentially among different occupations when it comes to job performance (Barrick & Mount, 1991; Tett, Jackson, & Rothstein, 1991), vocational interest (Barrick, Mount, & Gupta, 2003), as well as occupational attainment (Stokes, Barroso, Hecht, & Boyle, 1999), it is a probable conclusion that the successful personality "type" will also depend on the type of occupation.

In sum, the primary purpose of this study is to use the Big Five Personality dimensions in order to predict career success using profile level judgments of personality in addition to scale level measurements. In other words, do profile level judgments provide a better understanding of career success over scale level predictions? In addition, will differing personality "profiles" emerge as successful when the relationship between personality and career success is

investigated within differing occupational groups as categorized by Holland's typology, and will this subgroup membership once again provide incremental predictive validity of career success among different occupations?

This study has implications not only for the individual, but also for vocational and outplacement counselors as well as for organizations. Individuals can either shape their development plan to incorporate behaviors associated with those personality characteristics identified as successful for an occupation, or they can choose to gravitate towards other occupations where there is a better fit for success given their personality profiles. Vocational and outplacement counselors can similarly use the results of this study to help guide individuals towards occupations that correspond to their personalities for success. Finally, based on the assumption that the traits that make a person successful in their own careers will also help organizations to be successful in their missions as well, organizations can use this information to help guide them in selecting individuals who have the successful personality profile related the specific position for which they are being considered (recognizing that different positions within a single organization vary in terms of Holland's Occupational Taxonomy).

Career Success

Career success has been defined in terms of the real or perceived positive psychological and work-related outcomes or achievements accumulated as a result of one's work experiences (Judge, Cable, Boudreau, & Bretz, 1995; Judge, Higgins, Thoresen, & Barrick, 1999; Kraimer & Seibert, 2000; London & Stumpf, 1982; Seibert, Crant, & Kraimer, 1999). Career success is an evaluative concept, so judgments of career success depend on who does the judging (Judge et al, 1995). Previous research generally partitions career success into two components (Derr, 1986; Judge et al, 1995; Judge et al, 1999; Kraimer & Seibert, 2000). Career success as judged by

others usually references observable criteria. This type of career success is usually referred to as external or extrinsic career success because it can be measured by observable, objective metrics such as salary and number of promotions and refers to highly visible outcomes that are instrumental rewards from the job or occupation (Judge et al, 1995; Judge et al, 1999; Kraimer & Seibert, 2000). Career success as judged by the individual pursuing the career usually references some subjective measure of career success. This type of career success is usually referred to as internal or intrinsic career success, and is typically measured in terms of career satisfaction, which is an individual's own determinants or feelings of accomplishment and satisfaction with their careers (Derr, 1986; Judge et al, 1995; Judge et al, 1999). It usually refers to factors which are inherent in the job or occupation itself and is dependent on the job incumbent's subjective evaluation relative to his or her own goals and expectations (Kraimer & Seibert, 2000). Research confirms the notion that extrinsic and intrinsic career success can be assessed as relatively independent outcomes, as they are only moderately correlated (Bray & Howard, 1980; Judge & Bretz, 1994; Judge et al, 1999)

Derr (1986) formulated that there were actually five definitions of internal career success. These definitions reflect five different patterns or cognitive maps of what constitutes career success depending on the individual and his or her goals and expectations. In addition, career success is seen as the interplay between work, relationships and self-development activities.

According to Derr (1986), understanding these five career-success orientations must be qualified in four ways. First, it is important to note that work experiences shape these cognitive maps, so that an individual may begin his/her career by accepting the idea that success means getting ahead, but might learn through experience that getting "free" (freedom from structure and/or supervision) or getting "secure" (job security and/or good benefits) is more appropriately

his/her definition of career success. Second, the specifics of following a certain career success map also depend on contextual variables such as organizational culture, available opportunities, and sometimes just plain luck. Third, while some individuals plan or try to plan the course of their careers, others allow opportunities to dictate the complete course of their career. Finally, these internal career orientations can change with new self-discoveries or personal events that trigger major conceptual or emotional shifts.

As a result of self-perceived discrepancies between the internal and external careers, an individual might change her internal career orientation in order to resolve the perceived dilemma (Derr, 1986; Mihal, Sorce, & Compte, 1984). This is why one must look at both internal (intrinsic) as well as external (extrinsic) measures of career success. Korman, Wittig-Berman, and Lang (1981) found that objectively successful managers did not always feel successful or satisfied with what they had accomplished. An individual could objectively have achieved a high-level position, be earning a high salary, have attained a number of promotions, yet s/he could still be dissatisfied with his or her job or career.

Although there has been some research that has found that objective and subjective success are moderately related in a positive direction (Bray & Howard, 1980; Judge & Bretz, 1994), both of these aspects of career success are conceptually and empirically distinct (Judge & Bretz, 1994; Kraimer & Seibert, 2000) and should both be used in order to provide a broad measure of career success (Seibert, Crant, & Kraimer, 1999). In addition, there has not been an extensive amount of research which has simultaneously examined both the objective (external) and subjective (internal) aspects of career success (Judge, Cable, Boudreau, & Bretz, 1995).

Five-Factor Model of Personality

Researchers have long searched for a defining structure of personality. This extensive search led to the emergence of a model of personality that classifies personality characteristics into five broad dimensions. This structure of personality is commonly referred to as the Big Five (Barrick & Mount, 1991; Digman, 1989; Digman, 1990; McCrae, & John, 1996).

In 1932, McDougall wrote that, "personality may to advantage be broadly analyzed into five distinguishable but separate factors…" (p.15). A few years later, Cattell developed a complex taxonomy that consisted of 16 primary factors. Repeated attempts to replicate Cattell's finding were unsuccessful, and researchers found that five factors accounted for the data just as well. Tupes and Christal (1961) reanalyzed the data reported by Cattell and found support for five factors, and they are often accredited for having discovered the Big Five.

The Big Five is a result of nearly 50 years of factor analytic research on the structure of observer ratings (Hogan, 1991) and self-report personality measures (Goldberg, 1992). Although the acceptance of the Big Five has not gone without criticism (Block, 1995), the fact that the structures seem to hold up across cultures (Bond, Nakazato, & Shiraishi, 1975; McCrae & Costa, 1997; Noller, Law, & Comrey, 1987) and remain fairly stable over time (Costa & McCrae, 1992) has led to the widespread acceptance of the five-factor model among most personality researchers (Judge & Bono, 2000). Another important point to note is that these five factors seem to be relatively independent of cognitive ability measures (McCrae & Costa, 1987).

The Big Five personality traits are broad personality dimensions that are made up of more narrow or specific traits. The five broad factors include Extraversion, Agreeableness, Conscientiousness, Emotional Stability, and Openness to Experience. The first factor, extraversion, consists of the tendency to be sociable, assertive, gregarious, and active.

Individuals that score high on this factor are strongly predisposed to the experience of positive emotions or affect (Costa & McCrae, 1992; Watson & Clark, 1997), they are more likely to take on leadership roles, and are more impulsive than introverts (Watson & Clark, 1997). They are also more likely to have a higher number of strong relationships with others (DeNeve & Cooper, 1998).

The second factor, agreeableness, represents the tendency to be kind, courteous, flexible, gentle, trusting, warm, cooperative, altruistic, forgiving, and tolerant. This factor tends to focus on the type of relationship, or the quality of relationships, rather than the number of relationships a person attains.

The third factor, conscientiousness, is often characterized by its two major facets, achievement orientation and dependability, but also includes traits such as persistence, organization, thoroughness, self-discipline, ability to plan, and reliability. Conscientiousness is related to an individual's degree of self-control as well as her need for achievement and persistence (Judge, Higgins, Thoresen, & Barrick, 1999).

The fourth factor, emotional stability, is also commonly referred to by its opposite, neuroticism. Neuroticism is indicated by the tendency to be anxious, depressed, moody, emotional, impulsive, worried, insecure and fearful. Individuals who score high on neuroticism are more likely to have a variety of problems including negative moods that tend to linger and physical symptoms. They are also especially influenced by negative life events (Judge, Higgins, Thoresen, & Barrick, 1999).

The fifth and final factor, Openness to Experience, is often labeled Intellectance, and represents the tendency to be imaginative, creative, cultured, curious, original, intelligent, artistically sensitive, broad-minded, perceptive, and thoughtful.

Personality Dimensions and Career Success

Seibert, Crant, and Kraimer (1999) state that career success is a cumulative outcome, the product of behaviors aggregated over a relatively long period of time. Similarly, personality is also the result of aggregate outcomes as opposed to any single act or behavioral measure. Given that organizational life is largely ambiguous and full of uncertainty, personality is more likely to influence behavior in these types of situations that present few constraints on behavioral options rather than more structured and defined situations (Seibert, Crant, & Kraimer, 1999). The fact that the very nature of careers is a long-term, aggregate construct that occurs in ambiguous and uncertain situations suggests that personality should be researched in relation to career success (Seibert, Crant, & Kraimer, 1999). These ambiguous situations allow employees to express their personalities and maneuver in ways that will fulfill their goals. However, previous research in the area of career success has largely ignored the influence of personality on career success (Bell & Staw, 1989; Kilduff, M., & Day, D., 1994; Seibert, Crant, & Kraimer, 1999).

Seibert, Crant, and Kraimer (1999) found that proactive personality explained variance in career success in addition to that accounted for by other individual, organizational, and structural variables. Judge, Higgins, Thoresen, and Barrick's (1999) longitudinal study also demonstrated that relevant personality traits were capable of predicting multiple facets of career success, even over a span of 50 years.

In addition, the five-factor framework has provided at least some evidence for relationships between each of the five personality dimensions and career success (Boudreau, Boswell, & Judge, 2001; Judge, Cable, Boudreau & Bretz, 1995; Judge, Higgins, Thoresen, & Barrick, 1999; Kraimer, & Seibert, 2000; Seibert, Crant, & Kraimer, 1999).

A positive relationship has been shown not only between extraversion and extrinsic career success (Boudreau, et al., 2001; Judge, Higgins, Thoresen, & Barrick, 1999; Riordan et al., manuscript; Seibert & Kraimer, 2001), but also between extraversion and intrinsic career success (Boudreau et al., 2001; Seibert & Kraimer, 2001 Riordan et al, manuscript). One explanation for these findings is that extraverts are more assertive and persuasive and may take a more active role in managing their careers by altering situations to meet their needs and expectations (Kraimer & Seibert, 2000). Watson and Clark (1997) also note that extraversion is closely linked to positive emotionality (positive affectivity), which has been shown to be a significant predictor of job satisfaction (Watson & Slack, 1993). Extraversion has also successfully differentiated successful executives as determined by pay and job title (Rawls & Rawls, 1968), predicted salary and job level in two studies conducted in the United Kingdom (Melamed, 1996), and predicted managerial promotions in a large telecommunications industry (Howard & Bray, 1994).

A negative relationship between neuroticism and intrinsic as well as extrinsic career success has also been found (Boudreau et al., 2001; Judge et al., 1999; Riordan et al., manuscript; Seibert & Kraimer, 2001). Employees that are prone to negative emotions were found to be more likely to experience dysfunctional job-related thought processes, and hence, lower job satisfaction (Judge & Locke, 1993). In addition, self-confidence (low neuroticism) has not only been shown to be associated with higher occupational status and job levels (Melamed, 1996), it has also predicted earnings of MBA graduates in a longitudinal study (Harrell & Alpert, 1989).

Most studies have found support and tend to agree on a negative relationship between agreeableness and extrinsic career success (Boudreau et al., 2001; Judge et al., 1999; Riordan et

al., manuscript; Seibert & Kraimer, 2001). Agreeable worker's natural tendency is to be kind, courteous, flexible, and forgiving of others. While agreeableness sounds like a positively valued trait in organizations, agreeable workers often get overlooked when it comes time for promotions or salary increases that are typically based on performance measures. Piedmont and Weinstein (1993) found a significant negative relationship between the agreeableness facet measure of Straightforwardness and several job performance outcomes. Less evidence exists for a negative relationship between agreeableness and intrinsic career success (Boudreau et al., 2001; Seibert & Kraimer, 2001). Seibert and Kraimer (2001) indicated that agreeable individuals are perhaps too obliging of others' demands and fail to press sufficiently for their own interests, leading to lower satisfaction.

Several studies have found conscientiousness (mostly through the achievement orientation facet) to be positively related to extrinsic career success (salary and earnings; Judge et al., 1999). Orpen (1983) found that the need for achievement predicted 5-year salary growth in managers, while Barrick and Mount (1991) found a small, positive correlation between conscientiousness and salary in five studies. In addition, the assessment literature has consistently shown achievement orientation to predict promotions (Howard & Bray, 1994; Jones & Whitmore, 1995). However, Boudreau, Boswell, and Judge (2001) found no relationship to extrinsic success. A couple of studies have found conscientiousness to be positively related to intrinsic career success as well (Judge et al., 1999; Riordan et al., manuscript).

Previous research indicates no consistent relationship between openness to experience and career success. Seibert and Kraimer (2001) indicated that there was a negative relationship between openness to experience and extrinsic career success, while Judge, Higgins, Thoresen, and Barrick, (1999) found a positive relationship with intrinsic career success.

Personality Profiles

If personality could ultimately predict career success, then (referring back to the original question of this paper) what "type" of personality makes one person more successful than another? What "type" of person will be more successful? After all, it is not simply one personality characteristic or another that makes someone successful, because people are not one characteristic or another, but rather the combination of these characteristics.

Regressions or correlational analyses (variable-oriented approaches) have mostly been used in the literature to identify the relationship between the personality dimensions and career success, and the results of these analyses only indicate how each personality dimension (e.g., extraversion) relates to career success separately from the other personality dimensions. Researchers then combine these individual results and make profile level judgments as to what the successful individual's personality might look like. What this means is that although researchers claim to have identified "profiles" of personality that predict career success, they have, in fact, only identified single dimensions that correlate to career success across all individuals in their sample. For example, if high extraversion and high agreeableness are identified as predictive of success under the variable-oriented approach, it is still possible that individuals with high levels of extraversion and low levels of agreeableness be deemed as successful in their careers.

Practitioners have been attempting to make profile level judgments of individuals in business world within the selection and development arena for many years. However, much like researchers, practitioners are still using a variable-oriented approach to make their profile level judgments.

Assessments are typically individually written reports that summarize the results of various instruments in order to provide others with a meaningful interpretation of a single individuals result. Psychologists who write these types of assessments will weigh all of the information before making a judgment and will consider the person as a whole, taking into account all aspects of the data before writing such a report. They will make interpretations of the personality results based on a combination of the ranges of several scale scores as opposed to the single scale results (Jeanneret & Silzer, 1998). Given the time consuming demands of individual one-on-one assessments and the current technological advances, psychologists have created assessment systems that make "expert judgments" and provide interpretive reports of the person's personality results similar to those written by a psychologist. These reports take into account not only single scale results but also a select number of "interactions" among scales.

For example, within one popular expert system called ASSESS (Bigby, 1997), there are a couple of scales that provide extremely useful personality information when their scores are looked at in combination with each other. These scales are 'Assertiveness' and 'Need to be Liked.' When an individual scores high on the Assertiveness scale, that individual's behavior can be exhibited to others in two different ways. If they are equally as high on the Need to be Liked scale, they will likely be seen as assertive, but not overly aggressive, since their assertiveness will be tempered by their concern to be liked by others and their need for approval. However, if that same individual remains high on Assertiveness but has a low score on the Need to be Liked scale, then they will likely be seen as overly aggressive, cut-throat, and competitive because they are likely to not be concerned about what others think or what they have to do to get what they want.

Given this example, one can understand how the interaction of scales (in this case Assertiveness and Need to be Liked) would be critical to the understanding of an individual. Neglecting the results of such types of interactions among personality scales can, and often does, significantly bias the conclusions made about an individual. There is a definite knowledge gap in the literature regarding the use of personality profiles for prediction of work related outcomes. This paper will attempt to address this knowledge gap by looking at personality profiles and using subgroup information to understand what types of individuals are successful in their careers.

Person-Oriented Approach

People do not manifest their personalities one trait at a time, but rather any action or behavior by an individual reflects the simultaneous influence of multiple traits at one time (Brandt & Devine, 2000). People are not solely extraverted or conscientious or agreeable. They are either extraverted and conscientious or introverted and conscientious or extraverted and agreeable, etc. Given the exact same situation, two agreeable individuals are likely to behave in different manners if one is extraverted and the other is introverted. In fact, a recent study by Bernardin, Cooke, and Villanova (2000) found that the interaction of two personality scales (Conscientiousness and Agreeableness) played an important role in understanding rater leniency (why certain raters rate people higher or better as a whole, and use only the top end of the rating scale).

The person-oriented/centered or typological model has received increasing attention the recent literature and is not a new approach to understanding work behavior (Bergman, 1996; Borman, 1991; Katzell, 1994; Magnusson, 1999; Mumford, Zaccaro, Johnson, Diana, Gilbert, & Threlfall, 2000). The person-oriented approach has been described as a holistic view in which

the individual is seen as an organized whole, functioning and developing as a totality (Craig & Smith, 2000). This type of approach to research implies a process of identifying individuals with certain characteristics and then examining outcomes for those individuals. In other words, a person-oriented approach is a within-person approach.

Most psychological research utilizes the variable-oriented approach, which is in contrast to the person-oriented approach. This more common variable approach seeks to measure relations among different variables and across individuals (Craig & Smith, 2000). The important difference between the person-oriented approach and the variable-oriented approach is that in order for a relation to be significant, the variable-oriented approach requires the relation hold across all members of the research sample (Craig & Smith, 2000). The person-oriented approach, however, seeks to identify distinct, but internally homogenous subgroups for which different rules can apply.

Use of Subgroup Information

Feild, Lissitz, and Schoenfeldt (1975) suggested that there are four reasons for which subgroups of people (i.e. profiles) have been used in psychology. First, they permit the categorization of phenomena in a more efficient manner, and more efficient categorization facilitates parsimony, thus leading to higher systematization and conceptualization. Second, they contribute to non-linear prediction and to the recognition that in numerical data relation of a 'test' to a 'criterion' may be different within a type from that obtained between types. Third, as characteristics of a type are recognized and catalogued, typologies permit the prediction of the characteristics for new individuals assigned to a particular type. And lastly, since types differ from each other in special definable ways, typologies make it possible to compare groups in

terms of their characteristics and the use of subgroups assists in formulating both experimentally and clinically useful comparative statements.

