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Personality Profiles of Effective Leadership Performance in Assessment Centers

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Abstract

Most research examining the relationship between effective leadership and personality has focused on individual personality traits. However, profiles of personality traits more fully describe individuals, and these profiles may be important as they relate to leadership. This study used latent class analysis to examine how personality traits combine and interact to form subpopulations of leaders, and how these subpopulations relate to performance criteria. Using a sample of 2,461 executive-level leaders, six personality profiles were identified: Unpredictable Leaders with Low Diligence (7.3%); Conscientious, Backend Leaders (3.6%); Unpredictable Leaders (8.6%); Creative Communicators (20.8%); Power Players (32.4%); and Protocol Followers (27.1%). One profile performed well on all criteria in an assessment center; remaining profiles exhibited strengths and weaknesses across criteria. Implications and future directions for research are highlighted.

Keywords

Personality; leadership; performance; LCA

Moving into the twenty-first century, organizations are facing numerous challenges associated with the changing nature of work. As organizations expand their boundaries globally, rely on technology for communication, and develop knowledge workers to be adaptive in response to continually changing work demands (Tannenbaum, 2002), it is apparent that organizations will need to adjust their strategies to achieve a competitive advantage. In today's dynamic work environment, it is recognized that talented leaders can help overcome these challenges and pave the way toward achieving this goal. Talented leaders can direct and guide employees, teams, and organizations to be successful and to overcome these obstacles. Through their interaction with subordinates and stakeholders,

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leaders can profoundly influence followers' behaviors and thereby create a workforce primed for success (Barling, Christie, & Hopton, 2010).

Initially guided by the trait approach of leadership, several studies sought to discover characteristics that define talented leaders. Early studies produced inconsistent results (e.g., Bass, 1990; Mann, 1959; Stogdill, 1948), but there was renewed interest in discovering traits associated with successful leaders after the emergence of the 5-factor model of personality (Costa & McCrae, 1992). For example, Judge and colleagues (2002) conducted a meta-analysis demonstrating that leadership effectiveness was related to various specific factors of personality. Their findings revealed that Extraversion and Conscientiousness are moderately and positively associated with leadership effectiveness (Judge, Bono, Ilies, & Gerhardt, 2002). Additionally, DeRue and colleagues (2011) conducted a meta-analysis that reiterated the importance of both leader traits and behaviors for leader effectiveness. They concluded that traits and behavior explain about one-third of the variance in leader effectiveness and that Extraversion and Conscientiousness were consistent predictors of leader effectiveness (DeRue, Nahrgang, Wellman, & Humphrey, 2011).

Recent theoretical and methodological developments offer an opportunity to better understand the link between personality and effective leadership (Antonakis, Day, & Schyns, 2012). Past studies have typically examined personality traits individually (e.g., Bass, 1990; Mann, 1959; Stogdill, 1948), despite the fact that traits do not exist in isolation. Alternatively, approaching personality as a higher-order combination, or cluster, of personality traits allows for a more holistic view of the individual (Barrick & Mount, 2005). Clusters have been shown to be relevant in other areas of leadership as well. For example, Borman and Brush (1993) created a taxonomy of leadership performance by clustering critical performance dimensions, revealing a more complete picture of effective leadership performance. Furthermore, past studies have primarily focused on examining how personality relates to overall performance (see Judge et al., 2002). However, leadership performance contains many elements that differentially relate to aspects of personality, and certain types of leaders may excel in terms of some criteria but not in others.

The present study sought to characterize different classes of leaders based on their personality profile and to determine how these classes relate to unique performance criteria measured in an assessment center. Specifically, we used a novel, person-oriented approach, latent class analysis (LCA; Collins & Lanza, 2010) to identify subgroups of leaders defined by their personality profiles. We then conducted analyses to assess how membership in different personality classes relates to assessment center performance dimensions, including Defining the Strategy, Executing the Strategy, and Building Partnerships and Translating the Message. This study sought to address gaps in our understanding of the complex link between leadership personality and performance.

