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The Relationship Between the Five-Factor Model of Personality and Leadership Preferences for Initiating Structure and Consideration

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THE RELATIONSHIP BETWEEN THE FIVE-FACTOR MODEL OF PERSONALITY AND LEADERSHIP PREFERENCES FOR INITIATING STRUCTURE AND CONSIDERATION

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This study seeks to further understand the influence of personality on preferred leadership style by investigating the relationship between the Ohio State Model of Leadership and the 5-factor model of personality. Archival data, consisting of scores on the NEO PI-R and Leadership Opinion Questionnaire, and demographic information (age, gender, education level, prior managerial experience) for 296 job applicants was analyzed. Conscientiousness, Extraversion, and Neuroticism were hypothesized to predict Initiating Structure, whereas Agreeableness was hypothesized to predict Consideration. A correlation matrix was computed for all of the variables in the study, followed by several multiple regression analyses. Results revealed that both Conscientiousness and Extraversion were positively related to Initiating Structure; Neuroticism was negatively related, but its effect disappeared once the influence of the remaining factors were controlled for; Agreeableness did not have an initial relationship with Initiating Structure, but was negatively related to this construct after controlling for the remaining factors. Both Openness to Experience and Agreeableness were positively related to Consideration. However, a large part of the variance in Initiating Structure and Consideration scores could not be accounted for

by the five-factor model. The findings suggest that personality plays an important, yet insufficient, role in predicting leadership preferences for Initiating Structure and Consideration.

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INTRODUCTION

Early Approaches to Studying Leadership

From a scientific point of view, the concept of leadership has proven to be somewhat of an enigma. Perhaps Burns (1978) summed up it up best when he stated: "Leadership is one of the most observed and least understood phenomena on earth" (p. 2). At least part of the lack of understanding of leadership can be attributed to the fact that the very term itself has escaped precise definition. Different scholars, working in different fields, asking different questions, and operating from different theoretical perspectives have defined the concept in very diverse ways. At various times, leadership has been viewed as a trait, a behavior style, a characteristic of groups, and an interaction between a leader, followers, and the situation, just to name a few. A brief overview of the history of leadership research highlights just how challenging an endeavor it has been.

Starting in the early 1900s, researchers set out to identify relatively stable characteristics that could differentiate leaders from followers. This "trait" approach to the study of leadership dominated the field for the next 40 years. Although many different characteristics were studied during this time (for a review, see Stodgill, 1948), they can be classified into three basic categories: physical (e.g., age, height, weight, appearance), cognitive (e.g., intelligence, verbal fluency, knowledge, judgment), and personality (e.g., introversion/extroversion, dominance, ambition, cooperativeness).

During the mid 1940s, trait theories of leadership began to fall out of favor. Particularly damaging to the proponents of study of the trait approach to leadership was Stodgill's (1948) extensive literature review on the relationship between personal characteristics and leadership. Although the review actually identified some traits that fairly consistently differentiated leaders from followers, Stodgill concluded: "...if there are general traits which characterize leaders, the patterns of traits are likely to vary with the leadership requirements of different situations" (p. 61). In spelling out what this would mean for future leadership research, he further stated: "It becomes quite clear that an adequate analysis of leadership involves not only the study of leaders, but also of situations" (p. 65).

It was in this vein that, in 1945, researchers of the Personnel Research Board at Ohio State University began the "Leadership in a Democracy" studies. Operating under the hypothesis that situational demands of the leadership position largely influenced performance, the Ohio State approach to the study of leadership represented a marked departure from the trait approach. For the next 10 years, the research team, led by Shartle, Stodgill, and Hemphill, carried out some of the most extensive and fruitful studies on the concept of leadership. These studies represented an interdisciplinary approach to the study of leadership, which the researchers tentatively defined as "the behavior of an individual when he is directing the activities of a group to a shared goal" (Hemphill & Coons, 1957, p. 7). Thus, one of the main purposes of these studies was to describe and measure the actual behavior that leaders exhibited. More broadly, the studies aimed "to develop improved methodology for studying leadership, to establish criteria for judging it, and to prepare information and

techniques which may be useful in selecting and training persons who may occupy leadership positions in various types of organization structures" (Stodgill & Shartle, 1948, p. 286). If these aims were achieved, then the most effective styles (i.e., combination of behaviors) of leadership could be identified for the many different situations in which leaders function (Fleishman, 1953a).

The Ohio State Model of Leadership

One of the most important phases of the "Leadership in a Democracy" studies involved the creation of the Leader Behavior Description Questionnaire (LBDQ; Halpin, 1957), which would subsequently lead to the most influential finding of the Ohio State Studies. Briefly, the LBDQ creative process consisted of the researchers specifying nine a priori dimensions of leader behavior. "Expert judges" then created over 1,800 original items that reflected behavior for each of these dimensions. These were subsequently reduced to 150 items, which formed the basis for the actual LBDQ. Repeated administration of the questionnaire across a variety of participants and situations revealed that many of the dimensions overlapped considerably with one another.

In order to explore the underlying structure of the intercorrelations further, a factor analysis of the items, using the Wherry-Gaylord Iterative procedure, was conducted. The sample consisted of 300 LBDQs completed by Air Force crew members who described the behavior of their airplane commander. The result of the factor analysis was surprising: two major factors, later termed *Consideration* and *Initiating Structure* (or Structure), accounted for up to 80% of the common variance between the nine dimensions. Subsequent factor analyses with different populations

(Fleishman, 1953b; Halpin & Weiner, 1957) uncovered the same two factors. Moreover, the results from these factor analyses demonstrated that Consideration and Initiating Structure were orthogonal (Fleishman, 1953a). Thus, a leader could engage in one dimension of behavior without it affecting the other dimension. In other words, a leader could be low on both dimensions, high on both, or low on one and high on another.

Fleishman and Harris (1962) defined the dimensions of Initiating Structure and Consideration as follows:

> *Consideration* includes behavior indicating mutual trust, respect, and a certain warmth and rapport between the supervisor and his group. This does not mean that this dimension reflects a superficial "pat-on-the-back," "first name calling" kind of human relations behavior. This dimension appears to emphasize a deeper concern for group members' needs and includes such behavior as allowing subordinates more participation in decision making and encouraging more two-way communication.
>
> *Structure* includes behavior in which the supervisor organizes and defines group activities and his relation to the group. Thus, he defines the role he expects each member to assume, assigns tasks, plans ahead, establishes ways of getting things done, and pushes for production. This dimension seems to emphasize overt attempts to achieve organizational goals (pp. 43-44).

The discovery of these two dimensions changed the face of leadership research and resulted in hundreds of subsequent studies. In addition to the LBDQ, the Ohio State Leadership Studies produced several other instruments—the Supervisory

Behavior Description Questionnaire (SBDQ; Fleishman, 1957a), the Leadership Opinion Questionnaire (LOQ; Fleishman, 1957b), and the LBDQ-Form XII (Stodgill, 1963) —as ways of measuring Consideration and Initiating Structure. The LOQ is unique from the other three instruments in that it is a self-report measure and asks how the individual *should* behave as a leader, whereas the other three measures are filled out by subordinates and ask them to report their leader's *actual* behavior.

For the next 20 plus years, from the 1950s until the mid 1970s, the study of the effects of Consideration and Initiating Structure on various outcome criteria dominated the leadership research, much in the same way that trait theories did for the first half of the century. Many studies found that these two factors were related to subordinate satisfaction, grievances and turnover, and supervisor ratings, among other important outcome criteria (for a review, see Fleishman, 1973; Stodgill, 1974). Based on a review of relevant research, Fleishman (1989) has concluded that the most undesirable combination for many situations is one in which a leader is low in both Initiating Structure and Consideration, whereas conversely, a high Initiating Structure and Consideration combination is the most likely to result in favorable outcomes. Stodgill (1974), in a review of over 20 studies, also found strong support for the effectiveness of the "High-High" paradigm. To be fair, however, several researchers (e.g., Larson, Hunt, & Osborn, 1976; Nystrom, 1978; Schriesheim, 1982) have failed to find support for this paradigm and have gone so far as to label it a "myth." Nonetheless, what has not been disputed is Fleishman's (1989) assertion that low Consideration has never been found to be related to positive outcomes.