More recently, Mumford, Stokes, and Owens (1990) not only support but also suggest the use of a prototype approach towards classifying human individuality. The prototypical model is based on the ultimate goal of classifying individuals and the description of the similarities and differences among them. All individuals assigned to a prototype are assumed to display the same behavior and experiences that characterize the prototype as a whole. Therefore, assignment to a prototype makes it possible to predict the behavior and experiences of the individual and summarize the differential behavior and experiences of a group of individuals (Hecht, Finch, Landau, & Stokes, 2002; Mumford, Stokes, & Owens, 1990).

Clinical psychologists have often used this methodology in practice. They typically consider the entire profile of MMPI results to assess an individual and make more meaningful interpretations based on those profiles. The MMPI has been extensively studied in terms of the profiles it most typically generates and comprehensive systems have been developed to describe and classify these profiles in terms of their shape (Burger & Kabacoff, 1994; Lorr & Suziedelis, 1982; Skinner, Reed, & Jackson, 1976). Similarity between an individual MMPI protocol and modal prototypical profiles based on either the standard scales or on the factor scales (identified in the 80's by Johnson, Butch, Null, & Johnson, 1984) of the MMPI is determined by calculating the Pearson product moment correlation between the protocol and each of the modal profiles. Subsequently, clinicians have been able to utilize the configuration of scores on the MMPI as predictor variables rather than simply utilizing one scale or measure at a time for that purpose.

Profiles of the Big Five Personality Dimensions

As discussed previously in this paper, the Big Five personality structure is the result of nearly 50 years of research. It has not only received widespread acceptance among most personality researchers, but it also holds up across cultures and remains fairly stable over time. Although the Big Five personality structure has shown predictive validity with regards to important employee outcomes in several meta-analyses conducted in the 1990s (Barrick & Mount, 1991; Hough, 1992; Mount, Barrick, & Stewart, 1998; Tett, Jackson, & Rothestein, 1991), not many studies have investigated personality "types" among the Big Five. As discussed above, most of the previous research that has attempted to classify personality has primarily been of a clinical nature focusing on alcoholics or depressives and has tended to use instruments such as the MMPI (Lorr & Suziedelis, 1990).

There have only been a few studies that have even attempted to classify "normal" personality into profiles and uncover what prototypical personality "types" (or profiles) exist. Unfortunately, the studies that have attempted to classify "normal" personality (Craig & Smith, 2000; Lorr & Burger, 1981; Lorr & Suziedelis, 1985; Lorr & Suziedelis; 1990) each used a different personality instruments: the Hogan Personality Inventory, the PPI (developed by PDI), the CPI, the ISI (Interpersonal Style Inventory), and the 16PF. In addition, the samples used for each of these investigations were primarily undergraduate college students (the only exception being the sample used in conjunction with the PPI), and in one of the studies only male participants were used. Therefore, it is not surprising that different 'sets' of prototypical profiles were uncovered within each of these studies. Consequently, the generalizability of the results of any of these studies is severely questioned, and in fact, was directly questioned by Lorr and Suziedelis (1990).

Lorr and Strack (1993) is the only study that the author is aware of that has made an attempt to identify prototypical personality profiles based on the Big Five factors of personality. Using a sample of undergraduates at an eastern university, they performed a cluster analysis of the data and identified six clusters of personality. The first subgroup was interpreted as being emotionally stable, extraverted, and agreeable. The second subgroup was characterized as neurotic, disagreeable, yet open to new experiences. The third subgroup was introverted, not very open to new experiences, low on conscientiousness, and disagreeable. The fourth subgroup was emotionally stable, introverted, conventional, and conscientious. The fifth subgroup was very low on conscientiousness and marginally neurotic. The final subgroup represented a profile that was almost flat on all dimensions with only slightly elevated scores on agreeableness.

Although Lorr and Strack (1993) made a significant step towards the classification of the Big Five personality dimensions into prototypical profiles, there were some limitations to their study. One of which was the use of a homogeneous sample consisting only of volunteers from a predominantly first year class of undergraduate students at an eastern university.

Therefore, given these results, no definitive conclusions can yet be made as to what the definitive set of prototypical Big Five personality profiles might be. Moreover, no attempts were made towards using profile membership as a basis to investigate any outcome variables, and subsequently there is no information as to how each of the profiles identified by Lorr and Strack (1993) might behave differently from one another in terms of career success.

A Combination of Approaches

Tesser and Lissitz (1973) pointed out that researchers interested in prediction could take one of two basic approaches. The first and more common approach (variable-oriented approach) is to compute linear regressions between the predictor and the criteria. It is assumed that each of

the predictor dimensions is independent in its relationship with each of the criteria in this approach. Regardless of where an individual is located on any of the predictors, the relationship between each of the predictors and each of the criteria are unaffected.

The second approach (person-oriented approach) involves creating subgroups of individuals into homogeneous groups such that individuals within a particular subgroup are similar with respect to the predictor dimensions. Predictions are then made based on subgroup membership. This method focuses solely on subgroup membership by identifying distinctive patterns associated with subgroup membership and subsequently predicting typical behavior of the subgroup for the individual (Owens, 1971). Within this second approach, it is assumed that an individual's score on at least one of the grouping or predictor dimensions affects the relationships between the other grouping dimensions and the criteria. In other words, predictor dimensions are not independent from one another in the prediction of the criteria.

Despite the differences between these two approaches, they do not have to be at odds with each other, but rather can complement each other to provide a better understanding for the relationships between variables. One example of how this can occur is by using the results of previous variable-oriented research to inform an investigation that will use the person-oriented approach (Craig & Smith, 2000). Another example is using the results of both types of approaches in combination to make predictions for work related criteria (Feild, Lissitz, & Schoenfeldt, 1975).

Feild, Lissitz, and Schoenfeldt (1975) sought out to determine not only whether or not these two approaches would yield different predictive results, but also whether or not the prediction of criteria by individual variables could be enhanced by adding subgroup membership data to the analyses. To the author's knowledge there has been no other such study that has

empirically examined the predictive utility of subgroup membership versus individual information when making predictions in an applied context.

In order to test these differences, Feild, Lissitz, and Schoenfeldt (1975) examined the relationship between Biodata Factors based on early life experiences and College Experiences (e.g., academic achievement, participation in athletic activities, health). This relationship was examined using both approaches for prediction. Canonical correlations were calculated between the individual factors and the criterion measures as well as between the subgroup information and the criterion measures in order to compare predictive utility of these two approaches. The authors found that in this particular instance, the individual factors seemed to be more correlated to the criteria than subgroup information, although the authors did not actually test for the significance of these differences. Therefore, no definite conclusions can be made regarding individual variables predicting better or worse than subgroup information. In addition, the researchers concluded that the prediction of several criteria by individual information was "significantly improved by the addition of subgroup information" (Feild, Lissitz, & Schoenfeldt, 1975, p.459). They added that this improvement occurred when the within-group variance of the majority of the groups was smaller than the grand variance. It would then seem logical to conclude that if this is not the case, then using subgroup information might have only have minimal utility for prediction (Feild, Lissitz, & Schoenfeldt, 1975).

As previously stated in this paper, there is a definite knowledge gap in the literature regarding the use of subgroups (in this case personality profiles) for prediction of work related outcomes. In addition, there have been no investigations that have attempted to compare the predictive utility of individual information versus subgroup information. This paper will address this knowledge gap by looking at individual personality dimensions as well as subgroup

information (personality profiles) in order to determine whether or not these two approaches would yield different results within the same sample in addition to examining whether the prediction of career success can be enhanced by the addition of subgroup information.

Success in Different Occupations

Hogan and Hogan (1991) reviewed the literature regarding the relationship between personality and success in a set of occupations classified in terms of the Holland types and concluded that the pattern of personality variables associated with occupational success depends on the occupation. In addition, given that personality has predicted differentially among different occupations when it comes to job performance (Barrick & Mount, 1991; Tett, Jackson, & Rothstein, 1991) as well as occupational attainment (Stokes, Barroso, Hecht, & Boyle, 1999), it is a probable conclusion that the successful personality "type" will also depend on the type of occupation.

John Holland has outlined 6 different "types" of occupations based on interests, motives, and preferences in his typology. Commonly referred to as the RIASEC model, the six types include Realistic, Investigative, Artistic, Social, Enterprising, and Conventional (see Figure 1). Realistic types are technically and athletically inclined, prefer to work with their hands and tools to build, repair, or grow things, often outdoors. They tend to be stable, materialistic, frank, practical, and self-reliant. Investigative types tend to have good math and science abilities, like to explore, observe, and understand things and events and solve problems on their own. They tend to be analytical, independent, curious, and precise. Artistic types prefer to work with their minds, are creative, enjoy reading, music, art and enjoy creating original work. They tend to be imaginative, expressive, idealistic, intuitive, and original. Social types enjoy being around other people-informing, enlightening, training, helping, developing them. They tend to be cooperative,

friendly, understanding, tactful, sociable, and warm. Enterprising types like to work with people-influencing, leading, or managing them. They like to assume responsibility and enjoy public speaking. They tend to be ambitious, extraverted, self-confident, and adventurous. Conventional types prefer to work with words and numbers, carrying out detailed instructions. They like to work indoors, to organize things, and follow clear standards. They tend to be efficient, practical, orderly, and conscientious.

Holland has always maintained that he believes personality and vocational choices are related (Holland, 1973). Holland is neither the first nor the only person to propose such an idea. This notion that vocational interests are in some fundamental way linked to a broader class of dispositional constructs (otherwise identified as personality variables) is a recurring theme within the vocational interest literature (Hogan & Blake, 1999).

In addition to the notion that individuals are attracted to particular vocations based on their personalities, Holland, along with a number of other scholars, has argued that "fit" influences people's careers and career outcomes primarily through affective mechanisms (Mumford, et al., 2000). In other words, individuals tend to be attracted to particular organizations or organizational roles that are congruent with their personalities, because they find the perceived goals and rewards provided by that organization attractive given their broader patterns of dispositional characteristics. In addition, Mumford and his colleagues argue that individuals with characteristics consistent with the demands of particular roles not only find the activities within those roles rewarding, they actively seek out similar situations, which results in a pattern of situational choice where individuals begin to acquire the knowledge and skills necessary for effective performance within those roles or situations (Mumford et al., 2000).

Holland originally framed his vocational types in personality terms, using trait-descriptive adjectives, just as much of the work leading to the development of the Five-Factor model was based on the analysis of trait-descriptive adjectives. Thus, Holland's typology and the Five-Factor Model share a common language that provides a legitimate basis for studying relations between the two domains (Hogan & Blake, 1999).

The Big Five Personality Dimensions and Gravitational Hypothesis

Although there is general agreement among researchers that there indeed is a relationship between the Big Five personality dimensions and Holland's typology, the research results are either inconclusive or conflicting and have generally been weak to moderate (Barrick, Mount, & Gupta, 2003; Broughton, Trapnell, & Boyes, 1991; Costa, McCrae, & Holland, 1984; Gottfredson, Jones, & Holland, 1993; Blake & Sackett, 1999; Judge, Higgins, Thoresen, & Barrick, 1999). Barrick, Mount, and Gupta (2003) subsequently conducted a meta-analysis in their attempt to estimate the nature and magnitude of these relationships across studies. Several significant relationships between the Big Five personality dimensions and Holland's occupational groups were uncovered. Extraversion was positively related to social and enterprising types, agreeableness was related to social types, conscientiousness was related to conventional types, and openness to experience was positively related to investigative and artistic types. Weaker relationships were found for emotional stability and conscientiousness and investigative types. Barrick, Mount, and Gupta (2003) conclude that Big Five personality traits and vocational interests are only modestly related and are not mere substitutes for each other.

One explanation given to the inconclusive and inconsistent findings within the few studies that have investigated this relationship is that most studies used a test-test approach (Shin

& Holland, 2002). Researchers typically correlated the Big Five with either Holland's (1979) Self-Directed Search or the Vocational Preferences Inventory (Holland, 1985). De Fruyt and Mervielde (1997) argue that item overlap may account for the relationships found between the Big Five and Holland's types.

A suggested strategy for investigating the Big Five-Holland's types relationship is to compare Big Five scales to work outcome criteria after organizing jobs into Holland's types (Shin & Holland, 2002). Judge et al's (1999) test of the gravitational hypothesis (discussed below) as applied to personality and Holland's Codes is the only investigation that the author is aware of that categorized Holland's types based on attained jobs.

The gravitational hypothesis is based on the assumption that over the course of one's labor market experiences, an individual will sort himself/herself into jobs that are compatible with their interests, values, and abilities. In other words, they will look for and attain jobs for which there is a good person-job fit (Judge, Higgins, Thoresen, & Barrick, 1999). The gravitational hypothesis was first tested in relation to cognitive ability over a five-year period by Wilk, Desmarais, and Sackett (1995), and results indicated that high-ability individuals tended to advance into jobs requiring greater cognitive demands (persons lower on ability tended to settle into jobs lower in this hierarchy).

Furthering the gravitational hypothesis research, Judge, Higgins, Thoresen, and Barrick (1999) performed the first test of the gravitational hypothesis with relation to the Big Five personality variables and Holland's typology. They performed correlations as well as regression analyses, and their results provided limited support for the gravitational hypothesis, demonstrating that extraverts were significantly less attracted to realistic occupations while slightly more attracted to social occupations, as well as demonstrating that open individuals were

significantly less attracted to conventional occupations. Weaker relationships were found for extraverts and agreeable individuals being attracted to social occupations, open individuals being attracted to artistic occupations as opposed to conventional occupations, and individuals attracted to Investigative occupations being conscientious, introverted, and not agreeable.

Although Judge, Higgins, Thoresen, and Barrick (1999) took a further step in investigating the relationship between the Big Five personality dimensions and Holland's Occupational Codes, there were some limitations in their study. First, the Big five personality dimensions were not measured using a big five instrument (items were categorized into each dimension). Second, different types of personality data were collected via different methods (some were self-reports, others collected through observation, and others via parents, teachers, and friends). Lastly, identifying which personality dimensions are most prevalent within an occupational group does not mean that the personality characteristics of the most successful individuals within that group have been identified. In other words, even if a prototypical Big Five personality profile could be identified for each of the Holland types, one can make an argument distinguishing between what is "typical" vs. what is "successful". Identifying a typical profile within a particular Holland type simply means that this particular profile is most commonly represented within that particular Holland type. It does not, however, mean that this profile is the most successful profile among the occupations categorized by that Holland's type. The author is not aware of any research that directly attempts to identify the most successful personality profile for attainment of a job within each of Holland's types using the Five-factor model of personality. To further clarify, it is the identification of successful profiles that is critical to investigate and not the mere majority presence of a particular "type" of individual.

Present Study

Although previous research in the area of personality and career success has provided some clues as to the nature of the relationship that exists, it has been inconsistent and is inconclusive in determining specifically how each of the Big Five personality dimensions relate to career success. The research has mostly looked at unidimensional aspects of personality and has not attempted to look at profiles of personality or how profile membership might provide insight into the relationship between personality and career success. Once prototypical profiles are established and differences between the profiles and career success are identified, individuals could be classified into one of the profile types (possibly by using Skinner, Reed, and Jackson's 1976 system of calculating the correlation between the individual profile and the prototypical profiles), and this information could subsequently be used to make predictions regarding the individuals probability of career success. More specifically identifying which profile emerges as successful among all of Holland's types can be useful in order to make even more accurate predictions regarding the probability of success within a particular occupational category.

The primary purpose of this study is to use the Big Five Personality Dimensions in order to predict objective and subjective career success among different occupations using profile level judgments of personality in addition to scale level measurements. In other words, will profile level judgments provide a better understanding of career success over scale level predictions? In addition, will differing personality "profiles" emerge as successful when the relationship between personality and career success is investigated within differing occupational groups as categorized by Holland's typology, and will subgroup membership once again provide a greater understanding of career success among different occupations?

Broad vs. Narrow Personality Traits

There has been an ongoing debate in the personality literature regarding the use of broad vs. narrow personality traits. Ones and Viswesvaran (1996) make several arguments to support the use of broad constructs such as the Big Five model. Their first argument contends that the coefficient alpha reliabilities of broad traits are higher than for narrow traits. Second, they argue that the Big Five has better predictive validity and is more useful in theory-building than narrow traits. Finally, from a personnel standpoint, even if narrow traits are used separately in assessment of job applicants, the decision maker has to conceptualize each individual's standing on broader personality dimensions in order to make the hiring decision. In addition, Barrick and Mount (1994) found that the broad trait of conscientiousness was more predictive of a variety of criteria than any of the components (facets) that comprise Conscientiousness. When the general factor of Conscientiousness was partialled out, it rendered the correlations of the narrower Conscientiousness facets and job performance negligible.

Most of the arguments presented in the literature for the use of narrow traits discuss the increased predictive power in relating particular personality traits to specific types of job performance (Tett et al., 1991). Most of the research supporting the use of narrow traits uses personality characteristics to predict very specific aspects of job performance, such as creativity and work delinquency, and they have found that the use of the more specific traits were more predictive (Ashton, 1998; Costa & McCrea, 1995).

Proponents for the use of broad personality traits state that in order to maximize criterion-related validity, one should use broad traits and broad criteria (Ones & Viswesvaran, 1996). Given that the goal of this paper is not to predict a narrow specific dimension of job

performance, but rather investigate how personality relates to the more general dimension of career success, the use of the broad Big Five personality traits will be used.

Intrinsic and Extrinsic Career Success

The career success literature has mostly ignored the multidimensional aspect of career success and has largely investigated either extrinsic or intrinsic measures of success in isolation and sometimes only one measure was used to determine success. The current study will investigate both objective (extrinsic) and subjective (intrinsic) measures of career success. A composite score will be created for objective career success by combining standardized salary information as well as standardized number of promotions information (salary and number of promotions are widely accepted and the most commonly used metrics to measure objective career success within the literature). A composite score will be created for subjective career success by combining standardized job satisfaction information as well as standardized self-report success information (job satisfaction is the most commonly used metric to measure subjective career success within the literature).

Hypotheses

As mentioned previously in this paper, the results of variable-oriented research can be used as a guide to make hypotheses within a person-oriented investigation. The author will use such an approach in order to derive hypotheses regarding what combination of personality characteristics the successful "profile" will exhibit.