Trait Approach to Leadership

Beginning with the “great man” hypothesis (Carlyle, 1907), several attempts have been made to characterize an extraordinary leader. The trait approach to leadership seeks to define personality characteristics that are related to leadership effectiveness. Personality traits

differentiate individuals based on their tendencies to think, feel, and behave (Ones, Viswesvaran, & Dilchert, 2005) and therefore can help to elucidate why a leader may be more or less successful.

Prior studies examining personality traits have shown inconsistent and sometimes null findings (e.g., Bass, 1990; Mann, 1959; Stogdill, 1948). This has led to a perhaps false consensus that personality traits were poor predictors of leader outcomes (Antonakis et al., 2012). One reason for this may be the inconsistent use of labels to identify underlying personality traits (Judge et al., 2002). In an attempt to resolve these issues and synthesize across previous studies, Judge and colleagues (2002) conducted a meta-analysis examining how personality relates to leadership effectiveness using the 5-factor model of personality as a framework. Overall, Extraversion emerged as the most consistent correlate of leadership effectiveness. This is similar to other studies that demonstrated that leaders tend to be sociable and dominant (e.g., Lord, DeVader, & Alliger, 1986; Mann, 1959; Stogdill, 1948; Stogdill, 1974). Furthermore, Judge and colleagues (2002) also found that Conscientiousness and Openness to Experience were strong correlates of leadership. It follows that leadership effectiveness may result in part from a leader being organized and receptive to hearing various perspectives before making decisions.

Additionally, DeRue and colleagues (2011) reiterated the importance of individual differences in predicting leader effectiveness. In a meta-analysis, they found that variability in leader characteristics, including gender, intelligence, and the “Big Five,” accounted for 22 percent of the variance in leader effectiveness. The majority of this variance was attributed to Extraversion and Conscientiousness thereby highlighting the importance of these personality factors (DeRue et al., 2011).

While the majority of research has focused on how personality traits relate to positive outcomes, it is often the case that leaders derail on the job by not living up to their full potential. It has been estimated that approximately 47 percent of leaders end up derailing (Hogan, Hogan, & Kaiser, 2010). Across several studies, personality defects have been shown to be related to leader derailment including being low on Extraversion, Conscientiousness, and Openness to Experience and exhibiting a lack of integrity and honesty, egotism, and arrogance (Hogan, Hogan, & Kaiser, 2010; Kaiser & Hogan, 2011; Lipman-Blumen, 2006). These studies help to provide perspective that leaders are not always successful, but that personality can be a good mechanism to determine the likelihood of success in the role.

While these recent meta-analyses and studies brought to the forefront the importance of focusing on how personality relates to leadership, personality researchers have begun to stress the need to examine not only traits individually but also personality from a more holistic perspective (Barrick & Mount, 2005). Furthermore, several leadership researchers have called for future studies to be more integrative and methodologically rigorous in their approaches to studying leadership (e.g., Antonakis et al., 2012; Avolio, 2007; Bennis, 1959; DeRue et al., 2011; Hernandez, Eberly, Avolio, & Johnson, 2011). The following section details how this study meets this call to action.

Personality Profiles and Leadership Effectiveness: A Novel Approach

One method that can be used to identify personality profiles is LCA, which categorizes individuals into latent subgroups based on multiple observed scores (Collins & Lanza, 2010). Unlike more traditional variable-oriented approaches (e.g., multiple regression), LCA recognizes heterogeneity in the population and accounts for that heterogeneity by identifying a set of underlying subgroups of individuals who share common characteristics (Lanza, Collins, Lemmon, & Schafer 2007). LCA has been highlighted as a sophisticated and robust tool appropriate for organizational research. The benefits of LCA include its flexibility, its ability to be used for confirmatory or exploratory purposes, and its ability to accommodate measurement error (Wang & Hanges, 2011). Overall, LCA was noted as a very promising method to apply in a wide range of questions in organizational research (Wang & Hanges, 2011). In the current study, we used LCA to identify a set of personality profiles in a sample of leaders and estimated the association between these profiles and effectiveness in an assessment center.