In fact, this may be one of the only aspects of the Ohio State Model that has not been questioned. Although the model enjoyed widespread popularity, it was also subjected to widespread criticism, and almost no aspect of the theory or research was immune from scrutiny. Schriesheim and Kerr (1974), for example, had several serious criticisms of each of the four Ohio State measures. Among them was the assertion that the different instruments may not be measuring the exact same dimensions. Schriesheim and Kerr stated that, save for the LBDQ-XII, the remaining instruments contained items that measured extraneous leader dimensions. They also pointed out that the construct validity, concurrent validity, and predictive validity of each measure was largely unknown. Finally, Schriesheim and Kerr noted that all of the instruments were susceptible to either social desirability (in the case of the LOQ) or leniency (for the remaining instruments) response biases, as well as halo effects, and agreement response tendencies.

Another aspect of the Ohio State Model that was questioned was the independence of the two dimensions. Although the Ohio State researchers claimed the dimensions were orthogonal, Weissenberg and Kavanagh (1972) came to a different conclusion after reviewing 72 studies that used either the LOQ or the LBDQ. Results from their literature review showed that 51 percent of the studies reported significant positive correlations between the dimensions of Initiating Structure and Consideration. A majority of the positive correlations were found in studies that used the LBDQ, whereas the studies that employed the LOQ mostly found nonsignificant correlations. Weissenberg and Kavanagh concluded that: “although a supervisor would like to behave as if *C* and *S* were orthogonal (LOQ), he finds this impossible to

do in his day-to-day behavior, at least in terms of his subordinates perceptions of his behavior (LBDQ)" (p. 124).

The most critical review, however, came from Korman (1966), who pointed out five major shortcomings of the research to date: failure to account for situational moderators, inconsistent correlations between the dimensions and outcome criteria, criterion contamination, unanswered questions of causality, and failure to specify the ranges in which Initiating Structure and Consideration had a meaningful impact on outcome criteria. Based on his review of the studies conducted up until that point, Korman concluded: "Despite the fact that "Consideration" and "Initiating Structure" have become almost bywords in American industrial psychology, it seems apparent that very little is now known as to how these variables may predict work group performance and the conditions which affect such predictions. At the current time, we cannot even say whether they have any predictive significance at all" (p. 360).

Much as Stodgill's (1948) literature review lead to a demise in the popularity of trait theories in leadership research, Korman's (1966) review marked the beginning of the end for Initiating Structure and Consideration as the dominant leadership paradigm. Even a follow-up review by Kerr and Schriesheim (1974), which concluded that several of Korman's criticisms had been successfully addressed by the research, was not enough to turn back the tide. Although research on the Ohio State Model would remain fairly popular until the mid 1970s, the zeitgeist in the field of leadership research had definitely changed. The search for important situational moderators began in earnest following Korman's review, and Initiating Structure and Consideration came to be viewed as too simplistic to have much value in explaining

something as complex as leadership behavior. Greenwood and McNamara (1969), perhaps reflecting a sentiment held by a growing number of researchers, noted: "But with greater complexity and importance of other basic abilities and behavioral patterns in middle and upper level management levels, it appears doubtful whether Initiating Structure or Consideration can be considered important determinants of supervisory effectiveness or success in higher supervisory positions" (pp. 149-150).

And so, leadership theories became increasingly more complex in an effort to compensate for what was a perceived lack of a main effect of Initiating Structure and Consideration. An extension of the Ohio State Model, House's (1971) Path-Goal Theory, included moderating variables and hypothesized that the effects of Initiating Structure and Consideration will vary depending on the needs of subordinates. For example, if subordinates have ambiguously defined roles, a leader high in Initiating Structure will be more effective, whereas the same type of leader may be ineffective if placed in an environment where subordinate roles are already clearly defined. These types of contingency models of leadership became popular in the mid 1970s. However, after inconsistencies in the research for these models emerged, researchers moved on, yet again, to new models of leadership.

In the late 1970s, transformational models of leadership emerged, beginning with House's (1977) theory of charismatic leadership, which was soon followed by Burns' (1979) Pulitzer Prize winning book on the topic. The ideas of Burns were further expounded upon by Bass (1985), who also developed the first psychometric instrument to measure this construct. The basic idea behind transformational leadership is that certain charismatic individuals are able to create a vision that

inspires subordinates and results in extremely high levels of commitment from them. In turn, they put forward extraordinary amounts of effort and are able to perform at levels, and achieve goals, that far exceed normal expectations. Since the early to mid 1980s, the transformational model has become the dominant paradigm in the field of leadership research.

The Ohio State Model of leadership, on the other hand, is now generally viewed as a "classical" approach that has little relevance in today's leadership theory or research, outside of its obvious historical significance. Yukul and Van Fleet (1992), for example, stated: "Overall, the research based on a two-factor conceptualization of leadership behavior has added little to our knowledge about effective leadership" (p. 156). Tracey (1987) added: "Perhaps it is time to abandon the two dimensions altogether…" (p. 31). In fact, the scientific study of Initiating Structure and Consideration as important facets of leadership has fallen so far out of favor that it prompted Judge, Piccolo, and Ilies (2004) to question whether these concepts had become the "forgotten ones."

In order to clarify past inconsistencies in the research, and determine whether or not Initiating Structure and Consideration are still important leadership variables, Judge et al. (2004) performed three meta-analyses consisting of 130 studies that used one of the four Ohio State Scales to measure the relationship between these two constructs and various organizational criteria. Results from the study showed Initiating Structure, based on 159 correlations, and Consideration, based on 163 correlations, both had significant average true score correlations (ρ) of .29 and .48, respectively, across leadership criteria. Consideration was more strongly related to

follower satisfaction, whereas Initiating Structure was more strongly related to leader performance criteria. Results also showed the validities and the intercorrelations between the two dimensions varied by measure. The LBDQ and LBDQ-XXII had the highest validities averaged across the two dimensions, but also had the strongest intercorrelations, at .36 and .37 respectively. The LOQ and SBDQ, on the other hand, had lower validities (LOQ for Consideration and SBDQ for Initiating Structure), but also had the lowest intercorrrelations between the dimensions, at -.06 and -.07, respectively. However, only one of the validities, the SBDQ measure of Initiating Structure, failed to generalize. Based on the results of the study, Judge et al. concluded that "these behaviors—Consideration and Initiating Structure—are important pieces in the leadership puzzle" (p. 44) and furthermore "…it is inadvisable, at this point, to abandon Consideration and Initiating Structure in leadership research" (p. 47).

Keller (2006) reached a similar conclusion after performing a longitudinal study that examined the effects of both Transformational Leadership and Initiating Structure on five different performance measures (technical quality, schedule performance, cost performance, profitability, and speed to market) that were collected one and five years later. The sample for the study included 118 research and development project teams from five different organizations, comprising a total sample of 792 individuals. Results from the study indicated that Initiating Structure predicted unique variance in all of the performance measures and it was a stronger predictor of technical quality in development projects than Transformational

Leadership. Based on these findings, Keller concluded: "...it is time to bring Initiating Structure back into models of leadership for teams" (p. 209).

These two recent studies suggest the Ohio State Model may have been dismissed prematurely. Initiating Structure and Consideration appear to be important dimensions in leadership and it seems that further research on these concepts is warranted. One area that Judge et al. (2004) recommended for additional research was an examination of what causes a leader to display structuring and considerate behavior. A closer examination of the motivational correlates of leadership behavior has been previously advocated by Fleishman (1973; 1995). To date, however, there has been scant research on this topic. Moreover, the research that does exist is difficult to interpret, based on the fact that the measures used to assess the motivational correlates have tended to vary significantly from study to study and because the findings have been mixed.