Research has shown a consistent positive relationship between extraversion and emotional stability with objective and subjective career success. In addition, high conscientiousness and low agreeableness have also been found to be related to objective career success. This latter relationship has not been consistently found for subjective career success,

therefore the levels of conscientiousness and agreeableness will not be a factor in determining subjective career success.

H1a: The profile that most closely represents individuals who are highly extraverted and highly emotionally stable will be most predictive of subjective (intrinsic) career success.

H1b: The profile that most closely represents individuals who are highly extraverted, highly emotionally stable, highly conscientious, and low on agreeableness will be most predictive of objective (extrinsic) career success.

Based on the research by Feild, Lissitz, and Schoelfeldt (1975) it is expected that the prediction of career success (both subjective and objective) will be significantly improved by the addition of subgroup information.

H2a: The addition of subgroup information based on the Big Five personality dimensions will add significant incremental validity over individual personality dimensions to the prediction of subjective career success.

H2b: The addition of subgroup information based on the Big Five personality dimensions will add significant incremental validity over individual personality dimensions to the prediction of objective career success.

The relationship between personality and different types of success (objective vs. subjective) within Holland's occupational types has never been empirically tested. The following hypotheses predicting subjective career success were derived based on previous research and the results of a recent meta-analysis investigating the relationship between interest for each of Holland's occupational types and the Five-factor model of personality. The following hypotheses predicting objective career success were derived based on Hogan and Hogan's (1991) non-empirical examination between personality and status within each of

Holland's occupational types. In addition, the expectation that subgroup information will significantly improve the prediction of objective and subjective career success over individual personality dimensions will be tested within each of Holland's occupational groups.

Individuals that tend to gravitate towards Social occupations tend to enjoy being around other people, are cooperative, friendly, understanding, sociable and warm. It is not surprising that the personality factors of extraversion, agreeableness, and openness have been found to be positively related to interest in Social jobs. Additionally, according to Hogan and Hogan (1991) individuals who are extraverted, agreeable, and open to experiences achieve status within social occupations. Therefore, a similar success profile is predicted for both objective and subjective career success.

H3a: The profile that most closely represents individuals who are highly extraverted, highly agreeable, and highly open to experiences will be most predictive of subjective career success within the Social occupations.

H3b: The profile that most closely represents individuals who are highly extraverted, highly agreeable, and highly open to experiences will be most predictive of objective career success within the Social occupations.

H3c: The addition of subgroup information based on the Big Five personality dimensions will add significant incremental validity over individual personality dimensions to the prediction of subjective career success within Social occupations.

H3d: The addition of subgroup information based on the Big Five personality dimensions will add significant incremental validity over individual personality dimensions to the prediction of objective career success within Social occupations.

Individuals that tend to gravitate towards Investigative occupations tend to be good at math and science, they like to explore, observe, understand things and events, they are curious, and independent. It is not surprising that a negative relationship between extraversion and interest towards Investigative occupations has been found. In addition, it is not surprising that a positive relationship between open to experiences and interest in Investigative occupations has been found. Regarding status achievement within Investigative occupations, Hogan and Hogan (1991) state that introversion, creativity, and unconventional attitudes are desired personality attributes. Thus, similar personality profiles are hypothesized to predict both objective and subjective career success.

H4a: The profile that most closely represents individuals who are low on extraversion but are highly open to experiences will be most predictive of subjective career success within the Investigative occupations.

H4b: The profile that most closely represents individuals who are low on extraversion but are highly open to experiences will be most predictive of objective career success within the Investigative occupations.

H4c: The addition of subgroup information based on the Big Five personality dimensions will add significant incremental validity over individual personality dimensions to the prediction of subjective career success within Investigative occupations.

H4d: The addition of subgroup information based on the Big Five personality dimensions will add significant incremental validity over individual personality dimensions to the prediction of objective career success within Investigative occupations.

The Artistic occupations tend to attract individuals who are creative, enjoy reading, music, art, enjoy creating original work, they are imaginative and expressive. Openness to

experiences has been found to be positively related to interest in Artistic occupations. Although research has not found a relationship between conscientiousness and interest in artistic occupations, it seems reasonable to expect that individuals who enjoy being expressive, original, and creative (individuals attracted to Artistic occupations) would not be organized or reliable, would not enjoy planning their activities, and would not exhibit large amounts of self-control, which are all characteristics of conscientious individuals. Thus,

H5a: The profile that most closely represents individuals who are highly open to experiences yet low on conscientiousness will be most predictive of subjective career success within the Artistic occupations.

In addition to the attributes that are favorable for subjective career success, Hogan and Hogan (1991) state that artistic types are the one occupational group in which "high-status persons are typified by a degree of maladjustment" p. 147. Neuroticism does not seem to impede status attainment within artistic occupations, and in fact it might be somewhat of an advantage. Therefore,

H5b: The profile that most closely represents individuals who are highly open to experiences, low on conscientiousness, and slightly neurotic will be most predictive of objective career success within the Artistic occupations.

H5c: The addition of subgroup information based on the Big Five personality dimensions will add significant incremental validity over individual personality dimensions to the prediction of subjective career success within Artistic occupations.

H5d: The addition of subgroup information based on the Big Five personality dimensions will add significant incremental validity over individual personality dimensions to the prediction of objective career success within Artistic occupations.

Individuals that tend to be attracted to Conventional occupations like working with numbers and words, carrying out detailed instructions, they like to be organized, efficient, practical, and like to follow clear standards. A positive relationship between conscientiousness and interest in Conventional occupations as well as a negative relationship between openness to experiences and interest in Conventional occupations has been found. Thus, it is hypothesized that:

H6a: The profile that most closely represents individuals who are highly conscientious yet not open to experiences will be most predictive of subjective career success within the Conventional occupations.

Hogan and Hogan (1991) believe that in addition to being highly conscientious, status within Conventional occupations will be achieved by individuals who are emotionally stable. This belief is based on supervisor ratings of clerks (which belong to the conventional occupational group), which showed that clerks who had achieved status within the organization were well-adjusted individuals. Therefore,

H6b: The profile that most closely represents individuals who are highly conscientious, emotionally stable, yet not open to experiences will be most predictive of objective career success within the Conventional occupations.

H6c: The addition of subgroup information based on the Big Five personality dimensions will add significant incremental validity over individual personality dimensions to the prediction of subjective career success within Conventional occupations.

H6d: The addition of subgroup information based on the Big Five personality dimensions will add significant incremental validity over individual personality dimensions to the prediction of objective career success within Conventional occupations.

Enterprising occupations tend to attract individuals who like to work with people by influencing them and leading them. They enjoy responsibility and tend to be ambitious, self-confident, and adventurous. It is not surprising that extraversion has been found to be positively related to interest in Enterprising occupations. Thus,

H7a: The profile that most closely represents individuals who are highly extraverted will be most predictive of subjective career success within the Enterprising occupations.

Hogan and Hogan (1991) believe that status within Enterprising occupations is achieved by individuals who show highly elevated levels of all Big Five personality dimensions. Most importantly, however, are the characteristics of extraversion and emotional stability. Thus, it is hypothesized that:

H7b: The profile that most closely represents individuals who are highly extraverted and highly emotionally stable will be most predictive of objective career success within the Enterprising occupations.

H7c: The addition of subgroup information based on the Big Five personality dimensions will add significant incremental validity over individual personality dimensions to the prediction of subjective career success within Enterprising occupations.

H7d: The addition of subgroup information based on the Big Five personality dimensions will add significant incremental validity over individual personality dimensions to the prediction of objective career success within Enterprising occupations.

Realistic occupations correspond to individuals who prefer activities that require physical strength, aggressive action, or motor coordination and skill. Given that the preference for such activities does not appear to be consistently related to any of the Big Five personality dimensions

in the literature, no hypotheses were made regarding the relationship between personality and subjective career success in Realistic occupations.

Regarding objective career success, Hogan and Hogan (1991) state that successful individuals within Realistic occupations are self-assured and independent. Therefore,

H8a: The profile that most closely represents individuals who are highly introverted and highly emotionally stable will be most predictive of objective career success within the Realistic occupations.

H8b: The addition of subgroup information based on the Big Five personality dimensions will add significant incremental validity over individual personality dimensions to the prediction of subjective career success within Realistic occupations.

H8c: The addition of subgroup information based on the Big Five personality dimensions will add significant incremental validity over individual personality dimensions to the prediction of objective career success within Realistic occupations.

Practical Implications

Why should anyone care about career success? More importantly, what are the practical implications of this study for the world of work? Judge et al. (1999) posed the question, "Is it worthwhile for an individual to know he or she lacks conscientiousness or adjustment, when this deficiency may hinder his or her career?" The response to this question is that it is definitely worthwhile. It is always worthwhile to be aware of one's tendencies and weaknesses so that one can be better prepared to deal with events in the future which might shape ones own success. It might not be possible to change one's natural tendency for a particular trait, however it is definitely possible to change one's behavior that might be indicative of that tendency through

interpersonal development. An individual can, at the very least, use this knowledge to gravitate themselves to occupations that correspond with their personality.

Results from this study will add to the knowledge database of vocational and outplacement counselors. Vocational and outplacement counselors can use this type of information to help individuals not only identify but also gravitate themselves towards occupations that correspond to their personalities for success. This type of vocational decision based on not only which types of occupations an individual is interested but also which types of occupations an individual will be most successful has many positive benefits.

Additionally, although career success is an individual outcome, it is implicated with and often dependent upon job and organizational success. Given that, career success is both dependent upon and contributes back to organizational success (Judge et al., 1999). It is likely that the traits that make a person successful in their own careers will also help organizations to be successful in their missions as well. Organizations would consequently be better off selecting individuals who display personality traits that are most related to career success within the occupation in question.

Although the author expects that particular profiles will emerge as the most successful profiles for objective and subjective career success across all occupations, the current study will hopefully demonstrate that the successful personality profiles depend on occupational type. Large organizations typically consist of several departments comprised of different occupational types as characterized by Holland's typology, and selecting an individual based on a single profile might not be the best "fit" for the position that is being offered and the individual could sub sequentially quit and force the process to begin all over again. Additionally, an organization would be limiting its selection pool to only look for those individuals who portray a single

profile. Some evidence exists that suggests that an organization with an extremely homogeneous population across all departments is less able to adapt to change and remain viable (Powell, 1998). Some level of diversity within an organization is desired for long-term effectiveness (Schneider & Goldstein, 1995).

The ultimate goal is to find the person who is the best FIT for the position, which means that there is no true ultimate profile for every position across every organization. The ultimate profile should be relative to the position and the organization in question. An organization would benefit from considering the position for which it is selecting before determining which personality profile is the best "fit".

CHAPTER 2

METHOD

Participants

Sample

The sample that was used in this study consisted of 493 males and 351 females who attended the University of Georgia in the late 60's and early 70's. These individuals responded to several questionnaires during their attendance at the University of Georgia, as well as after their graduation. The most recent questionnaire was the Career Survey administered in 1995. These participants were ones that could be located through the Alumni Office at the University of Georgia. The Career Survey was developed in order to assess various work and non-work related variables including health, personality, and several job related attitudes. Aspects of the UGA Career Survey that were relevant to the present study were those that are related to measures of career success. These variables included job satisfaction, salary, number of promotions, and a measure of self proclaimed career success compared to peers. Participant's ages ranged from 38 to 47. Occupations and salaries for this sample were extremely diverse (salaries ranged from $20,000 to $200,000 after removing outliers). Some examples of occupations were pharmacists, nurses, physicians, school teachers, managers, Vice Presidents, entrepreneurs, landscape architects and engineers. For this particular study, only full-time employees at the time of the survey were included in the sample.

Measures

Big Five personality. The Big Five personality dimensions of extraversion (alpha reliability = .78), agreeableness (alpha reliability = .71), conscientiousness (alpha reliability = .67), emotional stability (alpha reliability = .72), and openness to experience (alpha reliability = .71) were measured using Form D of Barrick and Mount's Personal Characteristics Inventory (PCI; 1993). Barrick and Mount have provided ample evidence of the reliability and construct validity of these scales. Wonderlic is not the copyright holder of this personality inventory.

Objective Career Success Measures

Salary. Alumni were asked in a self-report survey to state their total compensation (salary plus bonuses and any other income) for the year 1995 (Schneer & Reitman, 1995). Only alumni who reported being full-time employees were used for this study. Although self-report data are prone to a number of distortions, Podsakoff and Organ (1986) noted that information that is factual, likely to be in the possession of the respondent, and at least in principle verifiable is less likely to suffer from such problems. For example, Judge et al. (1995) reported that in a sample of 1,338 executives, the difference between self- and archival reports of salary was 1%.

Number of promotions. Alumni were asked in a self-report survey to document various pieces of information (e.g., job title, industry type, number of employees in organization) for every year of employment since their graduation. One of the pieces of information gathered was whether or not the respondent was promoted for each year of employment. Only individuals who were employed full time consistently since the time of graduation were used for this study. In other words, a lapse of employment of more than 3 years disqualified the respondent from being used in this study. A total count was made of the total number of promotions each respondent received during the entire course of their career (O'Reilly and Chapman, 1994).

Subjective Career Success Measures

Job satisfaction. Alumni were asked to assess their satisfaction with eight facets of their job in self-report survey. The eight facets of job satisfaction included satisfaction with the reputation of the organization and management, satisfaction with their immediate supervisor, satisfaction with their compensation and benefits, satisfaction with their opportunities for advancement, satisfaction with the nature of the work itself, satisfaction with their opportunity for responsibility, satisfaction with their working conditions, and satisfaction with their fellow workers (Chacko, 1983). A likert-type response scale was used (1=very dissatisfied to 5=very satisfied) and a composite measure of job satisfaction was formed based on the eight facets (alpha reliability = .74).

Self-report of career success. Following Child and Klimoski (1986), a single-item 5-point scale was used. This single-item was a self-report measure asking individuals to assess their career success relative to their peers.

Control Variables

Several demographic variables have been identified as having a potential impact on levels of objective career success as well as perceived (subjective) career success. Such variables include age (older individuals might have had more of a chance to accumulate certain career success factors), gender (males have been shown to be favored over females for certain success factors), number of children (presence of children has indicated a displacement of focus on career success factors and more focus on family and home life), number of employees within the organization (larger organizations have been shown to have more of an opportunity for upward advancement), marital status (in many cases the status of "being married" has indicated to organizations a sign of maturity, stability, or responsibility), industry (different industries have

been shown to have different opportunities for certain success factors), and attainment of a graduate degree (attainment of a graduate degree has been shown to be related to certain success factors; Bielby & Bielby, 1988; Brett & Stroh, 1997; Judge, Cable, Boudreau, & Bretz, 1995; Korman, Wittig-Bergman, & Lang, 1981; Melamed, 1995; Subich, Cooper, Barrett, and Arthur, 1986). All of these variables were controlled for in the current study.

Control variables of a continuous nature were standardized before used for any analyses (i.e., age, number of children, and the number of employees). Control variables of a categorical nature (i.e., gender, marital status, industry, and attainment of graduate degree) were dummy coded prior to being entered in the first step of several hierarchical regression equations, where for each category respondents were coded as 1=belonged to particular group and 0=did not belong to particular group (Pedhazur, 1997). Gender was coded into two categories, males and females (male was the reference category). For all other categorical variables, an extra category for missing data was created in order to retain as many respondents as possible. Marital status was coded into four categories: married, not married, living together, and married missing (married was the comparison category). There were twelve industries available to choose from on the survey as well as an additional 'other' category. Industry categories were as follows: Public, Manufacturing, Service, Mining, Agriculture/Forestry/Fishing, Retail, Real Estate/Insurance/Finance, Construction, Wholesale Trade, Transportation Utilities/Sanitary Services, Computer, Health Care, Other, Industry Missing (Public was the reference category). Graduate degree was coded into three categories: received a graduate degree, did not receive a graduate degree, and missing graduate degree (not having received a graduate degree was the reference category).

Holland's Occupational Categorization

Participants were categorized into Holland's occupational types based on self-report job title and job description information. Job titles were referenced in two different sources: the *Dictionary of Holland Occupational Codes* (Gottfredson & Holland, 1989) and the O*Net Online database (available at http://online.onetcenter.org). As the replacement for the Dictionary of Occupational Titles (DOT), O*NET information is the nation's primary source of occupational information. The Occupational Information Network (O*NET) and O*NET OnLine were developed for the US Department of Labor by the National O*NET Consortium and includes thousands of job titles and their corresponding Holland category (research and technical report information, http://www.onetcenter.org/research.html). Every respondent was categorized into one of the six Holland codes except for a handful that were not found in either source for Holland's code, and therefore were not included in the analyses. Realistic occupations included job titles such as airline pilot, contractor, forester, and mechanic. Investigative occupations included job titles such as physician, engineer, chemist, anesthetist, geologist, psychologist, systems analyst and veterinarian. Artistic occupations included job titles such as artist, art teacher, auctioneer, copy editor, news editor, landscape architect, and writer. Social occupations included job titles such as assistant principal, caseworker, social worker, nurse, counselor, teacher (except for a few categories such as art teacher, drama teacher, resource teacher), and coordinator. Enterprising occupations included job titles such as account executive, attorney, branch manager, sales manager, resource teacher, CEO, controller, director, flight attendant, human resource manager, independent consultant, sales representative, stockbroker, VP, and zone managers. Conventional occupations included job titles such as accountant (CPA), bookkeeper, library assistant, revenue officer, secretary, underwriting specialist, and tax analyst.

Sample sizes for each of Holland's Categories were: Realistic (19), Investigative (139), Artistic (59), Social (145), Enterprising (392), and Conventional (55). Unfortunately there were not enough respondents in the Realistic, Artistic, and Conventional categories to test their corresponding hypotheses, thus, the only occupational groups investigated in this study were the Investigative, Social, and Enterprising occupations.

Analyses

Subgroup Formation

In order to determine the number of personality profiles that exist, a Cluster Analysis was conducted (Mumford, Stokes, & Owens, 1990; Owens & Schoenfeldt, 1979). First, each individual's profile of scores on the five factors of personality was obtained. A d^2 index was used to assess the similarity of these profiles, and groups of more or less similar individuals were identified by entering the resulting distance matrix into a Ward and Hook (1963) clustering. The Ward and Hook procedure is an iterative, hierarchical procedure that begins by treating each individual as a type unto himself/herself. The two most similar types are then combined, a mean profile formed, and the intergroup distance is recalculated. This process is repeated until all individuals have been merged into distinct groups. The number of groups, or types, to be retained is determined by identifying the point at which further combinations result in a sharp increase in within-group heterogeneity.

As suggested by Milligan and Cooper (1985) the stepsize criterion (distance measure between two clusters that are merged together at each step – as reported by SPSS Statistical Software Package) was used to determine at which step to terminate clustering. A plot of the stepsize criterion is displayed in Figure 2. Using scree-plot logic, there is evidence for retaining a three, four, or five cluster solution. To further evaluate the appropriateness of each solution, a

Predictive Discriminant Analysis was conducted in which the final type assignment served as the criterion, and the scores on the personality measures served as the predictors (Mumford, Zaccaro, Johnson, Diana, Gilbert, & Threlfall, 2000). The solution with the highest hit rate, or number of cross-validated cases correctly classified, was retained. The five-cluster solution demonstrated the highest hit rate (98.5%) of the three solutions (see Figure 3).

After the number of clusters or types to be retained has been identified, mean profiles for each type are obtained and used as seed points for a non-hierarchical k-means analysis. This procedure serves as a control for drift in early assignments into groups and provides the final assignment of individuals to types (Owens & Schoenfeldt, 1979). Each individual was removed from his or her initial cluster, and Euclidean distances to all cluster means were computed. If reallocation to another cluster improved the solution (by reducing the pooled within-group variance), that individual was assigned to this new cluster. This procedure was repeated until cluster assignments were stable and ensuing iterations of the procedure failed to decrease the pooled within-cluster variance.

Hierarchical Regressions

In order to test for all hypotheses that involved identifying which personality profile is most predictive of objective and subjective career success (overall as well as within each of Holland's occupational groups; hypotheses 1a and 1b, 3a and 3b, 4a and 4b, and 7a and 7b), two sets of hierarchical regressions were conducted. One set of hierarchical regressions was conducted for objective success and another set for subjective success. For both sets of regression equations, all control variables were entered in the first step. The second step involved entering subgroup information variables. Subgroup information (the personality profiles identified via cluster analysis) was dummy coded into "profile variables" as "1 = belongs

to profile" and "0 = does not belong to profile" for the five profiles that emerged (fifth personality profile was the reference group). The change in R-squared between the regression equation at step 1 and step 2 were calculated to determine whether or not personality profiles added significant incremental validity when predicting career success above what could be explained by the control variables.

In order to test for all hypotheses regarding the incremental predictive validity of subgroup information above what can be explained by individual personality variables, two sets of hierarchical regressions were conducted. One set of hierarchical regressions was conducted for objective success and another set for subjective success (hypotheses 2a and 2b, 3c and 3d, 4c and 4d, and 7c and 7d). Once again, the first step was to enter all control variables into the regression equation. The second step was to enter the individual Big Five personality dimensions of Extraversion, Neuroticism (Emotional Stability), Conscientiousness, Agreeableness, and Openness to Experiences. The third step was to enter the "profile variables" (dummy coded profile variables). The change in R-squared between the regression equation at step 2 and step 3 were calculated to determine whether or not the addition of subgroup information added significant incremental validity when predicting career success.

CHAPTER 3

RESULTS

As indicated earlier, the results of the cluster analysis identified five distinct personality profiles. A plot of the standardized personality dimension means for each profile can be found in Figure 4. Standardized scores within 1 standard deviation of the mean (from -.5 to +.5) were considered to be moderate scores for each dimension. Standardized scores over .5 indicated a high level score for each dimension while standardized scores below -.5 indicated a low level score for each dimension.

Profile 1 (Emotionally stable, agreeable, introverts): (n=183) Individuals classified in this group are primarily characterized by a high level of emotional stability. In addition they have moderately high levels of conscientiousness, agreeableness, and openness to experiences, and a moderately low level of extraversion (.34, .34, .25, and -.27 respectively).

Profile 2 (Neurotic moody introverts): (n=143) Introversion, neuroticism, and low scores on emotional stability primarily characterize members of this group. In addition they appear to have a level of conscientiousness approaching the low category (-.43).

Profile 3 (Unagreeable moody extraverts): (n=173) Persons affiliated with this profile are primarily characterized by a high level of extraversion and a low level of emotional stability. They also appear to have a level of agreeableness approaching the low category (-.46) and moderately low levels of conscientiousness.

Profile 4 (Emotionally stable, agreeable extraverts): (n=230) Individuals characterized by this profile have extremely high levels of extraversion (1.02) and are emotionally stable. They also appear to be approaching high levels of agreeableness and openness to experiences (.44 and .42 respectively).

Profile 5 (Closed introverts): (n=108) Members of this profile are characterized by their extremely low levels of both extraversion and openness to experiences (-1.27, -1.46 respectively). In addition they appear to have moderately high levels of conscientiousness and agreeableness.

The next step was creating the composite scores for intrinsic and extrinsic success. Judge and Bretz (1994) created a linear composite of intrinsic success factors when investigating the effect of political influence behavior on career success by standardizing and subsequently summing their variables to form an overall intrinsic factors measure. The same procedure was used for the current study. The subjective success variables (self-report measure of career success and job satisfaction) were standardized and summed to form an overall measure of intrinsic career success.

Regarding the extrinsic success variables (salary and number of promotions), an attempt was made to categorize these variables into a 9-box matrix where each variable had groups of low, medium, and high. There are certain professions and organizations that have limited opportunities for several promotions or to attain a high salary. Entrepreneurs (including physicians and lawyers in private practice among others), for example, do not have much opportunity for promotions, but are objectively considered to be extremely successful given their high level of income. On the other hand, there are individuals that have started at the lowest level of an organization and worked their way up through several promotions, but who never

achieve a relatively high level of income (e.g., a janitor that has been promoted several times to a high level machinist in a factory). These individuals are also considered to be objectively successful. Because of these factors, it was of interest to the author to investigate the differences between those individuals in the high salary/high promotion category as compared to those in the high salary/low promotion group and the high promotion/low salary group in an exploratory fashion. Unfortunately, the multinomial regression procedure necessary to test the relevant hypotheses could not be conducted due to constraints in the data. A large number of cells with zero frequencies were encountered. This scenario creates a condition under which the model fit statistics cannot be reliably interpreted (D. Garson, personal communication, July 2003), and a different solution had to be utilized in order to create the extrinsic success composite that was feasible to analyze. Judge and Bretz (1994) created a linear composite of extrinsic success factors when investigating the effect of political influence behavior on career success. They created a composite measure by standardizing and subsequently summing the variables salary, number of promotions, and job level, to form an overall extrinsic factors scale. Therefore, a subsequent decision was made to create a linear composite of the two variables used in this study (salary and the number of promotions; T. A. Judge, personal communication, July 2003). Since this type of linear composite did not allow the inspection of those individuals with high salaries and no promotions and vice versa, hierarchical regression analyses were conducted on each of the variables separately for exploratory purposes.

Objective and subjective success composite measures in this study were moderately correlated for the entire sample, $\underline{r} = .258$, $\underline{p} < .001$, as has been the case in some previous research (Bray & Howard, 1980; Judge & Bretz, 1994). However, both of these aspects of career success are conceptually and empirically distinct (Judge & Bretz, 1994; Kraimer & Seibert, 2000). In

addition, the correlation of objective and subjective success within each of Holland's occupational groups used in the current study revealed at least one non-significant correlation (Social, $\underline{r}$ = .158, $\underline{p}$ = .06; Enterprising, $\underline{r}$ = .262, $\underline{p}$<.001; Investigative, $\underline{r}$ = .345, $\underline{p}$<.001). Therefore, objective and subjective success were investigated separately in this study in order to provide a broad measure of career success (Seibert, Crant, & Kraimer, 1999).

Hypothesis 1a: The profile that most closely represents individuals who are highly extraverted and highly emotionally stable will be most predictive of subjective (intrinsic) career success.

Means, standard deviations, and intercorrelations among the variables are shown in Table 1 for the overall sample. The results of the hierarchical regression are shown in Table 2. Personality profiles, entered at the final step in the hierarchical regression, produced a significant increase in the amount of variance explained by the model for subjective career success (ΔR^2 = .038, $\underline{p}$ < .001). The profile that had the highest unit change in the dependent variable was profile 4, which is characterized by extremely high levels of extraversion and emotional stability. Post-hoc comparisons are shown in Table 3. Personality profile 4 was significantly different from all other profiles except for profile 1, which is primarily categorized by high emotional stability. Thus, hypothesis 1a was supported. Extremely extraverted and emotionally stable individuals exhibit higher levels of subjective career success. In terms of the control variables, graduate degree and industry significantly predicted intrinsic career success for the overall sample. It appears that individuals who had attained a graduate degree and those who worked in construction had the highest levels of intrinsic career success.

H1b: The profile that most closely represents individuals who are highly extraverted, highly emotionally stable, highly conscientious, and low on agreeableness will be most predictive of objective (extrinsic) career success.

Results of the hierarchical regression predicting objective success are shown in Table 4. Personality profiles, entered at the final step of the hierarchical regression, produced a significant increase in the amount of variance explained by the model ($\Delta R^2 = .017$, $\underline{p} < .01$). The profile with the highest unit change in the dependent variable was profile 4, which is characterized by extremely high levels of extraversion and emotional stability. High conscientiousness and low agreeableness were not exhibited by this profile, thereby not supporting hypothesis 1b. In fact, individuals of profile 4 exhibited moderately high levels of agreeableness, which was in the opposite direction than was hypothesized. Post-hoc comparisons are shown in Table 6. Personality profile 4 was only significantly different from profile 5. In terms of control variables, gender, the number of employees (positive relationship), and industry were significant predictors of the overall extrinsic success composite. Individuals with the highest levels of overall extrinsic success were males, who worked in large organizations within the construction industry.

As mentioned earlier, separate hierarchical regressions were conducted for salary and for number of promotions for exploratory purposes. The distribution of salary and the number of promotions indicated a nonnormal distribution, and therefore a natural logarithmic transformation of both variables was conducted for the exploratory analyses following the recommendation of Gerhart and Milkovich (1989). Table 5 shows the results of both hierarchical regressions. Personality profiles, entered at the final step of the hierarchical regression for salary, produced a significant increase in the amount of variance explained by the

model, ($\Delta R^2 = .021$, $\underline{p} < .001$). The profile with the highest unit change in the dependent variable was profile 3, which was a different profile from what predicted the overall objective success measure (profile 4). Profile 3 was characterized by a high level of extraversion, which was similar to profile 4; however it had a low level of emotional stability, which is the exact opposite of profile 4. In addition, it had moderately low levels of agreeableness and conscientiousness, which are also opposite of profile 4. In terms of the control variables, gender, graduate degree, the number of employees (positive relationship), the number of children (positive relationship), and industry were all significant predictors of salary for the overall sample. Individuals with the highest salaries were males who had attained a graduate degree, who had a higher number of children and worked for large organizations within the construction industry.

Results of the hierarchical regression for number of promotions did not produce a significant change in the amount of variance explained ($\Delta R^2 = .009$, $\underline{p} = .117$). The number of promotions seemed to be significantly explained by the control variables, and the addition of personality profiles did not add to the amount of variance explained. These results are discussed in more detail in the discussion section. In terms of the control variables, gender, graduate degree, and industry were all significant predictors of the number of promotions for the overall sample. Individuals with the highest number of promotions were males who had not attained a graduate degree and worked within the manufacturing industry.

H2a: The addition of subgroup information based on the Big Five personality dimensions will add significant incremental validity over individual personality dimensions in the prediction of subjective career success.

H2b: The addition of subgroup information based on the Big Five personality dimensions will add significant incremental validity over individual personality dimensions in the prediction of objective career success.

Results for hypothesis 2a and 2b are shown in Table 7. Personality profiles, entered at the final step of the hierarchical regression, did not produce a significant increase in the amount of variance explained by the model for either subjective or objective success. Thus, hypotheses 2a and 2b were not supported. It should be noted, that the introduction of the individual personality dimensions in step 2 produced a significant increase in variance explained by the model ($\Delta R^2 = .080$, $\underline{p} < .001$ for subjective and $\Delta R^2 = .037$, $\underline{p} < .001$). Conscientiousness, extraversion, and emotional stability were the significant predictors of intrinsic success, which actually resemble the characteristics of the personality profile that predicted the intrinsic success composite in hypothesis 1a (profile 4). Interestingly, the personality dimensions that predicted objective success (openness to experiences, extraversion, and low levels of agreeableness) did not resemble the profile that predicted the extrinsic success composite in hypothesis 1b. However, the individual personality dimensions did resemble the personality profile that predicted salary (profile 3).

H3a: The profile that most closely represents individuals who are highly extraverted, highly agreeable, and highly open to experiences will be most predictive of subjective career success within the Social occupations.

The results of the hierarchical regression are shown in Table 8. Personality profiles, entered at the final step in the hierarchical regression, produced a significant increase in the amount of variance explained by the model for subjective career success ($\Delta R^2 = .078$, $\underline{p} < .05$), however the overall model was not significant ($\underline{F} = 1.423$, $\underline{p} = .124$). Therefore, although the

addition of profile information added significant incremental validity over the control variables within Social occupations for subjective career success, given the non-significance of the overall model, hypothesis 3a was not supported.

H3b: The profile that most closely represents individuals who are highly extraverted, highly agreeable, and highly open to experiences will be most predictive of objective career success within the Social occupations.

Table 9 shows the results of the hierarchical regression for hypothesis 3b. Personality profiles, entered at the final step in the hierarchical regression, did not produce a significant increase in the amount of variance explained by the model for objective career success. Thus, hypothesis 3b was not supported. In addition, the separate hierarchical regressions for salary and number of promotions also revealed non-significant increases in the amount of variance accounted for by the personality profiles (see Table 10). In terms of the control variables, gender and industry were significant predictors of the overall extrinsic success composite within Social occupations. Individuals with the highest levels of overall extrinsic success were males within the Real Estate, Insurance, & Finance industry. Gender was the only significant predictor of salary as well as for the number of promotions for Social occupations. Males had the highest salaries as well as the highest number of promotions.

H3c: The addition of subgroup information based on the Big Five personality dimensions will add significant incremental validity over individual personality dimensions in the prediction of subjective career success within Social occupations.

H3d: The addition of subgroup information based on the Big Five personality dimensions will add significant incremental validity over individual personality dimensions in the prediction of objective career success within Social occupations.

Results for hypothesis 3c and 3d are shown in Table 11. Personality profiles, entered at the final step of the hierarchical regression, did not produce a significant increase in the amount of variance explained by the model for either subjective or objective success. Thus, hypotheses 3c and 3d were not supported. It should be noted, that the introduction of the individual personality dimensions in step 2 produced a significant increase in variance explained by the model for subjective success ($\Delta R^2 = .165$, $\underline{p} < .001$) but not for objective success. The fact that the personality dimensions were a significant predictor of subjective success, but not objective success is consistent with the results found for the personality profiles. The personality dimensions that predicted subjective success were conscientiousness, extraversion, and agreeableness. These dimensions only somewhat resemble the personality profile found to be significant for subjective success (profile 4) within Social occupations. The personality profile demonstrated extraversion and agreeableness, however only demonstrated mean levels of conscientiousness.

H4a: The profile that most closely represents individuals who are low on extraversion but are highly open to experiences will be most predictive of subjective career success within the Investigative occupations.

Table 12 shows the results of the hierarchical regression for hypothesis 4a. Personality profiles, entered at the final step in the hierarchical regression, did not produce a significant increase in the amount of variance explained by the model for subjective career success. Therefore, hypothesis 4a was not supported. None of the control variables had a significant influence in intrinsic career success within Investigative occupations.

H4b: The profile that most closely represents individuals who are low on extraversion but are highly open to experiences will be most predictive of objective career success within the Investigative occupations.

Table 13 shows the results of the hierarchical regression for hypothesis 4b. Personality profiles, entered at the final step in the hierarchical regression, did not produce a significant increase in the amount of variance explained by the model for objective career success. Thus, hypothesis 4b was not supported. In addition, the separate hierarchical regressions for salary and number of promotions also revealed non-significant increases in the amount of variance accounted for by the personality profiles (see Table 14). None of the control variables had a significant influence in either the overall extrinsic success composite or the number of promotions within Investigative occupations. However, industry and the number of children (positive relationship) were significant predictors of salary. Individuals with the highest salaries had a higher number of children and worked within the Retail industry.

H4c: The addition of subgroup information based on the Big Five personality dimensions will add significant incremental validity over individual personality dimensions in the prediction of subjective career success within Investigative occupations.

Results for hypothesis 4c are shown in Table 15. Personality profiles, entered at the final step of the hierarchical regression, did not produce a significant increase in the amount of variance explained by the model for subjective success. Thus, hypotheses 4c was not supported. The introduction of the individual personality dimensions in step 2 also did produce a significant increase in variance explained by the model for subjective success. Interestingly, the model at

step one with only control variables entered did not explain a significant amount of variance in subjective success.

H4d: The addition of subgroup information based on the Big Five personality dimensions will add significant incremental validity over individual personality dimensions in the prediction of objective career success within Investigative occupations.

Results for hypothesis 4d are shown in Table 15. Personality profiles, entered at the final step of the hierarchical regression, produced a significant increase in the amount of variance explained by the model for objective success ($\Delta R^2 = .092$, $p < .05$), however the overall model was not significant ($F = 1.117$, $p = .335$). Therefore, although the addition of subgroup information added significant incremental validity over individual personality dimensions within Investigative occupations for objective career success, given the non-significance of the overall model, hypothesis 4d was not supported. Interestingly, the addition of the individual dimensions at step 2 also did not produce a significant increase in the amount of variance accounted for in the model.

H5a: The profile that most closely represents individuals who are highly open to experiences yet low on conscientiousness will be most predictive of subjective career success within the Artistic occupations.

H5b: The profile that most closely represents individuals who are highly open to experiences, low on conscientiousness, and slightly neurotic will be most predictive of objective career success within the Artistic occupations.

H5c: The addition of subgroup information based on the Big Five personality dimensions will add significant incremental validity over individual personality dimensions in the prediction of subjective career success within Artistic occupations.

H5d: The addition of subgroup information based on the Big Five personality dimensions will add significant incremental validity over individual personality dimensions in the prediction of objective career success within Artistic occupations.

Hierarchical regressions for subjective and objective career success within the Artistic occupations were not conducted due to small sample sizes. Therefore, hypotheses 5a, 5b, 5c, and 5d could not be tested.

H6a: The profile that most closely represents individuals who are highly conscientious yet not open to experiences will be most predictive of subjective career success within the Conventional occupations.