Using the Gordon Survey of Interpersonal Values (Gordon, 1960) and the LOQ, Fleishman and Peters (1962) found a positive relationship between the interpersonal value of Benevolence (i.e., doing things for others, sharing, being generous, helping those who are unfortunate) and the leadership dimension Consideration and a negative relationship between Independence (i.e., having freedom to make decisions and to do things one's own way) and Initiating Structure. This finding was subsequently replicated by Matsui, Ohtsuka, and Kikuchi (1978) using a subordinate-rated measure of the two leadership dimensions, the SBDQ. L. V. Gordon (as cited in Bass, 1990) found Ascendancy was positively related to Initiating Structure, but negatively related to Consideration. There were no relationships,

however, between the two leader dimensions and Sociability, Responsibility, or Emotional Stability. Using the Edwards Personal Preference Schedule (Edwards, 1959), Batlis, Green, and Joure (as cited in Batlis & Green, 1979) found individuals in the high Initiating Structure group had a significantly higher mean Dominance score and a significantly lower mean Nurturance score than those in the low Initiating Structure Group. Finally, Fleishman (1957b) found individuals favoring Initiating Structure were more sociable and meticulous.

However, several other studies (e.g., Greenwood & McNamara, 1969; Nystrom, 1982; Palmer, 1974) have failed to find a relationship between personality variables and leadership behavior. Based on a review of studies attempting to link personality to Initiating Structure and Consideration, Bass (1990) concluded that situational factors "may override or eliminate the effect of personality on initiation and consideration" (p. 523). Although the conclusion reached by Bass may, in fact, be accurate, it may also be the case that the inconsistent results were due to the types of personality measures employed in the studies. What all of the aforementioned studies have in common is that they precede the popularity of the Five Factor Model (FFM) of personality.

Five Factor Model of Personality

Originally identified through factor-analytic studies by Fiske (1949), and subsequently replicated by several other researchers (Borgatta, 1964; Norman, 1963; Smith, 1967; Tupes & Christal, 1961), the FFM states that, at the broadest level, there are five robust factors that can almost completely account for the thousands of different personality descriptors. The five factors have been found to reliably

generalize across different samples and raters, as well as across several different cultures and languages (John & Srivastava, 1999). The labels most frequently assigned to these factors are:

I. Extraversion (talkative, energetic, assertive)

II. Agreeableness (cooperative, caring, trusting)

III. Conscientiousness (responsible, orderly, hardworking)

IV. Emotional Stability or Neuroticism (anxious, insecure, not tolerant of stress)

V. Intellect or Openness to Experience (intellectual, imaginative, broad minded)

Although these five factors, which are also commonly referred to as "The Big Five" (Goldberg, 1981), were first identified over 50 years ago, it was not until the 1980s that the views of personality researchers came to converge on the FFM (Digman, 1990). To be fair, the FFM has not been embraced by everyone, and critics of the model still remain (e.g., Block, 1995; Eysenck, 1992). Nonetheless, there is now a general consensus in the field that the FFM is the most comprehensive and parsimonious way of organizing a seemingly endless number of personality traits, and the model has already begun to pay significant dividends. In the field of industrial-organizational psychology, for example, the FFM has been credited with reviving interest in the search for useful personality variables for use in personnel selection (Mount & Barrick, 1998). Prior to the introduction of the FFM, attempts to identify personality traits that had predictive validity for job success were largely unsuccessful. That changed, however, when Barrick and Mount (1991) organized personality variables into the FFM framework and performed a meta-analysis on 117 studies. Results from the meta-analysis showed that Conscientiousness was a valid

predictor of job success across all occupational groups, whereas Extraversion was a valid predictor of success for managers and sales personnel. Since this time, an additional meta-analysis has found that Agreeableness and Emotional Stability (low Neuroticism) are valid predictors for jobs involving interpersonal interactions (Mount, Barrick, & Stewart, 1998).

Rationale and Hypotheses

Much as the FFM has helped identify useful personality variables for the purposes of personnel selection, so too might the model help to identify the underlying personality traits that are related to Initiating Structure and Consideration that recent research has, once again, shown to be important leadership dimensions. Of course, focusing on the relationship between the FFM and these two dimensions does not discount the role situational variables may play as moderators. Continued research on situational moderators would likely prove to be valuable. Nonetheless, prior to this endeavor, it would behoove the field of leadership research to have a clearer fundamental understanding of these two dimensions, including an examination of possible motivational correlates. Thus, the purpose of the present study is to examine the relationship between the leadership dimensions Initiating Structure and Consideration and the Five Factor Model of Personality.

Conscientious individuals are competent, well-organized, disciplined, and strive to reach goals (Costa & McCrae, 1992). Thus, it seems very plausible that this domain is related to the leadership dimension of Initiating Structure, which includes organizing, planning, and attempts to meet organizational goals. Therefore, if an individual is highly conscientious, he or she should be more apt to display a

leadership style that is marked by structuring subordinates' activities in a manner that attempts to meet organizational goals, whereas a less conscientious individual would be less likely to emphasize this leadership dimension. Also, prior research (i.e., Fleishman 1957b) has found a relationship between Initiating Structure and meticulousness, with the latter reflecting overly conscientious behavior.

Yet the domain of Conscientiousness does not include reference to interpersonal relationships and, by definition, leadership involves at least two people. Extraverted individuals are sociable, prefer large groups, and are assertive (Costa & McCrae, 1992). It is not surprising then, that a recent meta-analysis (Judge, Bono, Ilies, & Gerhardt, 2002) found that, out of all "Big Five" factors, Extraversion was most strongly related to leadership. The trait of dominance, as measured by the Edwards Personal Preference Schedule (Edwards, 1959), has been found to correlate with the domain of Extraversion (Piedmont, McCrae, & Costa, 1992) and prior research has shown that individuals high on dominance are more likely to score high on the dimension of Initiating Structure (as cited in Batlis & Green, 1979). It therefore seems likely that this domain is related to the leadership dimension of Initiating Structure, which involves assigning tasks, defining roles, and pushing for production—all acts that a highly outgoing and assertive individual should be comfortable doing.

The domain of Agreeableness is also primarily one of interpersonal orientation, and agreeable individuals are altruistic, cooperative, trusting, and concerned about others' needs (Costa & McCrae, 1992). Thus, it seems plausible that this domain is related to the leadership dimension of Consideration, which involves

showing trust and respect to subordinates, as well as a deep concern for their personal needs. Therefore, if an individual is highly agreeable, he or she should be more likely to have a leadership style that is marked by showing consideration for subordinates, whereas those that are more antagonistic would be less likely to emphasize this dimension. Moreover, the interpersonal value of Benevolence, which has previously been found to relate to Consideration (Fleishman & Peters, 1962; Matsui, Ohtsuka, & Kikuchi 1978), appears to resemble the domain of Agreeableness.

Neuroticism contrasts emotional stability with maladjustment (Costa & McCrae, 1992). Individuals who score high on this domain exhibit a lack of self-esteem and confidence (McCrae & Costa, 1991). In his review of personality traits and leadership, Bass (1990) found that self-confidence was consistently and positively related to leadership, whereas Moss and Ngu (2006) found that Neuroticism was positively related to individual attitudes towards laissez-faire leadership. Thus, it appears likely that an individual who lacked self-confidence would be less likely to engage in actively structuring the roles of subordinates.

Based on the above rationale and research, the following are the a priori hypotheses for the current study:

Hypothesis 1: Both Conscientiousness and Extraversion will be positively related to Initiating Structure and these relationships will be stronger than the relationship between Initiating Structure and the remaining three factors.

Hypothesis 2: Neuroticism will be negatively related to Initiating Structure.

Hypothesis 3: Agreeableness will be positively related to Consideration and this relationship will be stronger than the relationship between Consideration and the remaining four factors.

Due to a lack of a clear conceptual linkage, and the absence of prior research relating Openness to Experience to Initiating Structure or Consideration, no a priori hypotheses will be offered for this domain. There is, however, prior research that suggests the inclusion of additional demographic variables into the current study. Both Oshagbemi (2004) and Pinder and Pinto (1974) found that considerate managerial behavior tends to increase with age. Fleishman (1989) found that, on average, women score over five and a half points lower than males on the Initiating Structure dimension of the LOQ, whereas males score over half a point less than females on the dimension of Consideration. Esser and Strother (1962) found systematic differences in manager's values as a result of educational level. Finally, Latta and Emener (1983) found that Initiating Structure was positively related to the length of supervisory experience.

An ancillary purpose of the current study was to examine the construct validity of one of the tests currently used to measure Initiating Structure and Consideration, the Leadership Opinion Questionnaire (LOQ; Fleishman, 1989). In the Examiner's Manual, Fleishman asserts that "The LOQ was designed to maximize construct validity. The two dimensions measured by the questionnaire were developed by factor analytic procedures, and item analyses were carried out to provide homogenous measures of Consideration and Initiating Structure" (p. 8). However, Schriesheim and Kerr (1974) asserted construct validity must be

"*demonstrated* through a systematic program of research" (p. 758) that examines the extent to which the instrument in question is related to a group of similar concepts. Because such research was not available at the time of their writing, the authors concluded the construct validity of the LOQ was unknown. Since this time, only one other known study (Edwards, Rode, & Ayman, 1989) has attempted to assess the construct validity of the LOQ. A LISREL analysis found Initiating Structure and Consideration were highly related to their latent constructs. The present study will use a different analytical procedure, Logistic Regression, to examine the construct validity of the LOQ.

Chapter 2

METHOD

Participants

Archival data were collected for 294 job applicants (246 men, 48 women) who were assessed by a local consulting firm between 1996 and 2001. Participants were applying for salaried positions and ranged in age from 19 to 60 (M = 40.07, SD = 8.14). Thirty-four were high school graduates, 61 had graduated high school and obtained at least two years of postsecondary education, and 192 had graduated from a four year college or university. Slightly more than half of the participants (149) had less than one year of managerial experience, 37 had between one and five years of experience, 39 had between five and ten years of experience, and 69 participants had more than ten years of experience.

Measures

Personal History Form. The personal history form is a standard self-report form all applicants who are being tested at the local consulting firm fill out prior to the assessment process. The form is similar to a resume, and is used to obtain relevant background information (i.e., work experience, educational background, interests, age for test norming purposes) from each individual.

Leadership Opinion Questionnaire (LOQ). Initiating Structure and Consideration were measured by the LOQ (Fleishman, 1989). This is a 40-item self-report inventory that instructs individuals to place themselves in the role of a supervisor. It then asks them how often (e.g., Always, Often, Sometimes, Seldom, Never) they should perform the behavior (e.g., ""Needle" those under you for greater

effort;" "Put suggestions made by persons in the unit into operation") listed for each item. Scores for each item range from 0 to 4. With 20 questions for each independent dimension, Initiating Structure and Consideration scores can range from 0 to 80. Fleishman reports that split-half reliabilities of the LOQ range from .62 to .89, whereas test-retest reliabilities range from .67 to .80. Construct validity of the LOQ was developed through factor-analytic procedures and through the use of item analysis procedures in order to achieve homogeneity of the two scales. Fleishman also provides results from 14 studies in diverse organizations as evidence of criterion-related validity. Significant correlations were obtained between the two scales of the LOQ and a number of different outcome criteria of leadership effectiveness. Based on a sample of over 5,700, Fleishman reports a median correlation of -.06 between the scales, which is offered as evidence that social desirability and halo tendencies do not affect the independence of the dimensions.

The LOQ has been used in a number of diverse settings including business organizations, educational institutions, hospitals, military organizations, and governmental institutions. It also has been used for a number of different purposes including employee selection, training, counseling, and as a measure of organizational climate. It should be noted, however; because the measure asks individuals how they *should* behave, as opposed to how they *actually* act, it is technically a measure of leadership attitudes, as opposed to actual leadership behavior. Nonetheless, as the Judge et al. (2004) study showed, this measure is tapping into important dimensions, presumably Initiating Structure and Consideration, which are related to a variety of leadership outcome criteria. Further,

the LOQ is still commonly used today in applied settings for the purposes of identifying an individual's leadership style.

NEO Personality Inventory, Revised Edition (NEO PI-R). The Five-Factor Model was measured by the NEO PI-R (Costa & McCrae, 1992), Form S. This is a 240-item, self-report questionnaire that uses a five-point, Likert-type scale (i.e., Strongly Agree, Agree, Neutral, Disagree, Strongly Disagree) for each statement. Scores are provided for the domains of Neuroticism, Extraversion, Openness, Agreeableness, and Conscientiousness. Each domain has six facets, and scores for the domains are obtained by summing all of the facet scales for that domain. Based on a sample of over 1,500 individuals, Costa and McCrae report internal consistency reliabilities of .86 to .92 for the five domains, and reliabilities of .58 to .81 for the facet scales. Content validity was obtained by identification of six distinct facets to represent each domain, and by then selecting unique items to measure each facet.

The use of the NEO PI-R for employee selection purposes raises the possibility of socially desirable responding, which is potentially a serious concern, given that the measure does not have scales that detect this type of response distortion. Thus, the use of this measure for the present study may appear to be somewhat questionable. Although a summary of the debate on this matter is beyond the scope of this paper, a recent study is worth noting here. Marshall, Fruyt, Rolland, and Bagby (2005) assessed the factorial stability of the NEO PI-R by comparing responses from a sample of over 15,000 job applicants to a normative group of over 1,500 individuals who had no motivation to distort their responses. Results from the study showed that the factor structure of the NEO PI-R remained stable across the

groups. Thus, although socially desirable responding may occur in employee selection settings, it does not appear to occur with enough frequency or have enough magnitude to significantly alter the factorial stability of the measure, at least as evidenced by the results of the aforementioned study.

Procedure

Demographic information was collected from each participant's personal history form for the following variables of interest: age, sex, education level, and years of prior managerial experience. The information was assigned to categories as follows. Age: Category 1 (29 and younger), Category 2 (30-39), Category 3 (40 and over). Experience: Category 1 (less than 1 year of managerial experience), Category 2 (at least 1 year, but less than 5 years of experience), Category 3 (at least 5 years, but less than 10 years of experience), and Category 4 (over 10 years of experience). Education: Category 1 (High School Graduate), Category 2 (High School Plus; individuals who have achieved at least 2 years of secondary education beyond high school, but have not received a college degree) and Category 3 (College Graduates; individuals who have graduated from a four year institution).

Chapter 3

RESULTS

Descriptive Statistics and Correlations

Table 1 presents the means, standard deviations, and correlations between the variables in the study. The average T-scores for Extraversion and Conscientiousness were 60 and 61, respectively. As both of these scores were at least one standard deviation above the normative means for these dimensions, they fell into the High Range, which contains T-scores from 56 to 65. The average T-score for Agreeableness was 56, which also placed it in the High Range, even though it was less than one standard deviation above the normative mean for this dimension. Conversely, the average T-score for Neuroticism was 41, which is less than one standard deviation below the normative mean for this dimension, but still falls in the Low range, which contains T-scores from 36 to 44. The average T-score for Openness was 53, which placed it in the average range, which consists of T-scores from 46 to 55. Out of the 10 possible intercorrelations between the five factors, the only relationships that were of similar magnitude to those of the normative sample reported in the NEO PI-R manual (Costa & McCrae, 1992), were those between Openness and Extraversion, and Openness and Agreeableness. The eight remaining relationships between the factors were all stronger in the current study than in the aforementioned normative sample. However, sample standard deviations for the five domains were almost identical to those listed in the publication manual.