H6b: The profile that most closely represents individuals who are highly conscientious, emotionally stable, yet not open to experiences will be most predictive of objective career success within the Conventional occupations.

H6c: The addition of subgroup information based on the Big Five personality dimensions will add significant incremental validity over individual personality dimensions in the prediction of subjective career success within Conventional occupations.

H6d: The addition of subgroup information based on the Big Five personality dimensions will add significant incremental validity over individual personality dimensions in the prediction of objective career success within Conventional occupations.

Hierarchical regressions for subjective and objective career success within the Conventional occupations were not conducted due to small sample sizes. Therefore, hypotheses 6a, 6b, 6c, and 6d could not be tested.

H7a: The profile that most closely represents individuals who are highly extraverted will be most predictive of subjective career success within the Enterprising occupations.

The results of the hierarchical regression are shown in Table 16. Personality profiles, entered at the final step in the hierarchical regression, produced a significant increase in the amount of variance explained by the model for subjective career success ($\Delta R^2 = .031$, $\underline{p} < .05$). The profile that had the highest unit change in the dependent variable was profile 4, which is characterized by extremely high levels of extraversion and emotional stability. Therefore, hypothesis7a was supported. Individuals who are highly extraverted and emotionally stable have higher levels of subjective career success within Enterprising occupations. Post-hoc comparison analyses, seen in Table 17, show that profile 4 is significantly different from profile 2. None of the control variables had a significant influence in intrinsic career success within Enterprising occupations.

H7b: The profile that most closely represents individuals who are highly extraverted and highly emotionally stable will be most predictive of objective career success within the Enterprising occupations.

Table 18 shows the results of the hierarchical regression for hypothesis 7b. Personality profiles, entered at the final step in the hierarchical regression, did not produce a significant increase in the amount of variance explained by the model for objective career success. Thus, hypothesis 7b was not supported. The model seemed to be significantly explained by the control variables, and the addition of either the individual personality dimensions or the profiles did not add significantly to the amount of variance explained. In addition, the separate hierarchical regressions for salary and number of promotions also revealed non-significant increases in the amount of variance accounted for by the personality profiles (see Table 19). In terms of the

control variables, gender and graduate degree were significant predictors of the overall extrinsic success composite within Enterprising occupations. Individuals with the highest levels of overall extrinsic success were males who had not attained a graduate degree. Gender, graduate degree, and the number of children (positive relationship) were significant predictors of salary for Enterprising occupations. Individuals with the highest salaries were males with graduate degrees and a higher number of children. Graduate degree was the only significant predictor of the number of promotions for Enterprising occupations. Individuals with the highest number of promotions had not attained a graduate degree.

H7c: The addition of subgroup information based on the Big Five personality dimensions will add significant incremental validity over individual personality dimensions in the prediction of subjective career success within Enterprising occupations.

Results for hypothesis 7c are shown in Table 20. Personality profiles, entered at the final step of the hierarchical regression, produced a significant increase in the amount of variance explained by the model for subjective success ($\Delta R^2 = .024$, $\underline{p} < .05$). The addition of subgroup information added significant incremental validity over individual personality dimensions within Enterprising occupations for subjective career success. Interestingly, this was the case even after the individual dimensions entered at step 2 produced a significant increase in the amount of variance accounted for by the model. Thus, hypothesis 7c was supported.

H7d: The addition of subgroup information based on the Big Five personality dimensions will add significant incremental validity over individual personality dimensions in the prediction of objective career success within Enterprising occupations.

Results for hypothesis 4a are shown in Table 20. Personality profiles, entered at the final step of the hierarchical regression, did not produce a significant increase in the amount of

variance explained by the model for subjective success. Thus, hypotheses 7d was not supported. The introduction of the individual personality dimensions in step 2 also did produce a significant increase in variance explained by the model for objective success.

H8a: The profile that most closely represents individuals who are highly introverted and highly emotionally stable will be most predictive of objective career success within the Realistic occupations.

H8b: The addition of subgroup information based on the Big Five personality dimensions will add significant incremental validity over individual personality dimensions in the prediction of subjective career success within Realistic occupations.

H8c: The addition of subgroup information based on the Big Five personality dimensions will add significant incremental validity over individual personality dimensions in the prediction of objective career success within Realistic occupations.

Hierarchical regressions for subjective and objective career success within the Realistic occupations were not conducted due to small sample sizes. Therefore, hypotheses 8a, 8b, and 8c, could not be tested.

CHAPTER 4

DISCUSSION

The results of this investigation add unique information to the growing body of literature relating personality to career success. This study attempted to bridge some identified knowledge gaps within the personality and career success literature by using personality profiles to predict career success among different occupations. The primary purpose of this study was to use the Big Five Personality dimensions in order to predict career success using profile level judgments of personality in addition to scale level measurements. In addition, will differing personality "profiles" emerge as successful when the relationship between personality and career success is investigated within differing occupational groups as categorized by Holland's typology, and will subgroup membership provide incremental predictive validity of career success for the entire sample as well as among different occupations?

The results of this study support the notion that dispositional characteristics play a key role in organizational behavior, and that personality should definitely be included in models of career success (House, Shane, & Herold, 1996; Seibert, Crant, & Kraimer, 1999). More specifically, however, this study attempted investigated the use of personality profiles based on the Big Five in predicting career success.

As mentioned earlier in this paper, it is not simply one personality characteristic or another that makes someone successful, because people are not one characteristic or another, but rather the combination of these characteristics. Neglecting the results of interactions among personality scales can, and often does, significantly bias the conclusions made about an

individual. There were five unique personality profiles identified in the present study, and although these personality profiles are believed to be representative of the current sample (college graduates from a large Southeastern University), future researchers must continue to investigate profiles of personality in order to establish definitive and stable personality profiles in accordance with the Big Five. This will require many replications of clustering individuals based on the Big Fiver personality dimensions using larger and more diverse samples in order to determine the most frequently occurring and stable personality profiles.

Results from the current study suggest that the same personality profile (profile 4) predicted both objective and subjective success across all occupations (hypotheses 1a and 1b). The profile that predicted both subjective and objective success was characterized by individuals who were extremely extraverted and emotionally stable, and had moderately high levels of agreeableness and openness to experiences. However, when predicting salary and the number of promotions separately, a completely different profile emerged as the significant predictor of salary, whereas personality did not seem to significantly predict the number of promotions. The profile that predicted salary was characterized by high levels of extraversion, but low levels of emotional stability and moderately low levels of agreeableness and conscientiousness. Further exploration for the lack of significant findings for the number of promotions is provided later.

Regarding the prediction of subjective success, post-hoc analyses suggest that the profile that emerged as the best predictor was significantly different from all other profiles except for one (profile 1), which only differed in terms of its non-high levels of extraversion. One might then conclude, based on the non-significant differences between these two profiles, that even though individuals representative of profile 4 exhibited the highest levels of subjective success, an individual who exhibited the characteristics of either personality profile would exhibit

generally high levels of subjective success. In other words, individuals who are emotionally stable, moderately agreeable, moderately open to experiences, somewhat conscientious, and either highly extraverted or moderately introverted will exhibit high levels of subjective success across all occupations.

Regarding the prediction of objective success, profile 4 was the best predictor for the linear composite measure of objective success (subsequently referred to as overall objective success). Profile 4 was only significantly different from profile 5, which was characterized by extremely low levels of openness to experiences and extraversion. This observation leads the author to speculate that individuals with personality characteristics similar to profiles 1, 2, 3, and 4 would exhibit non-significantly different levels of overall objective success, and that only individuals who display a personality profile characterized by low levels of extraversion and openness to experiences will have significantly lower levels of objective success.

Profile 3 was the best predictor for salary, and only differed significantly from profiles 1 (characterized by a high level of emotional stability and moderately high levels of conscientiousness, agreeableness, openness to experiences and moderately low levels of extraversion) and 5 (characterized by extremely low levels of openness to experiences and extraversion and moderately high levels of agreeableness and conscientiousness). Following the same line of reasoning as above, one could speculate that individuals with personality characteristics similar to profiles 2, 3, and 4 would exhibit non-significantly different levels of salary, and that only individuals who display personality profiles 1 or 5 will have significantly lower levels of salary.

Although post-hoc analyses demonstrated that profiles 3 and 4 were not significantly different from each other when predicting either overall objective success or salary only, the

author still believes it is important to note the differences between these two profiles and why each might have differentially emerged as the best predictor for the two differing criteria. The differences among the two profiles are interesting and further exploration of the data indicate that the individuals that are considered to be successful based on the linear composite of objective success are somewhat of a different subset of the sample than the subset with high levels of salary. The individuals who comprised the top 25% most successful scores based on the linear composite of objective success were compared to the individuals who comprised the top 25% most successful salaries. The individuals that are emerging as most successful when predicting only salary do not appear to be the same individuals who are emerging as most successful when predicting the linear combination of salary and number of promotions (the overall objective success measure). This is not completely unexpected given that the two measures are virtually uncorrelated. One must keep in mind that these are not two different samples, but rather the same sample with different subsets emerging as most successful depending on which criterion is being predicted.

The fact that there are certain professions and organizations that have limited opportunities for promotions or limited opportunities to ever attain a high salary is the reason why the author originally attempted to investigate the two extrinsic success measures in a 9-cell matrix. The examples previously given of entrepreneurs or machinists who are considered successful by only one of the two measures of success and not both simultaneously would not have been accurately predicted as successful using the linear composite of objective success used in this study. Although the 9-cell matrix was not able to be used in the current study, a comparison of the data using the 9-cell matrix categories of objective success revealed that a greater percentage of individuals categorized within the high salary/low number of promotions

group owned the company that they worked for (72%) as opposed to the individuals categorized within the high salary/high number of promotions group (27%). This is not surprising given the previous explanation regarding entrepreneurs, physicians, and lawyers, and the fact that they make-up a large percentage of the high salary only group, but do not predominantly make-up the high end of the spectrum for the linear composite extrinsic success variable due to their lack of promotions. The majority of the individuals who had both high salaries and high numbers of promotions tended to be managers, directors, and VPs of organizations. This presents a different picture when trying to explain the differences in the profiles that emerged as significant predictors for the linear composite of extrinsic success versus salary alone.

The two biggest differences between the profiles were their levels of agreeableness and emotional stability. Both profiles exhibited high levels of extraversion, which indicated that introverted individuals would not be objectively successful. The profile that predicted the linear composite also exhibited high levels of emotional stability and moderate levels of agreeableness. In contrast, the profile that predicted salary exhibited low levels of emotional stability and moderately low levels of agreeableness. It would appear that the explanations given in past research as well as within this investigation about the importance of low levels of agreeableness only apply when looking at salary in isolation. In other words, based on the observation of the subsamples of the data that emerged as more successful when predicting salary only, low levels of agreeableness seems to be more of an important factor for groups of individuals such as entrepreneurs, physicians, and attorneys. Individuals with low levels of agreeableness seem to gravitate towards occupations where they will not have to "take credit", be flexible, altruistic and tolerant (in other words, they can be however they choose since they run their own companies). In contrast, individuals in managerial, directorial, or executive positions do seem to need

moderate levels of agreeableness to be extrinsically successful. It makes sense that they do not exhibit high levels of agreeableness for the same reasons given previously in this investigation (agreeable people are less likely to shed blame and take credit, and more likely to be taken advantage of and passed over when it comes time for salary increases; Boudreau et al., 2001; Judge et al., 1999; Riordan et al., manuscript; Seibert & Kraimer, 2001). However, it also makes sense that they are not disagreeable with others and rely on achieving high quality relationships given that they rely on others to dictate when they receive a pay raise or a promotion.

Regarding their levels of emotional stability, higher levels of stability helped those individuals with both high salaries and high promotions. This is what would be expected given past research and the notion that self-confidence leads to success (Boudreau et al., 2001; Judge et al., 1999; Riordan et al., manuscript; Seibert & Kraimer, 2001). Interestingly, low levels of emotional stability were indicative of high salary. Once again, this subsample of individuals emerging as most successful when only predicting salary consisted mostly of entrepreneurs, physicians, and attorneys. It's possible that when you consider the emotional ups and downs that physicians and attorneys must endure throughout the course of their careers (e.g., watching people suffer, dealing with the death of patients, or the loss of cases for clients), the ones who remain within these professions and emerge as successful exhibit a natural tendency to be more emotional and worried.

The next two hypotheses addressed the predictive utility of subgroup membership versus individual information when making predictions in an applied context. Neither hypothesis 2a nor 2b were significant. In other words, the addition of subgroup information based on the Big Five personality dimensions did not add significant incremental validity over individual personality dimensions to the prediction of objective or subjective career success.

Subsequent analyses investigating the predictive utility of subgroup membership versus individual information when making predictions about objective and subjective success among Holland's occupational groups were also all non-significant except for when predicting subjective success within the Enterprising occupations. Although the empirical tests of subgroup information resulted in primarily non-significant findings, the importance of profiles of personality especially as it relates to work outcomes has already been discussed previously in this paper. People do not manifest their personalities one trait at a time, but rather any action or behavior by an individual reflects the simultaneous influence of multiple traits at one time (Brandt & Devine, 2000). People are not solely extraverted or conscientious or agreeable. They are either extraverted and conscientious or introverted and conscientious or extraverted and agreeable, etc. Given the exact same situation, two agreeable individuals are likely to behave in different manners if one is extraverted and the other is introverted. Bernardin, Cooke, and Villanova (2000) found that the interaction of two personality scales (Conscientiousness and Agreeableness) played an important role in understanding rater leniency (why certain raters rate people higher or better as a whole, and use only the top end of the rating scale).

The resulting profiles of this study add to the argument that researchers should not be looking at individual dimensions and then making profile level judgments based on those results. Individual prediction would have led the researcher to conclude that the "profile" that best predicted objective career success for the entire sample would be one with high levels of extraversion, high openness to experiences, and low agreeableness, when in fact the true profile that best predicted objective success was one of high extraversion and emotional stability and moderately high levels of agreeableness. In addition, none of the profiles uncovered in the present sample are indicative of the hypothesized profile for predicting objective career success,

which was based on results from investigations that only used single dimensions. In other words, if a hiring manager were to use the results of past research based on individual personality dimensions predicting objective success to locate and hire such an individual, it is not likely that they would find many individuals with that particular profile since it did not emerge from the cluster analysis. For the hypotheses that were supported, additional information was gained when observing the entire profile than would have been gained from just looking at one dimension. Hopefully the current study is only the beginning to what hopefully will motivate other researchers to begin looking at individuals as a whole and using personality profiles (person-oriented approach) as opposed to singular dimensions to predict work outcomes.

Only three out of the six hypotheses predicting subjective career success among Holland's occupations were tested due to insignificant sample sizes among three of the occupational groups. Personality profiles did not produce significant results when predicting subjective career success within Investigative occupations (hypothesis 5a) and Social occupations (hypothesis 7a). However, personality profiles did predict subjective success within Enterprising occupations. This profile was characterized by high levels of extraversion and high levels of emotional stability and approaching high levels of agreeableness and openness to experiences. All hypotheses that were able to be tested predicting objective success within Holland's occupational groups (Social, Enterprising, and Investigative) did not result in significant findings.

In the current study the researcher was unable to investigate three out of the six categories of occupations due to small sample sizes. Future researchers should attempt to establish larger sample sizes in order to be able to investigate the relationships of all six categories. However, if similar non-significant findings of personality predicting objective

success emerge among the other three categories of Holland's typology researchers might need to turn towards other occupational taxonomies. Perhaps a different taxonomy that is based on more narrowly defined occupational characteristics. Holland's typology is based on interests, motives, and preferences, which might explain why significant findings occurred for subjective success but not for objective success. The previous discussion between the two personality profiles that emerged as significant for the overall sample between the two subsamples (the linear composite versus salary only) indicated that the differences might have something to do with the differences between entrepreneurs, physicians, and lawyers versus managerial, directorial, or executive types of positions. These differences are not clearly differentiated among Holland's occupational hexagon. Entrepreneurs and attorneys were mostly classified as Enterprising, while physicians were classified under the Investigative category. Holland's typology does not take into consideration external factors that might influence such things as salary or the number of promotions.

Future research should also try to attain a larger sample size, which would enable the researcher to use some form of categorical combination of extrinsic measures of success in order to use multinomial logistic regression. This would allow the investigation of which type of personality predicts of individuals who have achieved high levels of compensation and low levels of promotions (or another indicator of extrinsic success) and vice versa, and if there are any significant differences between these two profiles. In addition, the investigation would reveal whether or not either of these profiles is similar or dissimilar to the profile that predicts high levels of both measures of extrinsic success.

A possible explanation as to why there were no significant findings for the number of promotions has to do with the cohort group used for these analyses. The sample used for this

study belongs to a particular cohort group and is not cross-sectional in nature, and period effects can influence this type of data. This particular cohort group began their careers in the mid-70s, which was a period of great recession in this country. In fact, some consider it to be one of the two longest and deepest recessions in this country since World War II, with the other being the recession of the early-80s (Labonte, 2002). It was post Vietnam-era, and there were many veterans coming back to the U.S. looking for work. There was an extremely high rate of unemployment and inflation during that time (Labonte, 2002), which likely caused people to accept any employment opportunity that was offered to them. Subsequently, these jobs probably did not provide many opportunities for advancement.

In addition, the nature of the workforce has been changing over the years. The more traditional adult career paths have been giving way to economic and organizational changes since the 1970s (Ebberwein, 2001). During the 1950's one could assume that once hired, by simply displaying a good work ethic, one would be rewarded with promotion, salary increases and job security. During the 1980s and 1990s, globalization of the world's economy and technological advances have produced a highly competitive corporate environment that is punctuated by mergers, takeovers, and downsizing, making the job market extremely competitive (Stimson, 1995). It is possible that the growing rate of downsizing and the decrease in job tenure caused individuals to switch organizations more often then in the past.

Frequent job-hopping would result in fewer total number of promotions because an individual does not remain within a single organization long enough to be promoted. In addition, not only are individuals making frequent changes across organizations, they are also changing occupations more often than in the past (Mclellan, 2000). These frequent changes in occupation would also indicate fewer numbers of promotions, and might indicate greater satisfaction and

greater compensation. It seems unreasonable to believe that an individual would switch occupations unless they believed that the new occupation would provide a better fit for satisfaction and/or salary, but not necessarily for promotions.