As shown in the table, none of the demographic variables were related to Consideration. However, both gender, $r(292) = -.14$, $p = .02$ (two-tailed) and age,

Table 1. *Descriptive Statistics and Intercorrelations Between Demographic Variables, Leadership Behavior, and Five Factors*

Variable	*M*	*SD*	*T-score*†	1	2	3	4	5	6	7	8	9	10	11
1. Gender	1.16	.370	-	-										
2. Age	40.07	8.14	-	**-.17****	-									
3. Education	2.51	.728	-	.06	-.01	-								
4. Experience	2.10	1.25	-	**-.27****	**.43****	-.02	-							
5. Consideration	54.79	6.38	-	-.03	-.02	.04	.10	-						
6. Initiating Structure	50.47	7.53	-	**-.14***	**-.13***	.03	.05	-.02	-					
7. Neuroticism	57.59	19.84	41	.03	.05	-.07	**-.16****	**-.21****	**-.24****	-				
8. Extraversion	125.76	18.37	60	**.15***	**-.14***	.07	**.14***	**.20****	**.26****	**-.51****	-			
9. Openness	115.04	16.10	53	**.16****	**-.12***	**.13***	-.02	**.22****	-.02	**-.17****	**.40****	-		
10. Agreeableness	130.34	14.77	56	.01	.00	-.04	.08	**.21****	-.01	**-.41****	**.25****	.10	-	
11. Conscientiousness	142.32	16.83	61	.02	.01	.10	**.21****	**.20****	**.31****	**-.68****	**.5****	**.13***	**.4****	-

****p*<.05 (two-tailed), ***p*<.01 (two-tailed)**

† weighted average based on gender

$r(292) = -.13$, $p = .03$ (two-tailed), showed significant negative relationships to Initiating Structure. That is, younger males tended to score higher on Initiating Structure. Further, and consistent with research summarized by Fleishman (1989), Consideration and Initiating Structure were found to be independent, $r(292) = -.02$, $p = .79$ (two-tailed). All of the five domain scores of the NEO PI-R had significant relationships with Consideration. However, only Neuroticism, Extraversion, and Conscientiousness were related to Initiating Structure. For these three domains, the pattern of relationships with Consideration and Initiating Structure were similar. Neuroticism was the only domain negatively related to both leadership dimensions and the three domains were somewhat more strongly related to Initiating Structure than to Consideration. Put another way, the only two domain scores that showed differing relationships between the two leadership dimensions were Openness to Experience and Agreeableness. Both of these domains showed significant positive relationships to Consideration, but were unrelated to Initiating Structure.

Multiple Regressions

In order to further examine the relationships between the five factors and Consideration and Initiating Structure, two separate hierarchical regression analyses were performed. In Step 1 of the first analysis, scores for Consideration were regressed onto each of the following demographic variables: gender, age, education level, and prior managerial experience. As can be seen in Table 2, these variables accounted for a minimal ($R^2 = .02$), and non-significant, $F(4, 289) = 1.29$, $p = .27$, amount of variance in Consideration scores. In Step 2 of the analysis, scores for Consideration were regressed onto each of the five factors. The inclusion of these

variables accounted for a medium (R^2 = .11) and significant, $F(9, 284) = 3.79$, p = .00, amount of the variance in Consideration scores and represented a significant improvement (ΔR^2 = .09, p = .000) over demographic variables. Of the five domains, only Agreeableness (β = .14, p = .02) and Openness (β = .18, p = .004) had significant relationships to Consideration scores.

Table 2. *Relationship Between Big Five Traits and Ohio State Model of Leadership*

	Consideration		Initiating Structure	
	β	*t*	β	*t*
Neuroticism	-.04	-.54	-.03	-.38
Extraversion	.03	.38	**.20****	2.85
Openness to Experience	**.18****	2.94	-.11	-1.88
Agreeableness	**.14***	2.27	**-.15****	-2.42
Conscientiousness	.06	.74	**.26****	3.35
Regression Model	$F(9,284) = 3.79$**		$F(9,284) = 6.98$**	
R^2	.11		.18	
Adjusted R^2	.08		.16	

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

The second regression analysis was identical to the first, except instead of Consideration, Initiating Structure served as the dependent variable. In Step 1 of the analysis, Initiating Structure was regressed onto age, gender, education level, and prior managerial experience. These variables accounted for a small (R^2 = .05), but significant, $F(4, 289) = 3.82$, p = .005, amount of variance in Initiating Structure scores. Out of the demographic variables, only gender (β = - .14, p = .02) and age (β = - .19, p = .003) were significantly related to Initiating Structure. In Step 2 of the analysis, the five factors were added into the regression equation. This step was also significant, $F(9, 284) = 6.98$, p = .00, in accounting for the total variance (R^2 = .18) in

Initiating Structure scores and also represented a significant increase ($\Delta R^2 = .13$, $p = .00$) over the previous model. Similar to the Pearson Correlations, both Conscientiousness ($\beta = .26$, $p = .001$) and Extraversion ($\beta = .20$, $p = .005$) were positively related to Initiating Structure. Unlike the Pearson Correlations, however, the regression analysis showed that Neuroticism was not related ($\beta = -.03$, $p = .71$) to Initiating Structure once controlling for additional variables. Conversely, the regression analysis showed that Agreeableness, which does not have a zero-order correlation with Initiating Structure, is negatively related ($\beta = -.15$, $p = .02$) to this leadership dimension, after controlling for the effects of the other four factors.

Results from these first two regression analyses showed that there were a total of five significant relationships between the two leadership domains and the five factors, two for Consideration and three for Initiating Structure. In order to understand the nature of these relationships better, five additional hierarchical regression analyses were performed, one for each significant relationship. Thus, the relationship between Consideration and the six facet scores for the domains of Openness (i.e., Fantasy, Aesthetics, Feelings, Actions, Ideas, and Values) and Agreeableness (i.e., Trust, Straightforwardness, Altruism, Compliance, Modesty, and Tender-Mindedness) were explored in two separate analyses. There were two steps in each analysis, which were identical to the two steps in the first pair of regression analyses, save for the use of specific facet scores as the independent variables, as opposed to the five domain scores. Thus, in Step 1 for both analyses, Consideration was regressed onto each of the demographic variables (i.e., gender, age, education level, and prior managerial experience). In Step 2, Consideration was regressed onto

either the six facets of the Openness domain or the six facets of the Agreeableness domain. As can be seen in Table 3, there were only two facets, Ideas (β = .14, p = .06) of the Openness domain, and Tender-Mindedness (β = .13, p = .06) of the Agreeableness domain, that approached statistically significant relationships with Consideration.

Table 3. *Relationships Between Facets and Consideration*

Openness Facets	β	*t*	Agreeableness Facets	β	*t*
O1: Fantasy	.08	1.17	A1: Trust	.10	1.49
O2: Aesthetics	-.03	-.47	A2: Straightforwardness	.04	.58
O3: Feelings	.09	1.36	A3: Altruism	.11	1.48
O4: Actions	.05	.67	A4: Compliance	-.06	-.83
O5: Ideas	**.14***	1.91	A5: Modesty	.00	-.07
O6: Values	.07	1.21	A6: Tender-Mindedness	**.13***	1.89
Regression Model	$F(10,283)$ = **2.34****			$F(10,283)$ = **2.66****	
R^2	.08			.09	
Adjusted R^2	.04			.05	
ΔR^2	.06			.07	

***p*<.10, ** *p*<.05**

The next three regression analyses examined the relationships between Initiating Structure and the six facet scores for the domains of Extraversion (i.e., Warmth, Gregariousness, Assertiveness, Activity, Excitement Seeking, and Positive Emotions), Conscientious (i.e., Competence, Order, Dutifulness, Achievement Striving, Self-Discipline, and Deliberation), and Agreeableness. In the first step of the regression, Initiating Structure was regressed onto gender, age, education level, and prior managerial experience. In Step 2, Initiating Structure was regressed onto the six facets of the Extraversion domain, the six facets of the Conscientious domain, or the

six facets of the Agreeableness domain. As can be seen in Table 4, Assertiveness (β = .26, p = .001) was the only facet of Extraversion significantly related to Initiating Structure. Similarly, Achievement Striving (β = .32, p = .00) was the only facet of Conscientiousness significantly related to Initiating Structure. For Agreeableness, both Altruism (β = .25, p = .001) and Modesty (β = -.12, p = .05) were significantly related to Initiating Structure. These relationships are stronger than the zero order correlations between Initiating Structure and Altruism, $r(292) = .14$, p = .02 (two-tailed), and Initiating Structure and Modesty, $r(292) = -.10$, p = .08 (two-tailed).

Moderator Analyses

In order to explore the possibility that prior managerial experience moderated the relationship between personality and leadership preferences, two separate multiple regression analyses were performed, one for each leadership dimension. In step 1 of the first analysis, Consideration was regressed onto gender, age, and education level. The result was not significant, $F(3, 290) = .28$, p = .84 (two-tailed). In the second step, Consideration was regressed onto prior managerial experience and the five factors. This step was significant, $F(9, 284) = 3.79$, p = .00 (two-tailed) and explained significantly more variance (ΔR^2 = .10, p = .00) than the three demographic variables. For step 3 of the equation, Consideration was regressed onto interaction variables (i.e., domain score X prior managerial experience) that were created for each of the five factors. Although the results of this step were significant, $F(14, 279) = 2.94$, p = .00 (two-tailed), the additional variance in Consideration scores that was explained by the interaction terms, above and beyond the variables in Step 2, was not (ΔR^2 = .02, p = .24).

Table 4. *Relationship Between Facets and Initiating Structure*

Extraversion	β	*t*	Conscientiousness	β	*t*	Agreeableness	β	*t*
E1: Warmth	.06	.67	C1: Competence	-.01	-.06	A1: Trust	-.06	-.87
E2: Gregariousness	-.02	-.20	C2: Order	.03	.46	A2: Straightforwardness	-.00	-.05
E3: Assertiveness	**.26****	3.40	C3: Dutifulness	.00	-.04	A3: Altruism	**.25***	3.25
E4: Activity	.10	1.39	C4: Achievement Striving	**.32****	3.60	A4: Compliance	-.08	-1.25
E5: Excitement-Seeking	.03	.48	C5: Self-Discipline	.03	.29	A5: Modesty	**-.12****	-2.00
E6: Positive Emotions	-.05	-.73	C6: Deliberation	.01	.14	A6: Tender-Mindedness	-.01	-.14
Regression Model	F(10,283) =**4.82****			F(10,283) = **5.52****			F(10,283) = **3.17****	
R^2	.15			.16			.10	
Adjusted R^2	.12			.13			.07	
ΔR^2	.10			.11			.05	

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

The second moderation analysis followed the same three steps as the first, with the only difference being that Initiating Structure, as opposed to Consideration, served as the dependent variable. Step 1 showed a significant relationship between Initiating Structure and gender, age, and education level, $F(3, 290) = 4.32$, $p = .005$ (two-tailed). Step 2 also showed a significant relationship between Initiating Structure, prior managerial experience, and the five factors, $F(9, 284) = 6.98$, $p = .000$ (two-tailed). Further, the change in the total variance that was explained by the addition of these variables was significant ($\Delta R^2 = .14$, $p = .000$). Similar to the first two steps of this analysis, Step 3 was significant, $F(14, 279) = 5.07$, $p = .000$ (two-tailed). However, similar to the moderation analysis for Consideration, the total variance explained by adding the interaction terms to the regression model was not significantly greater than in the previous step ($\Delta R^2 = .02$, $p = .18$). In the current study, prior managerial experience did not affect the relationship between personality and leadership preferences for Consideration or Initiating Structure.

Based on the negative relationship between Agreeableness and Initiating Structure, two separate multiple regression analyses were performed to explore the possibility that Agreeableness moderated the relationships between Initiating Structure and the domains of Conscientiousness and Extraversion. In step 1 of the first analysis, Initiating Structure was regressed onto experience, education, gender, and age. The result was significant, $F(4, 289) = 3.82$, $p = .01$ (two-tailed). In the second step, Initiating Structure was regressed onto Conscientiousness. This step was also significant, $F(5, 288) = 9.11$, $p = .00$ (two-tailed), and explained significantly more variance ($\Delta R^2 = .09$, $p = .00$) than the demographic variables alone. For step 3

of the equation, Initiating Structure was regressed onto an interaction variable (i.e., Conscientiousness X Agreeableness). The results of this step were significant, $F(6, 287) = 8.48$, $p = .00$ (two-tailed) and explained significantly more variance ($\Delta R^2 = .014$, p = .03) than the previous step. However, this finding is what Cohen (1988) would define as being a small effect size. Thus, agreeableness had a statistically significant, but weak, moderating effect on the relationship between Conscientiousness and Initiating Structure.

Step 1 of the second moderation analysis was the same as the first analysis. Step 2 was similar to the previous analysis, with the only difference being that Extraversion was substituted for Conscientiousness. This step showed a significant relationship, $F(5, 288) = 7.37$, $p = .000$ (two-tailed), between Initiating Structure and Extraversion, and explained significantly more variance ($\Delta R^2 = .06$, $p = .00$) than the demographic variables alone. Similar to the first two steps of the analysis, Step 3 was significant, $F(14, 279) = 5.07$, $p = .000$ (two-tailed). However, unlike the moderation analysis for Conscientiousness, the total variance explained by adding the interaction terms to the regression model was not significantly greater than in the previous step ($\Delta R^2 = .00$, $p = .26$). In the current study, Agreeableness did not moderate the relationship between Extraversion and Initiating Structure.

Logistic Regression

In order to further examine the construct validity of the LOQ, six separate logistic regression equations were performed, three for each leadership dimension. The five domains of the NEO PI-R served as the independent variables and cut-off points at the twenty-fifth, fiftieth, and seventy-fifth percentiles of LOQ scores for

both Initiating Structure and Consideration served as the dependent variables. The areas under the ROC Curves were used to determine whether or not the relationship between the domains of the NEO PI-R and the two dimensions of leadership remained consistent, regardless of where a participant's score was on the LOQ. Consistency would suggest that the LOQ is measuring homogenous dimensions, whereas inconsistency would suggest that other factors influence the observed scores on the LOQ. As can be seen in Table 5, the relationship between the five domains of the NEO PI-R and Initiating Structure and Consideration of the LOQ remained consistent, regardless of where an individual scored on the two leadership dimensions.

Table 5. *Construct Validity of Leadership Opinion Questionnaire*

	25th Percentile			50th Percentile			75th Percentile		
Initiating Structure	Area	95% CI		Area	95% CI		Area	95% CI	
Neuroticism	.37	.30	.44	.36	.30	.43	.39	.31	.47
Extraversion	.61	.53	.68	.62	.56	.68	.71	.63	.78
Openness	.51	.44	.58	.50	.43	.57	.50	.41	.58
Agreeableness	.47	.40	.55	.51	.44	.57	.53	.45	.61
Conscientiousness	.64	.57	.71	.62	.56	.68	.67	.59	.76
Consideration	Area	95% CI		Area	95% CI		Area	95% CI	
Neuroticism	.40	.33	.47	.39	.32	.45	.33	.25	.41
Extraversion	.62	.55	.69	.60	.53	.66	.61	.53	.69
Openness	.62	.55	.70	.64	.58	.70	.60	.52	.69
Agreeableness	.62	.55	.69	.62	.56	.69	.60	.52	.68
Conscientiousness	.62	.55	.70	.59	.53	.66	.60	.51	.68

Chapter 4

DISCUSSION

The primary purpose of this study was to obtain a better understanding of the leadership dimensions of Initiating Structure and Consideration by examining their relationship to the Five Factor Model of Personality. Although previous studies have examined the relationship between personality and the Ohio State Model of Leadership (e.g., Fleishman, 1957b; Fleishman & Peters, 1962; Greenwood & McNamara, 1969; Nystrom, 1982), and the FFM and transformational leadership (e.g., Judge & Bono, 2000; Lim & Ployhart, 2004; Ployhart, Lim, & Chan, 2001), this is the first known study to investigate the relationship between the Ohio State Model of Leadership and the FFM. Furthermore, the current study has the added benefits of using actual job applicants as participants and examining the relationship between two self-report measures used for employee selection purposes, resulting in a high level of external validity and clinical utility. Results offered mixed support for the a priori hypotheses, and also identified relationships between the leadership dimensions and the five domains that were unexpected. A review of the major findings for each leadership dimension is presented, followed by secondary findings, limitations and suggestions for future research, and finally, general implications.