Traditional jobs are a thing of the past. Job security is not an option for most workers. In the past, careers were closely tied to organizations. However, the changes in the perceived contract dictate a new type of career. This new career is being referred to as the protean career (Hall & Mirvis, 1996). The protean career is a process where the person, not the organization, is managing careers. It consists of all of the person's varied experiences in education, training, work in several organizations, changes in occupational field, etc. In order to realize the potential of this new career, an individual must develop new competencies related to management of self and career. The competencies are Self-knowledge and Adaptability (Hall & Moss, 1998; Szymanski, 1999). These competencies are sometimes referred to as skills that need to be built in order to have the "learning to learn" mentality necessary for this new type of career. Part of this "process" is to continuously re-evaluate one's career or non-career goals and change directions accordingly.

It is possible that personality is related to this process of continuous learning; however no research has been done investigating the relationship between personality and individuals who successfully manage their own career through this process of continuous learning and movement. This is a definite topic for future research. Researchers should focus on what types of individuals are more capable of leading a Protean Career. Organizations might need to adapt to this new mentality by allowing for employees to continuously learn new skills and have different opportunities within the organization so that they will not leave and go elsewhere. There are examples of individuals who at mid-career found flexibility or "at home time" with

family to be more important than upward direction within an organization and changed their career development or direction accordingly (Hall & Moss, 2003). It is probable that the increasing number of women in the workforce could have influenced the shift in importance from solely focusing on upward mobility to other factors such as "at home time" with family.

It is likely that the number of promotions is not as much an indicator of career success as believed to be in the past, and subsequently there might be better indicators of extrinsic success than the number of promotions. Future research should consider the use of job level, or possibly occupational status (Judge, Higgins, Thoresen, & Barrick, 1999) as another indicator or perhaps as a replacement indicator for the number of promotions given the changes in the workforce. Using an indicator such as occupational status would also allow the researcher to include all participants that are employed full-time during the data collection year in question, without having to drop participants with lapses of employment, as had to be done for the current study. There were approximately 60 women who were dropped from the current study due to their lapse of employment for more than three years, in order to remain at home with their children.

It would be interesting for future researchers to investigate the differences, if any, that would emerge if the relationship between personality profiles and career success were investigated for men and women separately. Would differing profiles emerge as successful? For example, would personality profile 3 (the profile that predicted salary) predict salary for a sample of only women, or does this personality profile consist of the essential characteristics for a higher income regardless of gender? The top third of individuals with the highest salaries in this sample were primarily men (approximately 80% men and 20% women). It is possible that women who display certain characteristics of personality profile 3 (not agreeable and moody) are perceived more negatively in the workplace than men who display those same characteristics.

Do women who have been able to break the glass ceiling in terms of salary display a different personality profile than men? Furthermore, do successful women in terms of other types of objective success or in terms of subjective success display a different personality profile than men? These are interesting questions for future researchers to address.

Lastly, future researchers should attempt to assess the importance of both extrinsic and intrinsic measures of success to individuals. It seems reasonable to believe that the match between personality and success would be of greater significance for the type of success that is most important to an individual. In other words, if an individual values intrinsic success, then it would reason that their personality would not be as significant a predictor of their salary or number of promotions as it would be for their internal satisfaction with their job and their internal measure of success.

In sum, the current study made the first step in attempting to bridge some of the identified knowledge gaps within the personality and career success literature. While not all research questions can be answered within a single investigation, the current study contributed unique information to the growing body of literature relating personality to career success. The results of this study supported the notion that dispositional characteristics play a key role in organizational behavior, and that personality should definitely be included in models of career success. In addition, an argument was made not only for the use of personality profiles (based on the Big Five personality dimensions) in predicting career success, but also for the need to investigate career success within specific occupational categories.

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Table 1

Descriptive Statistics and Intercorrelations – Facets of Job Satisfaction

Variable		N	Mean	Std. Dev.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
Personality																							
1.	Age	844	41.58	1.89	1.000																		
2.	Male	844	.58	.49	-.01	1.000																	
3.	Female	844	.42	.49	.01	-1.00**	1.000																
4.	Married	844	.74	.44	-.07*	.13**	-.13**	1.000															
5.	Not Married	844	.19	.39	.02	-.18**	.17**	-.81**	1.000														
6.	Living Together	844	.02	.15	.07*	.02	-.01	-.26**	-.07*	1.000													
7.	Married Missing	844	.05	.22	.07	.04	-.04	-.38**	-.11**	-.04	1.000												
8.	Number of Children	844	1.48	.09	.02	.22**	-.22**	.42**	-.41**	-.18**	.01	1.000											
9.	Graduate Degree – Yes	844	.55	.50	.05	-.02	.02	.02	-.02	-.04	.01	.03	1.000										
10.	Graduate Degree – No	844	.43	.50	-.02	.01	-.01	-.04	.04	.05	-.02	-.04	-.96**	1.000									
11.	Graduate Degree – Missing	844	.02	.14	-.10*	.06	-.06	.05	-.07*	-.02	.04	.02	-.16**	-.13**	1.000								
12.	Number of Employees	844	5576.08	1645.17	-.05	.03	-.03	-.05	.02	.14**	-.02	-.06	-.09*	.09*	-.01	1.000							
13.	Public	844	.25	.43	.06	-.27**	.27**	.02	-.02	.01	-.01	.01	.22**	-.21**	-.03	-.06	1.000						
14.	Manufacturing	844	.06	.24	-.05	.10**	-.10**	.00	.04	-.01	-.06	.01	-.11**	.11**	.00	.00	-.15**	1.000					
15.	Service	844	.14	.34	-.02	.04	-.04	.02	.02	-.06	-.03	.02	.01	.00	-.01	-.09*	-.23**	-.10**	1.000				
16.	Mining	844	.01	.08	-.00	.07*	-.07*	.05	-.04	-.01	-.02	.04	.05	-.05	-.01	.00	-.05	-.02	-.03	1.000			
17.	Agriculture, Forestry, Mining	844	.02	.14	.01	.08*	-.08*	-.02	.00	.04	.01	-.01	.00	.00	-.02	-.02	-.08*	-.04	-.06	-.01	1.000		
18.	Retail	844	.03	.18	.06	.07	-.07	.01	-.01	.02	-.01	.02	-.09**	.10**	-.03	-.01	-.11**	-.05	-.08*	-.02	-.03	1.000	
19.	Real Estate, Insurance, Finance	844	.08	.27	-.03	.08*	-.08*	-.03	.02	-.01	.04	.03	-.07*	.08*	-.01	.04	-.17**	-.08*	-.12**	-.03	-.04	-.06	1.000
20.	Construction	844	.01	.10	-.02	.01	-.01	.03	-.05	.07*	-.02	.00	-.01	.01	-.01	-.04	-.06	-.03	-.04	-.01	-.01	-.02	-.03
21.	Wholesale Trade	844	.03	.16	-.03	.08	-.08	-.03	.01	.02	.03	.05	-.14**	.13**	.03	-.05	-.10**	-.04	-.07	-.01	-.02	-.03	-.05
22.	Transportation, Sanitary	844	.05	.23	.04	.05	-.05	.04	-.04	.00	-.01	.00	-.20**	.21**	-.04	.32**	-.14**	-.06	-.01**	-.02	-.03	-.05	-.07*
23.	Computer	844	.04	.19	-.08*	.06	-.06	-.05	.06	.01	-.02	-.07*	-.03	.03	-.03	.05	-.12**	-.05	-.08*	-.02	-.03	-.04	-.06
24.	Health Care	844	.11	.32	-.04	.03	-.03	.00	-.01	-.01	.02	.00	.17**	-.18**	.02	-.06	-.21**	-.09**	-.14**	-.03	-.05	-.07*	-.11**
25.	Other	844	.13	.33	.04	-.05	.05	-.05	.01	.01	.08*	-.07*	-.03	.00	.09**	-.02	-.22**	-.10**	-.15**	-.03	-.05	-.07*	-.11**
26.	Industry Missing	844	.04	.20	.03	.01	-.01	.05	-.03	.01	-.05	.00	-.06	.05	.01	.02	-.12**	-.06	-.08*	-.02	-.03	-.04	-.06

* p < .05. ** p < .01.

Table 1 (cont.)

Descriptive Statistics and Intercorrelations – Facets of Job Satisfaction

Variable	N	Mean	Std. Dev.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
Personality																						
27. Personality Profile 1	844	0.22	.41	.03	-.04	.04	.08*	-.04	-.02	-.07*	.01	.05	-.04	-.04	-.04	.03	.01	-.04	-.01	.01	.01	.02
28. Personality Profile 2	844	.17	.38	-.03	-.01	.01	-.11**	.08*	.02	.07*	-.05	.05	-.04	-.02	.00	-.01	.01	.07	.00	.01	-.02	-.03
29. Personality Profile 3	844	.21	.40	-.01	.00	.00	-.04	.02	.00	.05	-.04	-.02	.00	.05	-.03	-.02	.03	-.02	-.01	-.05	.02	.01
30. Personality Profile 4	844	.28	.45	.04	.05	-.05	.07*	-.09	.03	.00	.05	-.01	.01	.02	.04	-.01	-.03	.02	.04	-.01	.00	-.01
31. Personality Profile 5	844	.13	.33	-.06	.00	.00	-.02	.07*	-.03	-.06	.02	-.09*	.09**	-.01	.04	.00	-.01	-.03	-.03	.05	-.01	.02
32. Conscientiousness	844	-.03	.96	.03	-.07	.07	.02	.02	-.05	-.04	-.01	.08*	-.06	-.09*	.04	.07*	-.01	-.06	.01	.01	-.02	-.03
33. Extraversion	844	-.07	.99	.06	.08*	-.08*	.09*	-.12**	.04	.01	.08*	.00	-.01	.03	-.01	-.04	-.01	.00	.02	-.04	.02	.06
34. Agreeableness	844	-.06	.98	.01	-.15**	.15**	.12**	-.08*	-.06	-.06	.06	.04	-.03	-.07	.01	.09*	-.08*	-.08*	.01	.00	-.01	.01
35. Emotional Stability	844	.02	.98	.08*	.10**	-.10**	.11**	-.10	.01	-.04	.08*	-.02	.02	.00	.03	-.03	.00	.03	.04	.04	.02	.02
36. Openness to Experiences	844	.08	.95	.01	-.09**	.09**	-.06	.02**	.11**	.01	-.10**	.15**	-.14**	-.04	.03	.03	.00	.03	.00	.00	-.03	-.09**
37. Intrinsic Success	844	.13	1.62	.04	.07*	-.07*	.09*	-.10**	.00	.00	.11**	.13**	-.12**	-.03	-.08	-.06	-.03	.00	.03	.05	.03	.06
38. Extrinsic Success	844	-.02	1.43	.04	.30**	-.30**	.05	-.06	-.03	.03	.13**	-.03	.03	-.01	.10**	-.27**	.1**0	.01	.01	-.01	.03	.09**
39. Salary	844	75886.49	70383.12	.03	.39**	-.39**	.08*	-.10**	-.01	.03	.21**	.13**	-.14**	.03	.06	-.32**	.07*	.04	.02	-.05	.03	.08*
40. Promotions	844	.88	.69	.02	.16**	-.16**	-.01	.00	-.01	.03	-.03	-.19**	.20**	-.02	.11**	-.13**	.14**	-.06	.03	.05	.01	.08*

* p < .05. ** p < .01.

Table 1 (cont.)

Descriptive Statistics and Intercorrelations – Facets of Job Satisfaction

Variable	N	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
20. Construction	844	1.000																				
21. Wholesale Trade	844	-.02	1.000																			
22. Transportation, Sanitary	844	-.02	-.04	1.000																		
23. Computer	844	-.02	-.03	-.05	1.000																	
24. Health Care	844	-.04	-.06	-.09*	-.07*	1.000																
25. Other	844	-.04	-.06	-.09**	-.08*	-.14**	1.000															
26. Industry Missing	844	-.02	-.04	-.05	-.04	-.08*	-.08*	1.000														
27. Personality Profile 1	844	-.02.	-.04	-.05	.04	.04	.01	-.06	1.000													
28. Personality Profile 2	844	-.05	.00	-.04	.04	.02	-.04	.00	-.24**	1.000												
29. Personality Profile 3	844	-.02	.02	-.01	-.04	-.01	.05	.04	-.27**	-.23**	1.000											
30. Personality Profile 4	844	.05	-.01	.03	-.03	-.07	.03	.04	-.33**	-.28**	-.31**	1.000										
31. Personality Profile 5	844	.04	.02	.08*	.00	.03	-.07*	-.03	-.20**	-.17**	-.20**	-.24**	1.000									
32. Conscientiousness	844	-.08*	-.05	.01	-.01	.04	.00	.01	.14**	-.15**	-.20**	.08*	.13**	1.000								
33. Extraversion	844	.04	.03	-.03	-.06	-.06	.05	.05	-.18**	-.42**	.37**	.57**	-.52**	-.08*	1.000							
34. Agreeableness	844	.06	-.05	.00	-.02	.02	.03	-.01	.21**	-.34**	-.29**	.28**	.09**	.11**	.06	1.000						
35. Emotional Stability	844	.06	-.02	.03	.00	-.06	.00	-.03	.36**	-.45**	-.45**	.43**	.03	.14**	.13**	.38**	1.000					
36. Openness to Experiences	844	-.02	-.07*	-.04	.06	-.01	.06	.00	.12**	.06	.08*	.23**	-.61**	-.03	.34**	.03	.09**	1.000				
37. Intrinsic Success	844	.04	.02	-.08*	-.07	.08*	-.02	.03	.04	-.14**	-.01	.16**	-.09*	.12**	.23**	.09**	.19**	.09*	1.000			
38. Extrinsic Success	844	.02	.03	.06	-.01	.14**	-.01	-.01	-.07*	-.03	.06	.11**	-.10**	.03	.21**	-.09**	.05	.11**	.26**	1.000		
39. Salary	844	.02	.02	.01	-.02	.27**	-.02	.01	-.09**	-.05	.08*	.11**	-.08*	.02	.22**	-.11**	.04	.05	.35**	.69**	1.000	
40. Promotions	844	.03	.04	.10**	.02	-.10**	.03	-.01	-.02	.00	.03	.06	-.09*	.00	.12**	-.07*	.05	.09**	.03	.68**	.10**	1.000

* p < .05. ** p < .01.

Table 2

Summary of Hierarchical Regression Analysis for Variables Predicting Overall Intrinsic Success

Variable	B	SE B	β	R^2
Step 1				.067**
Male	.087	.122	.027	
Graduate Degree – yes	.403	.122	.125	
Graduate Degree – Missing	-.220	.387	-.020	
Manufacturing	.239	.258	.036	
Service	.206	.192	.043	
Mining	.608	.655	.032	
Agriculture/Forestry/Fishing	.744	.413	.065	
Retail	.559	.320	.065	
Real Estate/Insurance/Finance	.614	.231	.105	
Construction	.789	.569	.049	
Wholesale Trade	.746	.374	.074	
Transportation/Sanitary	-.058	.284	-.008	
Computer	-.222	.312	-.027	
Health Care	.500	.199	.100	
Other	.215	.193	.045	
Industry Missing	.673	.299	.083	
Not Married	-.261	.160	-.064	
Living Together	.051	.394	.005	
Married Missing	-.112	.256	-.015	
Number of Employees	-.250	.169	-.055	
Number of Children	.101	.069	.058	
Age	.073	.057	.045	
Step 2				.104**
Profile 1	.428	.192	.111	
Profile 2	-.130	.203	-.030	
Profile 3	.291	.195	.073	
Profile 4	.746	.185	.210	
Change in R^2				.038**

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

Table 3

Bonferroni Post-Hoc Comparison of Personality Profiles Predicting Overall Intrinsic Career Success

Profile Comparisons	Bonferroni
Profile 4 vs. Profile 1	.505
Profile 4 vs. Profile 2	1.420**
Profile 4 vs. Profile 3	1.035
Profile 4 vs. Profile 5	1.171*

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

Table 4

Summary of Hierarchical Regression Analysis for Variables Predicting Overall Extrinsic Success

Variable	B	SE B	β	R^2
Step 1				.165**
Male	.561	.081	.251	
Graduate Degree – yes	-.078	.081	-.035	
Graduate Degree – Missing	-.359	.268	-.046	
Manufacturing	.797	.169	.175	
Service	.280	.126	.086	
Mining	.523	.428	.041	
Agriculture/Forestry/Fishing	.307	.270	.039	
Retail	.249	.219	.040	
Real Estate/Insurance/Finance	.651	.156	.156	
Construction	1.148	.397	.097	
Wholesale Trade	.651	.235	.099	
Transportation/Sanitary	.415	.191	.085	
Computer	.380	.198	.069	
Health Care	.477	.138	.129	
Other	.462	.127	.140	
Industry Missing	.332	.193	.061	
Not Married	-.037	.105	-.013	
Living Together	-.304	.251	-.042	
Married Missing	.179	.170	.036	
Number of Employees	.273	.114	.085	
Number of Children	.014	.046	.012	
Age	.066	.038	.060	
Step 2				.182**
Profile 1	.180	.129	.067	
Profile 2	.334	.134	.115	
Profile 3	.404	.131	.147	
Profile 4	.428	.124	.172	
Change in R^2				.017**

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

Table 5

Summary of Hierarchical Regression Analysis for Variables Predicting Salary and Number of Promotions

	Salary				Promotions			
Variable	B	SE B	β	R^2	B	SE B	β	R^2
Step 1				.277**				.102**
Male	.325	.036	.304		.205	.051	.151	
Graduate Degree – yes	.172	.036	.163		-.176	.051	-.131	
Graduate Degree – Missing	.061	.119	.016		-.215	.168	-.045	
Manufacturing	.400	.075	.184		.357	.106	.130	
Service	.276	.056	.177		-.043	.079	-.022	
Mining	.278	.190	.046		.276	.269	.036	
Agriculture/Forestry/Fishing	-.003	.120	-.001		.272	.170	.057	
Retail	.322	.097	.109		-.069	.138	-.018	
Real Estate/Insurance/Finance	.420	.069	.211		.177	.098	.070	
Construction	.688	.176	.122		.342	.250	.048	
Wholesale Trade	.372	.104	.118		.176	.148	.044	
Transportation/Sanitary	.274	.085	.118		.156	.120	.053	
Computer	.217	.088	.082		.104	.125	.031	
Health Care	.498	.061	.283		-.089	.087	-.040	
Other	.287	.056	.182		.134	.080	.067	
Industry Missing	.275	.086	.106		.061	.122	.018	
Not Married	.008	.047	.006		-.061	.066	-.036	
Living Together	.016	.112	.005		-.221	.158	-.050	
Married Missing	.082	.076	.034		.033	.107	.011	
Number of Employees	.127	.051	.083		.098	.072	.050	
Number of Children	.054	.021	.093		-.054	.029	-.073	
Age	.025	.017	.048		.030	.024	.045	
Step 2				.298**				.110**
Profile 1	.033	.057	.026		.144	.081	.089	
Profile 2	.085	.059	.061		.184	.085	.105	
Profile 3	.199	.058	.151		.196	.083	.117	
Profile 4	.184	.055	.155		.191	.078	.127	
Change in R2				.021**				.009