Findings for Initiating Structure

Hypothesis 1 was strongly supported; Extraversion and Conscientiousness were the only domains of the NEO PI-R that had a positive and significant relationship to Initiating Structure. An examination of the facet scales for each domain also produced clear results; only the Assertiveness facet of the Extraversion

domain and the Achievement Striving facet of the Conscientiousness domain were significantly related to Initiating Structure. The relationship between Initiating Structure and Assertiveness is not surprising when one examines the similarities between the definitions of each variable. Individuals who score high on the former dimension "…play a very active role in directing group activities through planning, communicating information, scheduling, criticizing, trying out new ideas, and so forth…" (Fleishman, 1969), whereas individuals high on the latter are "dominant, forceful, and socially ascendant. They speak without hesitation and often become group leaders" (Costa & McCrae, 1992 p. 17). Similarly, the relationship between Initiating Structure and Achievement Striving makes logical sense. The former consists of "... overt attempts to achieve organizational goals" (Fleishman & Harris, 1962 p. 44), and high scores on the latter "have high aspiration levels and work hard to achieve their goals. They are diligent and purposeful and have a sense of direction in life" (Costa & McCrae, 1992 p. 17).

Hypothesis 2, that Neuroticism would be negatively related to Initiating Structure, was partially supported. There was a significant negative zero-order correlation between these two variables, which remained even after controlling for demographic variables, but disappeared after controlling for the other personality domain scores. Thus, unlike Extraversion and Conscientiousness, Neuroticism did not, by itself, predict any unique variance in Initiating Structure scores. Instead, it appears the original correlation was a function of the strong negative correlation between Neuroticism and the domains of Extraversion and Conscientiousness.

Curiously, converse to the above was the relationship between Agreeableness and Initiating Structure. Although there was not a significant zero-order correlation between the two variables, nor one after controlling for demographic variables, a significant negative relationship emerged after controlling for the other four personality domains. An examination of the facet scores revealed that only the Altruism and Modesty facets had significant relationships, with the former being the largest and positive, and the latter being smaller and negative. The remaining facets, although not significant, were negatively related to Initiating Structure. Thus, it is possible the lack of an initial zero-order correlation between Agreeableness and Initiating Structure was a result of the Altruism facet being positively related to the Initiating Structure, which obscured the negative relationships of the remaining facets.

The significant negative relationship between Agreeableness and Initiating Structure was not hypothesized. On one hand, this finding makes logical sense, as individuals who score low on this personality domain are competitive, as opposed to cooperative. It follows that a competitive individual would be more likely to emphasize production in an attempt to get those under him or her to accomplish important goals, as this would presumably make the leader successful. However, because the observed relationship between Agreeableness and Initiating Structure was not strong ($\beta = -.15$), and intercorrrelations between some variables were elevated, there is another possible, and perhaps more parsimonious, explanation: a Type I error caused by multicollinearity. Although tolerance statistics for the multiple regression model did not indicate a problem with multicollinearity, the logistic regression

analysis would suggest that the significant negative relationship between Agreeableness and Initiating Structure is a statistical artifact. More specifically, the domain of Agreeableness had an area below .5 at the 25th percentile of Initiating Structure (.47), and only slight above this at the 50th percentile (.51) and 75th percentile (.53). Compare this to Openness, which was not significantly related to Initiating Structure, but showed very similar magnitude of relationships: 25th percentile (.51), 50th percentile (.50), and 75th percentile (.50). Both Openness and Agreeableness show a different pattern of relationships with Initiating Structure than either Extraversion or Conscientiousness, as the latter pair both had an area of at least .61 for the three different cutoff points. At best, then, the relationship between Agreeableness and Initiating Structure is ambiguous.

Of course, still unaccounted for is the positive relationship between Altruism and Initiating Structure. This finding would appear to be counterintuitive, as high scorers on Altruism "…have an active concern for others' welfare as shown in generosity, consideration of others, and a willingness to assist others in need of help" (Costa & McCrae, 1992 p. 18). The above relationship becomes less confusing, however, when one takes into account that Altruism loads heavily (.52) on the domain of Extraversion (Costa, McCrae, & Dye, 1991). Thus, it is possible that a majority of the variance that Altruism shares with Initiating Structure is a result of the overlap between this facet and the domain of Extraversion. To further explore this possibility, an additional multiple regression analysis was performed to see whether the relationship between Altruism and Initiating Structure would remain after controlling for the domain of Extraversion. Results from the analysis showed that

Altruism was not significantly related ($\beta = .04$, $p = .58$) to Initiating Structure after controlling for Extraversion. Therefore, in this case, Extraversion appears to have been acting as a confounding variable.

The above findings lead to a deeper understanding of the leadership dimension of Initiating Structure that has both conceptual and practical implications. Conceptually, structuring behavior is more likely to be exhibited by male leaders who are younger, achievement oriented, assertive, and not overly agreeable. As a whole, these variables ($R^2 = .18$) had between a medium ($R^2 = .09$) and large ($R^2 = .25$) effect size, as defined by Cohen (1988). Of course, this also has very practical implications for applied practitioners who are involved in individual assessment for employee selection and development purposes. More specifically, if an individual scores high on Initiating Structure, as well as on Achievement Striving and/or Assertiveness, it is now possible to explain (at least partially) *why* that person would be more likely to engage in structuring behavior. Additionally, the findings provide a hypothetical framework for tying in previous research on the Ohio State Model of Leadership with more recent studies examining the relationship between the Five Factor Model and leadership. For example, Fleishman and Harris (1962) found that when a high level of Initiating Structure was not accompanied by a corresponding high level of leadership Consideration, it led to increases in subordinate grievances and turnover. Compare this to a recent study by Smith and Canger (2004), which showed lower levels of supervisor Conscientiousness were, in general, related to more positive job-related attitudes from subordinates.

Findings for Consideration

Hypothesis 3 was partially supported, as Agreeableness was positively related to Consideration. Surprisingly, however, the second part of the hypothesis, that Agreeableness would be the factor most strongly related to Consideration, was not supported. The domain of Openness had a larger standardized regression coefficient than Agreeableness (though the 95% confidence intervals for the beta weights overlapped). An exploration of the six facet scales for both domains revealed that none of the twelve facets were statistically significant, but that one facet of each domain approached significance: Tender-Mindedness (A6) of the Agreeableness domain and Ideas (O5) of the Openness domain. According to Costa and McCrae (1992), the former scale measures sympathy and concern for others, whereas the latter measures intellectual curiosity, open-mindedness, and willingness to consider new ideas. The finding that Tender-Mindedness approached a statistically significant relationship with Consideration becomes more impressive when one takes into account that this scale has a coefficient alpha of only .56 (Costa, McCrae, & Dye, 1991), making it the least reliable of the 30 facet scales. Thus, it is possible that attenuation played a substantive role in Tender-Mindedness failing to reach statistical significance.

Although not hypothesized beforehand, it is rather easy to see, with the benefit of hindsight, why Openness to Experience and Consideration are related. Consideration includes giving subordinates the opportunity to participate in decision making and encouraging them to communicate. These behaviors would be more likely to be exhibited by an individual who was open and receptive to different types

of experiences. Further, in a revised definition of Consideration, Fleishman (1969) makes specific reference to displaying respect for subordinates' ideas and taking their feelings into account. Both ideas and feelings are facets of the Openness domain. Finally, it appears that at least five of the items on the LOQ (Fleishman, 1989) that measure Consideration appear to be directly related to the Openness domain:

11. Be slow to adopt new ideas (reverse scored)

13. Resist changes in the ways of doing things (reverse scored)

24. Be willing to make changes

28. Reject suggestions for change (reverse scored)

33. Put suggestions made by persons in the unit into operation

Worth noting, though, is that not all of the descriptions of Consideration would lead one to believe that Openness is an important part of this dimension. Judge, Piccolo, and Ilies (2004), for example, describe Consideration as the "…degree to which a leader shows concern and respect for followers, looks out for their welfare, and expresses appreciation and support" (p. 36). This definition emphasizes behavior that would be displayed by an agreeable individual, but there is no real reference to behavior that would be displayed by someone who is highly open to new experiences. However, based on the current results, it would seem that a mention of being open to subordinates' ideas, feelings, and actions should be included in future definitions of Consideration, in order to fully convey the important aspects of this dimension. Thus, considerate behavior is more likely to be displayed by a leader who is not only agreeable, but also open to new experiences. In fact, because this latter point is often overlooked (as it was in the present study when generating the a priori hypotheses) it

may be the most important finding of the present study. Although the relationship between personality traits and the dimension of Consideration was not as large as for Initiating Structure, they still had (ΔR^2 =.09) what Cohen (1988) would describe as a medium effect size.

Additional Findings

Several other findings that emerged from the current study have practical implications for applied practitioners. First, prior managerial experience did not moderate the relationship between personality and leadership style. This finding contradicts prior research (i.e., Latta & Emener, 1982) and suggests that preferences for Initiating Structure and Consideration, at least as measured by the LOQ, are fairly stable and are not likely to change based on experience in a leadership role. This suggests that attitudes towards leadership behavior may have trait-like characteristics, possibly due to being influenced by an individual's personality. Of course, drawing any strong conclusion about this from the current study is not possible, as it was not longitudinal in nature and three of the experience groups had rather small sample sizes. Thus, it may very well be that managerial experience leads to meaningful individual changes in leadership styles, but this is for future research to determine.

The results of the current study also offer rather strong support for the psychometric soundness of the LOQ, even in situations where individuals could be motivated to distort their responses. More specifically, the means for the two leadership dimensions were in the average range and remained independent. This offers further support to Fleishman's (1989) claim that Initiating Structure and Consideration are not affected by social desirability and "halo" tendencies. Further,

the constructs of Consideration and Initiating Structure, as measured by the LOQ, appear to be homogenous. Regardless of where an individual scored on these dimensions, the relationship with the NEO PI-R domains remained constant. This finding offers additional support for the construct validity of the LOQ by showing that the same personality characteristics are responsible for scores at the low end, middle, and high end of Initiating Structure and Consideration.

Limitations and Future Research

The current study is not without some limitations. Most notably, given the archival data that was available for use, it was not possible to compute coefficient alpha scores for the domains or facet scales. Given that intercorrelations between the domains were, in all but two cases, greater than those reported in the NEO PI-R manual (Costa & McCrae, 1992), it is likely that the coeffiecient alphas for the domains and facets also differed. Of course, given the inflated intercorrelations and mean scores, it is also likely the reliabilities were greater than those reported by Costa, McCrae, and Dye (1991).

A second limitation is that a majority of the sample were male college graduates who had less than a year of leadership experience. Therefore, the extent to which the current findings will generalize to other populations is not known. Also, the average T-scores for the five domains of the NEO PI-R suggest a restriction of range effect for several of the scales. More specifically, average T-score for Neuroticism fell in the below average range, whereas the average T-scores for Extraversion, Conscientiousness, and Agreeableness all fell in the above average range, with the former two having more notable elevations. Whether this was due to socially

desirable responding or was simply representative of the sample assessed (e.g., the individuals were being seen for higher-level positions, making it likely that those with less "favorable" personality characteristics would have been already been screened out of the process) is not clear. On the one hand, research (e.g., Rosse, Stecher, Miller, & Levin, 1998) has shown that response distortion tends to occur more often among job applicants than among job incumbents. However, other research (e.g., Smith, Hanges, & Dickson, 2001) has shown that the factor structure of the NEO PI-R does not differ across student, applicant, or job incumbent groups, and that a five-factor solution fit a job applicant sample better than a student sample. Furthermore, a meta-analysis done by Ones, Viswersvaran, and Reiss (1996) showed that scores on social desirability scales did not function as predictors, suppressors, or mediators of job performance, and offered evidence that differences on these scales reflect real individual differences in conscientiousness and emotional stability. In any case, whatever the reason, a restriction of range did occur in the current study and it could have significantly decreased the strength of the relationship between Initiating Structure, Consideration, and the FFM. In one sense, however, this makes the current findings somewhat more impressive, as a more diverse sample may have yielded even stronger results.

Another limitation of the present study is that it relied solely on self-report measures to provide information on the variables of inference. This introduces the possibility that the findings were contaminated by common method variance. Unfortunately, because the study used archival data, it was not possible to obtain data that relied on sources other than self-report measures. However, Costa and McCrae

(1992) have shown that for the NEO PI-R, an individual's self-report tends to agree with how that person is rated by others who know him or her.

In order to address some of the potential limitations of the current study, future research on the relationship between the FFM and the Ohio State Model of Leadership is warranted. Firstly, it would be beneficial to conduct research that used job incumbents or another group of subjects that may have less motivation to distort their responses. Related to this, it would also be informative to see how well the NEO PI-R predicts *actual* leadership behavior, as measured by subordinates' ratings of supervisors on the dimensions of Initiating Structure and Consideration. Further, although meta-analyses have shown that both Initiating Structure and Consideration (Judge, Piccolo, & Ilies, 2004) and four of the five factors (Judge, Bono, Ilies, & Gerhardt, 2002) are related to leadership effectiveness, it is not clear how much of this is a result of shared variance. Thus, a study that examined the differences in predictive validity between the two measures would be useful, in order to examine whether the Ohio State Model of Leadership adds incremental validity to the FFM in predicting leadership effectiveness, or vice versa. Finally, to the extent that the results of the present study could be replicated, it would further elucidate the relationship between Initiating Structure and Agreeableness.

Implications

As previously mentioned, this is the first known study to examine the relationship between the Ohio State Model of Leadership and the Five Factor Model of Personality. Therefore, it is somewhat difficult to put the current results into the context of recent research. However, two studies that examined the relationship

between preferred leadership styles and the FFM (as measured by the NEO PI-R) are worth mentioning. Using a leadership measure created for the experiment, Stevens and Ash (2001) found that Agreeableness (β = .20) and Openness to Experience (β = .19) were positively related to preferences for more participative managerial styles. As allowing subordinate participation is a key component of the Consideration dimension, the results are consistent with the present study and were of similar magnitude. This is more impressive when one takes into account that Stevens and Ash used a sample of undergraduates and the leadership measure that was used contained five descriptive scenarios, as opposed to individual questions, that reflected different levels of subordinate participation.

Using the CPE questionnaire, which measures a leader's preferences for change, production, and employee relations, Kornor and Nordvik (2004) found that Agreeableness was positively related to an employee relations leadership orientation, whereas both Conscientiousness and Extraversion were positively related to a production leadership orientation. Again, these results are consistent with the present study, though the magnitude of relationships (β= .28 to .47) was considerably greater. Also, in that study, Neuroticism was positively related to a production leadership orientation, whereas Openness to Experience had a significant negative relationship. Although the positive relationship between Neuroticism and production is clearly at odds with the findings of the current study, it is worth noting that Openness to Experience (β = -.11, p =.06) did approach a statistical significant relationship with Initiating Structure.

When the above studies are taken into account with the current findings, it appears that an individual's personality can be useful in predicting preferences for various leadership styles, contrary to the assertion of Bass (1990), who suggested that situational factors eliminated the affect of personality on Initiating Structure and Consideration. Thus, if an individual is given the NEO PI-R without the LOQ, it is now possible to predict with greater certainty their leadership style preferences. However, the dimensions of Consideration and Initiating Structure still had a large amount of variance that could not be accounted for by the five domains of the NEO PI-R. This may be due to the fact that the LOQ and NEO PI-R have a different frame of reference. Whereas the LOQ instructs the individual to put themselves in the role of supervisor, and hence a work-related context, the NEO PI-R asks an individual about their general behavioral tendencies, attitudes, relationships, etc., without reference to a specific context. Thus, when an individual is responding to the NEO PI-R, he or she may be thinking of situations outside of the workplace. This notion is supported by research, as Schmit, Ryan, Stierwalt, and Powell (1995) showed that changing the items on the NEO Five-Factor Inventory (Costa & McCrae, 1989) to make them work-related led applicants to respond more positively. Still, regardless of the actual reason, the LOQ appears to be measuring important characteristics that are not captured by personality tests, even one that is based on the all inclusive FFM. Therefore, the use of the LOQ in selection situations, along with a measure like the NEO PI-R, may be needed in order to perform a thorough assessment of a candidate's suitability for a particular managerial or supervisory position.

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