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

Table 6

Bonferroni Post-Hoc Comparison of Personality Profiles Predicting Overall Extrinsic Career Success and Salary

Profile Comparisons	Bonferroni
Overall Extrinsic Success	
Profile 4 vs. Profile 1	.311
Profile 4 vs. Profile 2	.142
Profile 4 vs. Profile 3	.055
Profile 4 vs. Profile 5	.424*
Salary	
Profile 3 vs. Profile 1	.175*
Profile 3 vs. Profile 2	.104
Profile 3 vs. Profile 4	-.005
Profile 3 vs. Profile 5	.200*

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

Table 7

Summary of Hierarchical Regression Analysis for Subgroup Utility (Personality Profiles) Predicting Intrinsic and Extrinsic Career Success

	Intrinsic				Extrinsic			
Variable	B	SE B	β	R^2	B	SE B	β	R^2
Step 1				.067**				.165**
Male	.087	.122	.027		.561	.081	.251	
Graduate Degree – yes	.403	.122	.125		-.078	.081	-.035	
Graduate Degree – Missing	-.220	.387	-.020		-.359	.268	-.046	
Manufacturing	.239	.258	.036		.797	.169	.175	
Service	.206	.192	.043		.280	.126	.086	
Mining	.608	.655	.032		.523	.428	.041	
Agriculture/Forestry/Fishing	.744	.413	.065		.307	.270	.039	
Retail	.559	.320	.065		.249	.219	.040	
Real Estate/Insurance/Finance	.614	.231	.105		.651	.156	.156	
Construction	.789	.569	.049		1.148	.397	.097	
Wholesale Trade	.746	.374	.074		.651	.235	.099	
Transportation/Sanitary	-.058	.284	-.008		.415	.191	.085	
Computer	-.222	.312	-.027		.380	.198	.069	
Health Care	.500	.199	.100		.477	.138	.129	
Other	.215	.193	.045		.462	.127	.140	
Industry Missing	.673	.299	.083		.332	.193	.061	
Not Married	-.261	.160	-.064		-.037	.105	-.013	
Living Together	.051	.394	.005		-.304	.251	-.042	
Married Missing	-.112	.256	-.015		.179	.170	.036	
Number of Employees	-.250	.169	-.055		.273	.114	.085	
Number of Children	.101	.069	.058		.014	.046	.012	
Age	.073	.057	.045		.066	.038	.060	
Step 2				.147**				.202**
Conscientiousness	.207	.057	.124		.023	.038	.020	
Extraversion	.307	.059	.190		.134	.040	.119	
Agreeableness	.002	.061	.001		-.109	.041	-.096	
Openness to Experiences	.237	.062	.144		.022	.041	.020	
Emotional Stability	.026	.063	.015		.116	.042	.100	
Change in R^2				.080**				.037**
Step 3				.151**				.208**
Profile 1	-.242	.252	-.063		-.325	.171	-.122	
Profile 2	.142	.268	.033		.011	.181	.004	
Profile 3	-.199	.337	-.050		-.307	.228	-.111	
Profile 4	-.459	.335	-.129		-.389	.226	-.157	
Change in R2				.004				.006

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

Table 8

Summary of Hierarchical Regression Analysis for Variables Predicting Overall Intrinsic Success within Social Occupations

Variable	B	SE B	β	R^2
Step 1				.109
Male	-.090	.341	-.025	
Graduate Degree – yes	.837	.296	.256	
Graduate Degree – Missing	.792	.975	.076	
Service	-.237	.475	-.044	
Agriculture/Forestry/Fishing	-1.027	1.518	-.057	
Real Estate/Insurance/Finance	1.272	.730	.155	
Computer	2.349	1.564	.130	
Health Care	.435	.480	.080	
Other	.290	.522	.052	
Industry Missing	.917	.718	.112	
Not Married	-.158	.384	-.040	
Living Together	-1.283	1.124	-.100	
Married Missing	.299	.897	.028	
Number of Employees	.121	.606	.017	
Number of Children	-.032	.185	-.018	
Age	.064	.130	.043	
Step 2				.187
Profile 1	.510	.379	.155	
Profile 2	-.343	.447	-.079	
Profile 3	.169	.428	.042	
Profile 4	1.022	.403	.284	
Change in R^2				.078**

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

Table 9

Summary of Hierarchical Regression Analysis for Variables Predicting Overall Extrinsic Success within Social Occupations

Variable	B	SE B	β	R^2
Step 1				.290**
Male	.576	.154	.313	
Graduate Degree – yes	.025	.134	.015	
Graduate Degree – Missing	.632	.443	.119	
Service	-.227	.213	-.083	
Agriculture/Forestry/Fishing	-.484	.683	-.053	
Real Estate/Insurance/Finance	1.164	.328	.281	
Computer	.469	.704	.051	
Health Care	.565	.216	.206	
Other	.018	.249	.006	
Industry Missing	.000	.323	.000	
Not Married	-.172	.169	-.089	
Living Together	.425	.506	.066	
Married Missing	.099	.405	.019	
Number of Employees	-.333	.272	-.093	
Number of Children	-.061	.083	-.067	
Age	-.023	.059	-.031	
Step 2				.302**
Profile 1	-.019	.177	-.011	
Profile 2	-.055	.209	-.025	
Profile 3	.128	.198	.064	
Profile 4	.168	.187	.093	
Change in R^2				.012

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

Table 10

Summary of Hierarchical Regression Analysis for Variables Predicting Salary and Number of Promotions for Social Occupations

	Salary				Promotions			
Variable	B	SE B	β	R^2	B	SE B	β	R^2
Step 1				.252**				.245**
Male	.213	.066	.278		.440	.123	.307	
Graduate Degree – yes	.161	.057	.235		-.026	.107	-.020	
Graduate Degree – Missing	.530	.189	.239		.241	.356	.058	
Service	-.128	.091	-.112		-.130	.171	-.061	
Agriculture/Forestry/Fishing	-.181	.292	-.048		-.409	.549	-.058	
Real Estate/Insurance/Finance	.382	.140	.221		.710	.263	.220	
Computer	-.022	.301	-.006		.442	.565	.062	
Health Care	.066	.092	.058		.350	.173	.164	
Other	.124	.106	.100		.006	.200	.002	
Industry Missing	.035	.138	.020		-.069	.259	-.021	
Not Married	-.024	.072	-.030		-.122	.136	-.081	
Living Together	.201	.216	.074		.452	.406	.090	
Married Missing	.175	.173	.079		-.004	.325	-.001	
Number of Employees	.009	.116	.006		-.333	.218	-.120	
Number of Children	-.029	.036	-.076		-.046	.067	-.064	
Age	.039	.025	.124		-.041	.047	-.070	
Step 2				.294**				.248**
Profile 1	.046	.074	.066		.001	.143	.001	
Profile 2	-.089	.087	-.097		.006	.169	.004	
Profile 3	.143	.083	.172		.006	.160	.004	
Profile 4	.067	.078	.090		.082	.151	.058	
Change in R2				.042				.003

* p < .05. ** p < .01.

Table 11

Summary of Hierarchical Regression Analysis for Subgroup Utility (Personality Profiles) Predicting Intrinsic and Extrinsic Career Success within Social Occupations

	Intrinsic				Extrinsic			
Variable	B	SE B	β	R^2	B	SE B	β	R^2
Step 1				.109				.290**
Male	-.090	.341	-.025		.576	.154	.313	
Graduate Degree – yes	.837	.296	.256		.025	.134	.015	
Graduate Degree – Missing	.792	.975	.076		.632	.443	.119	
Service	-.237	.475	-.044		-.227	.213	-.083	
Agriculture/Forestry/Fishing	-1.027	1.518	-.057		-.484	.683	-.053	
Real Estate/Insurance/Finance	1.272	.730	.155		1.164	.328	.281	
Computer	2.349	1.564	.130		.469	.704	.051	
Health Care	.435	.480	.080		.565	.216	.206	
Other	.290	.522	.052		.018	.249	.006	
Industry Missing	.917	.718	.112		.000	.323	.000	
Not Married	-.158	.384	-.040		-.172	.169	-.089	
Living Together	-1.283	1.124	-.100		.425	.506	.066	
Married Missing	.299	.897	.028		.099	.405	.019	
Number of Employees	.121	.606	.017		-.333	.272	-.093	
Number of Children	-.032	.185	-.018		-.061	.083	-.067	
Age	.064	.130	.043		-.023	.059	-.031	
Step 2				.274**				.312**
Conscientiousness	.425	.137	.273		-.033	.067	-.042	
Extraversion	.354	.133	.231		.094	.065	.121	
Agreeableness	.321	.148	.201		-.006	.073	-.008	
Openness to Experiences	.175	.140	.117		.025	.067	.033	
Emotional Stability	-.058	.138	-.038		.027	.068	.035	
Change in R^2				.165**				.021
Step 3				.293**				.323**
Profile 1	.678	.531	.206		-.366	.260	-.218	
Profile 2	.961	.601	.222		-.271	.298	-.123	
Profile 3	1.266	.793	.315		-.407	.386	-.204	
Profile 4	.868	.770	.241		-.398	.377	-.221	
Change in R2				.019				.012

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

Table 12

Summary of Hierarchical Regression Analysis for Variables Predicting Overall Intrinsic Success within Investigative Occupations

Variable	B	SE B	β	R^2
Step 1				.217
Male	-.256	.355	-.065	
Graduate Degree – yes	.843	.415	.209	
Graduate Degree – Missing	.238	1.047	.021	
Manufacturing	.714	.941	.071	
Service	-.245	.829	-.027	
Mining	.458	1.023	.040	
Agriculture/Forestry/Fishing	.760	1.026	.066	
Retail	1.660	.856	.184	
Real Estate/Insurance/Finance	.009	1.461	.001	
Construction	-1.313	1.682	-.066	
Transportation/Sanitary	.544	1.061	.047	
Computer	-.860	.588	-.159	
Health Care	.330	.431	.098	
Other	.171	.705	.024	
Industry Missing	1.227	1.032	.106	
Not Married	.165	.437	.037	
Living Together	1.494	1.201	.129	
Married Missing	-.608	.557	-.094	
Number of Employees	-.839	.634	-.150	
Number of Children	.344	.181	.195	
Age	-.259	.161	-.151	
Step 2				.260
Profile 1	.557	.507	.146	
Profile 2	.454	.516	.116	
Profile 3	.798	.588	.170	
Profile 4	1.220	.523	.295	
Change in R^2				.042

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

Table 13

Summary of Hierarchical Regression Analysis for Variables Predicting Overall Extrinsic Success within Investigative Occupations

Variable	B	SE B	β	R^2
Step 1				.113
Male	.015	.233	.006	
Graduate Degree – yes	.094	.258	.042	
Graduate Degree – Missing	.498	.775	.064	
Manufacturing	.279	.586	.050	
Service	.367	.455	.086	
Mining	-.037	.637	-.006	
Agriculture/Forestry/Fishing	.611	.640	.096	
Retail	-.298	.537	-.060	
Real Estate/Insurance/Finance	-.236	.914	-.030	
Construction	-.392	1.047	-.036	
Transportation/Sanitary	1.172	.663	.184	
Computer	-.130	.367	-.043	
Health Care	.115	.273	.058	
Other	-.188	.440	-.047	
Industry Missing	-.409	.770	-.053	
Not Married	.502	.274	.199	
Living Together	-.172	.748	-.027	
Married Missing	.319	.372	.084	
Number of Employees	.518	.399	.166	
Number of Children	.080	.115	.077	
Age	-.010	.107	-.011	
Step 2				.137
Profile 1	-.052	.342	-.023	
Profile 2	.345	.342	.157	
Profile 3	.124	.412	.041	
Profile 4	.245	.344	.105	
Change in R^2				.024

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

Table 14

Summary of Hierarchical Regression Analysis for Variables Predicting Salary and Number of Promotions for Investigative Occupations

	Salary				Promotions			
Variable	B	SE B	β	R^2	B	SE B	β	R^2
Step 1				.397**				.255*
Male	.067	.104	.055		.000	.146	.000	
Graduate Degree – yes	.321	.115	.265		-.203	.161	-.134	
Graduate Degree – Missing	.415	.346	.098		.082	.484	.015	
Manufacturing	.330	.262	.110		.057	.366	.015	
Service	.347	.203	.151		-.062	.284	-.022	
Mining	.188	.284	.054		-.143	.397	-.033	
Agriculture/Forestry/Fishing	-.148	.286	-.043		.447	.399	.103	
Retail	.569	.240	.211		-.796	.335	-.235	
Real Estate/Insurance/Finance	-.278	.408	-.066		.103	.570	.019	
Construction	.053	.468	.009		-.120	.653	-.016	
Transportation/Sanitary	.311	.296	.090		.446	.414	.103	
Computer	.116	.164	.071		-.295	.229	-.144	
Health Care	.522	.122	.487		-.453	.170	-.337	
Other	.066	.196	.031		-.243	.274	-.089	
Industry Missing	-.166	.344	-.039		-.321	.480	-.061	
Not Married	.210	.123	.154		.169	.171	.098	
Living Together	.495	.334	.143		-.563	.467	-.130	
Married Missing	.126	.166	.062		.122	.232	.047	
Number of Employees	.176	.178	.104		.247	.249	.117	
Number of Children	.108	.052	.192		-.054	.072	-.077	
Age	-.063	.048	-.117		.081	.067	.120	
Step 2				.437**				.261
Profile 1	-.133	.150	-.111		.002	.215	.001	
Profile 2	.116	.149	.098		.065	.215	.044	
Profile 3	.112	.180	.069		-.074	.260	-.036	
Profile 4	.146	.151	.115		-.077	.217	-.048	
Change in R2				.040				.006

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

Table 15

Summary of Hierarchical Regression Analysis for Subgroup Utility (Personality Profiles) Predicting Intrinsic and Extrinsic Career Success within Investigative Occupations

	Intrinsic				Extrinsic			
Variable	B	SE B	β	R^2	B	SE B	β	R^2
Step 1				.217				.113
Male	-.256	.355	-.065		.015	.233	.006	
Graduate Degree – yes	.843	.415	.209		.094	.258	.042	
Graduate Degree – Missing	.238	1.047	.021		.498	.775	.064	
Manufacturing	.714	.941	.071		.279	.586	.050	
Service	-.245	.829	-.027		.367	.455	.086	
Mining	.458	1.023	.040		-.037	.637	-.006	
Agriculture/Forestry/Fishing	.760	1.026	.066		.611	.640	.096	
Retail	1.660	.856	.184		-.298	.537	-.060	
Real Estate/Insurance/Finance	.009	1.461	.001		-.236	.914	-.030	
Construction	-1.313	1.682	-.066		-.392	1.047	-.036	
Transportation/Sanitary	.544	1.061	.047		1.172	.663	.184	
Computer	-.860	.588	-.159		-.130	.367	-.043	
Health Care	.330	.431	.098		.115	.273	.058	
Other	.171	.705	.024		-.188	.440	-.047	
Industry Missing	1.227	1.032	.106		-.409	.770	-.053	
Not Married	.165	.437	.037		.502	.274	.199	
Living Together	1.494	1.201	.129		-.172	.748	-.027	
Married Missing	-.608	.557	-.094		.319	.372	.084	
Number of Employees	-.839	.634	-.150		.518	.399	.166	
Number of Children	.344	.181	.195		.080	.115	.077	
Age	-.259	.161	-.151		-.010	.107	-.011	
Step 2				.280*				.169
Conscientiousness	.283	.154	.169		-.018	.097	-.019	
Extraversion	.179	.161	.104		.209	.107	.210	
Agreeableness	-.074	.175	-.041		-.046	.116	-.045	
Openness to Experiences	.166	.179	.088		-.159	.116	-.149	
Emotional Stability	.203	.167	.114		.043	.109	.042	
Change in R^2				.062				.056
Step 3				.305*				.261
Profile 1	.307	.756	.081		-1.334	.511	-.604	
Profile 2	.859	.751	.220		-.629	.488	-.287	
Profile 3	1.483	1.005	.316		-1.875	.663	-.625	
Profile 4	1.231	1.033	.297		-2.025	.689	-.866	
Change in R2				.025				.092*

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

Table 16

Summary of Hierarchical Regression Analysis for Variables Predicting Overall Intrinsic Success within Enterprising Occupations

Variable	B	SE B	β	R^2
Step 1				.062
Male	.120	.186	.036	
Graduate Degree – yes	.154	.173	.049	
Graduate Degree – Missing	-.390	.548	-.037	
Manufacturing	-.093	.345	-.018	
Service	.062	.299	.015	
Mining	.538	.936	.030	
Agriculture/Forestry/Fishing	.090	.605	.008	
Retail	-.011	.416	-.002	
Real Estate/Insurance/Finance	.496	.323	.105	
Construction	1.593	.827	.102	
Wholesale Trade	.434	.428	.062	
Transportation/Sanitary	-.480	.391	-.083	
Computer	.600	.528	.063	
Health Care	.349	.499	.040	
Other	.113	.316	.024	
Industry Missing	.226	.424	.032	
Not Married	-.151	.237	-.037	
Living Together	.266	.519	.028	
Married Missing	-.360	.363	-.052	
Number of Employees	-.176	.218	-.044	
Number of Children	.068	.100	.041	
Age	.123	.083	.078	
Step 2				.093*
Profile 1	.246	.323	.059	
Profile 2	-.456	.342	-.098	
Profile 3	.000	.307	.000	
Profile 4	.404	.294	.124	
Change in R^2				.031*

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

Table 17

Bonferroni Post-Hoc Comparison of Personality Profiles Predicting Overall Intrinsic Career Success within Enterprising Occupations

Profile Comparisons	Bonferroni
Profile 4 vs. Profile 1	.132
Profile 4 vs. Profile 2	.858**
Profile 4 vs. Profile 3	.439
Profile 4 vs. Profile 5	.483

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

Table 18

Summary of Hierarchical Regression Analysis for Variables Predicting Overall Extrinsic Success within Enterprising Occupations

Variable	B	SE B	β	R^2
Step 1				.118**
Male	.380	.129	.160	
Graduate Degree – yes	-.043	.121	-.019	
Graduate Degree – Missing	-1.137	.401	-.147	
Manufacturing	.482	.237	.133	
Service	-.111	.208	-.038	
Mining	.492	.645	.039	
Agriculture/Forestry/Fishing	-.114	.416	-.015	
Retail	-.012	.300	-.002	
Real Estate/Insurance/Finance	.206	.227	.060	
Construction	1.462	.570	.135	
Wholesale Trade	.135	.290	.028	
Transportation/Sanitary	.031	.275	.007	
Computer	.455	.363	.069	
Health Care	.521	.343	.085	
Other	.069	.219	.021	
Industry Missing	.199	.292	.040	
Not Married	-.001	.166	.000	
Living Together	-.374	.358	-.057	
Married Missing	.274	.250	.057	
Number of Employees	.285	.158	.097	
Number of Children	.086	.070	.072	
Age	.088	.058	.077	
Step 2				.124**
Profile 1	.107	.230	.037	
Profile 2	.192	.241	.060	
Profile 3	.315	.220	.120	
Profile 4	.231	.211	.099	
Change in R^2				.007

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

Table 19

Summary of Hierarchical Regression Analysis for Variables Predicting Salary and Number of Promotions for Enterprising Occupations

Variable	Salary				Promotions			
	B	SE B	β	R^2	B	SE B	β	R^2
Step 1				.160**				.088*
Male	.259	.057	.243		.038	.078	.027	
Graduate Degree – yes	.172	.053	.171		-.149	.073	-.113	
Graduate Degree – Missing	-.254	.176	-.073		-.548	.241	-.120	
Manufacturing	.209	.104	.129		.132	.142	.062	
Service	.128	.091	.096		-.331	.125	-.189	
Mining	.133	.282	.024		.291	.387	.039	
Agriculture/Forestry/Fishing	-.181	.182	-.052		.044	.250	.010	
Retail	.135	.131	.059		-.232	.180	-.077	
Real Estate/Insurance/Finance	.269	.100	.174		-.172	.136	-.085	
Construction	.609	.249	.125		.280	.342	.044	
Wholesale Trade	.188	.127	.088		-.151	.174	-.054	
Transportation/Sanitary	.095	.120	.051		-.078	.165	-.032	
Computer	.211	.159	.071		.036	.218	.009	
Health Care	.352	.150	.129		-.063	.206	-.018	
Other	.130	.096	.087		-.182	.131	-.093	
Industry Missing	.200	.128	.090		-.079	.175	-.027	
Not Married	.010	.073	.008		-.048	.099	-.028	
Living Together	.022	.157	.007		-.284	.215	-.073	
Married Missing	.018	.110	.008		.103	.150	.036	
Number of Employees	.124	.069	.094		.092	.095	.053	
Number of Children	.065	.031	.122		-.006	.042	-.009	
Age	.029	.026	.057		.021	.035	.031	
Step 2				.175**				.098
Profile 1	-.051	.100	-.039		.184	.138	.107	
Profile 2	.018	.105	.013		.149	.144	.079	
Profile 3	.130	.096	.111		.255	.132	.166	
Profile 4	.067	.092	.064		.186	.127	.135	
Change in R2				.014				.010

* p < .05. ** p < .01.

Table 20

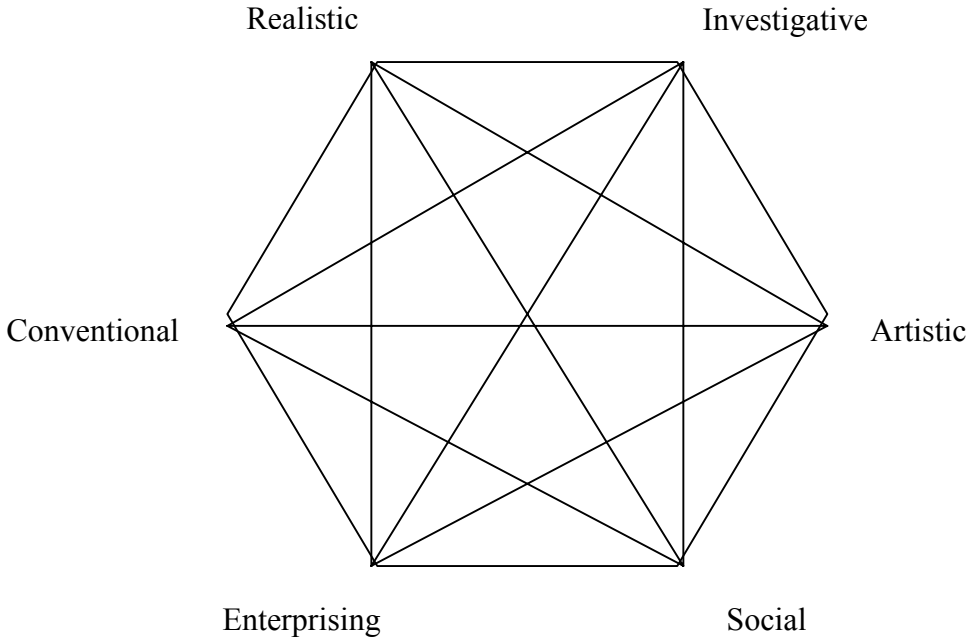
Summary of Hierarchical Regression Analysis for Subgroup Utility (Personality Profiles) Predicting Intrinsic and Extrinsic Career Success within Enterprising Occupations

	Intrinsic				Extrinsic			
Variable	B	SE B	β	R^2	B	SE B	β	R^2
Step 1				.062				.118**
Male	.120	.186	.036		.380	.129	.160	
Graduate Degree – yes	.154	.173	.049		-.043	.121	-.019	
Graduate Degree – Missing	-.390	.548	-.037		-1.137	.401	-.147	
Manufacturing	-.093	.345	-.018		.482	.237	.133	
Service	.062	.299	.015		-.111	.208	-.038	
Mining	.538	.936	.030		.492	.645	.039	
Agriculture/Forestry/Fishing	.090	.605	.008		-.114	.416	-.015	
Retail	-.011	.416	-.002		-.012	.300	-.002	
Real Estate/Insurance/Finance	.496	.323	.105		.206	.227	.060	
Construction	1.593	.827	.102		1.462	.570	.135	
Wholesale Trade	.434	.428	.062		.135	.290	.028	
Transportation/Sanitary	-.480	.391	-.083		.031	.275	.007	
Computer	.600	.528	.063		.455	.363	.069	
Health Care	.349	.499	.040		.521	.343	.085	
Other	.113	.316	.024		.069	.219	.021	
Industry Missing	.226	.424	.032		.199	.292	.040	
Not Married	-.151	.237	-.037		-.001	.166	.000	
Living Together	.266	.519	.028		-.374	.358	-.057	
Married Missing	-.360	.363	-.052		.274	.250	.057	
Number of Employees	-.176	.218	-.044		.285	.158	.097	
Number of Children	.068	.100	.041		.086	.070	.072	
Age	.123	.083	.078		.088	.058	.077	
Step 2				.141**				.137**
Conscientiousness	.174	.085	.105		.021	.062	.018	
Extraversion	.318	.090	.195		.064	.066	.055	
Agreeableness	.025	.087	.016		-.094	.064	-.084	
Openness to Experiences	.232	.091	.144		.021	.066	.019	
Emotional Stability	-.003	.098	-.002		.115	.071	.096	
Change in R^2				.078**				.020
Step 3				.165**				.141**
Profile 1	-.880	.401	-.210		-.303	.294	-.104	
Profile 2	-.497	.423	-.107		-.061	.311	-.019	
Profile 3	-1.266	.497	-.344		-.136	.366	-.052	
Profile 4	-1.559	.497	-.477		-.334	.365	-.143	
Change in R2				.024*				.004

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

Figure Caption

Figure 1. Holland's Hexagon



Note: The Holland Hexagon shows the similarity among interest patterns as an inverse function of the distance between the interest patterns. For example, the Social type is most similar (and close in distance) to the Artistic and Enterprising type, while is most dissimilar to (and further in distance) to the Realistic type.

Figure Caption

Figure 2. Agglomeration Schedule of Stepsize Criterium

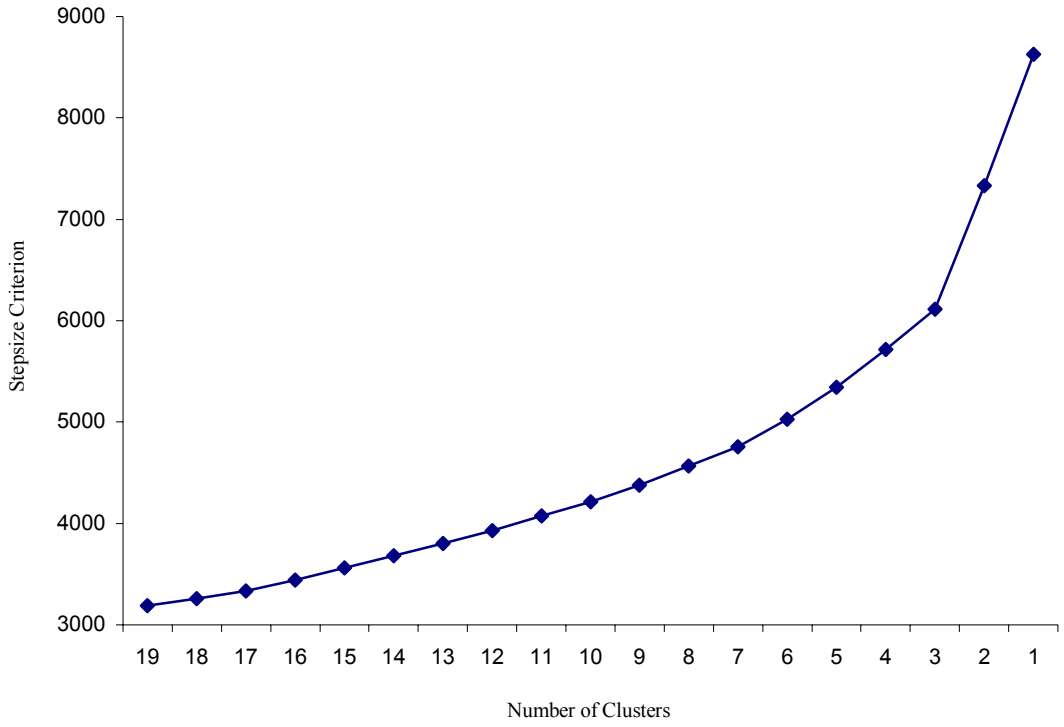

9000
8000
7000
6000
5000
4000
3000
Stepsize Criterion
19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1
Number of Clusters

Figure Caption

Figure 3. Results of Predictive Discriminant Analysis (PDA) for Cluster Solutions

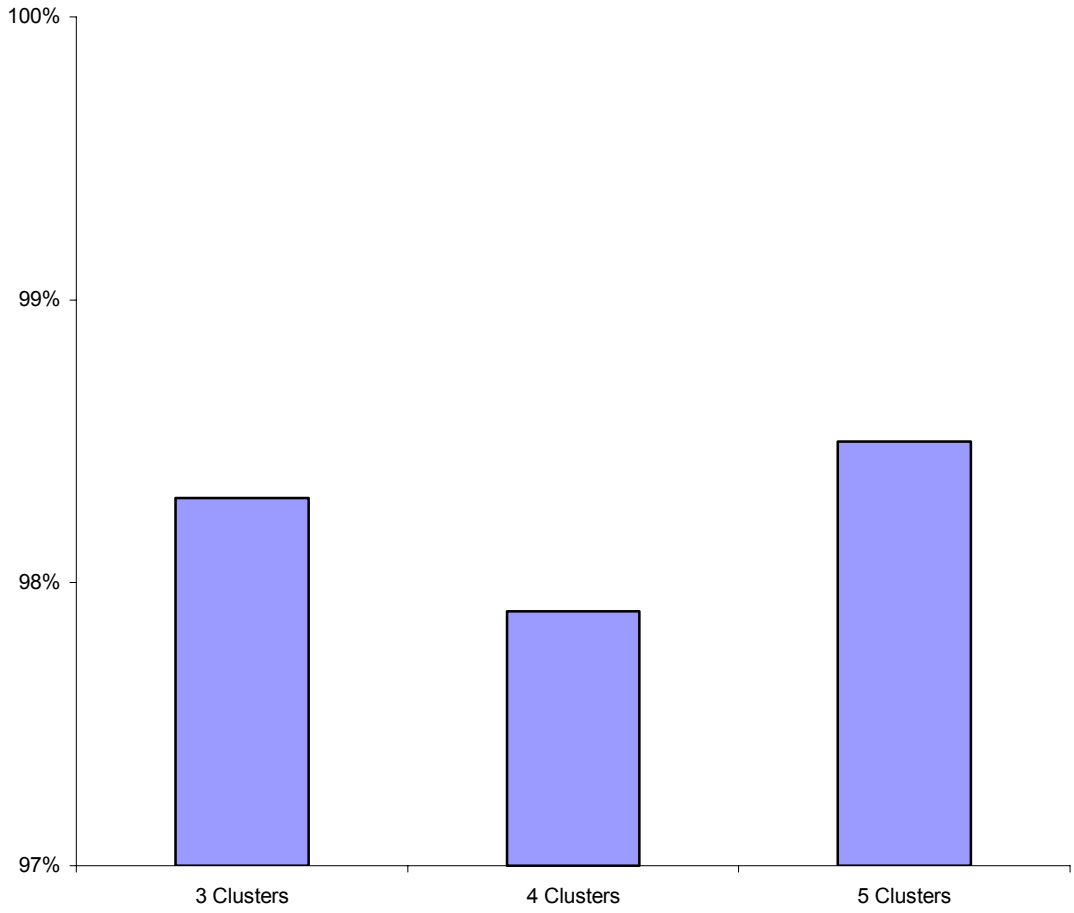
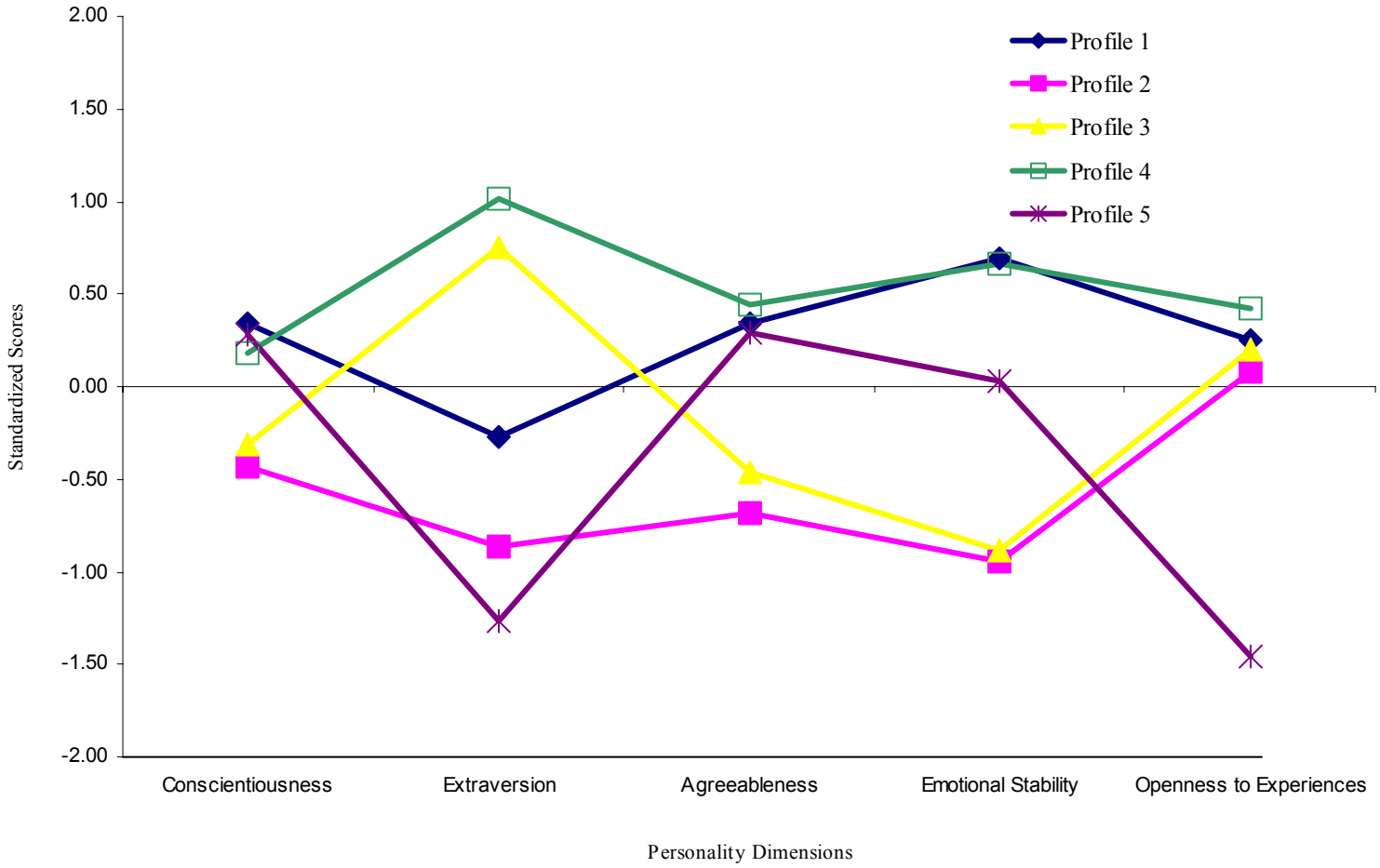

100%
99%
98%
97%
3 Clusters
4 Clusters
5 Clusters

Figure Caption

Figure 4. Personality Profiles as a Result of Cluster Analysis


2.00
1.50
1.00
0.50
0.00
-0.50
-1.00
-1.50
-2.00
Standardized Scores
Profile 1
Profile 2
Profile 3
Profile 4
Profile 5
Conscientiousness
Extraversion
Agreeableness
Emotional Stability
Openness to Experiences
Personality Dimensions