Research Questions

The research questions guiding the study were as follows: (1) What different personality profiles can be identified in a sample of leaders? (2) What is the prevalence rate for each leadership profile? (3) How do these leadership profiles relate to various performance criteria measured in an assessment center? This study was primarily descriptive and investigative, therefore specific hypotheses were not stated.

Method

Participants & Procedures

Data used in this study were collected by an external consulting firm. Participants were 2,461 executive-level leaders from various organizations across the United States. All participants were identified as being at least second- or third-level leaders (e.g., directors, vice presidents) and reported an average of 14 years of experience in leadership roles. The majority of the sample was male (75%) and White (80%). The average age was 44 ($SD = 7$).

In addition to this core sample, an independent sample was used to validate the latent class structure. Participants in this sample were 5,997 leaders from organizations across different types of industries. This sample comprised both lower- and higher-level leaders. As such, this sample included a broader array of leaders and offered an adequate test of the identified latent classes.

Participants completed a personality inventory. Subsequently, everyone participated in a day-in-the-life assessment center. Throughout the assessment, participants assumed the role of an executive in a fictitious organization to enact simulated work performance. They engaged in a series of visual and written exercises, including role plays, presentations, and in-baskets. Trained assessors rated participants on various performance competencies after the participants performed all of the activities over the course of a full day. The trained assessors

made independent ratings and then had an integration session to finalize all the competency ratings.

Materials

Personality—The Hogan Personality Inventory (HPI; Hogan & Hogan, 2007) was used to assess personality. The HPI contains 206 items that are scored as true or false. The HPI results in seven primary scales: Adjustment, Ambition, Sociability, Interpersonal Sensitivity, Prudence, Inquisitiveness, and Learning Orientation. The HPI is often used in personnel selection and places an emphasis on constructs relevant to job, career, and occupational performance (Hogan & Hogan, 2007). Thus, this personality inventory is appropriate to use in work settings and leadership research. Due to the proprietary nature of the test, we were not able to calculate the internal consistency of the factors, but the HPI manual reports alpha coefficients of .89, .86, .83, .71, .78, .78, and .75 for Adjustment, Ambition, Sociability, Interpersonal Sensitivity, Prudence, Inquisitiveness, and Learning Orientation, respectively (Hogan & Hogan, 1995).

Performance—Work performance (i.e., leadership effectiveness) was simulated by having participants engage in a series of real-life activities that are common to leaders. Eleven performance competencies were rated as part of the standard assessment procedure used by the external consulting company implementing the assessment center. The performance competencies are related to dimensions that are necessary for effective leadership, including gaining influence, coaching subordinates, making decisions, developing business strategies and understanding financial data. Experienced assessors rated each competency on a scale from 1 (*highly ineffective*) to 3 (*highly effective*).

The performance competencies were subjected to a factor analysis using promax rotation. Results suggested a three-factor solution with 45 percent of the variance explained. Based on the factor loadings, the three factors were labeled Defining the Strategy, Executing the Strategy, and Building Partnerships and Translating the Message. Defining the Strategy is composed of competencies related to understanding financial information and business trends as well as selecting strategies to drive organizational growth. Executing the Strategy contains competencies related to making day-to-day decisions, driving plans to achieve goals, initiating change, and building an environment in which change can occur. Finally, Building Partnerships and Translating the Message is composed of competencies related to communicating effectively, persuading others, coaching others, and networking. Performance factor scores were computed by taking the average of each performance competency measured in the assessment center. All competencies were equally weighted when calculating the overall performance factor. Reliabilities for the three factors ranged from .50 to .55.

Data Preparation and Analyses

The first step in data analysis involved cleaning and preparing the personality data. First, we chose to base analyses on the 5-factor model of personality because this is widely used throughout personality and industrial/organizational psychology research. The HPI parallels the 5-factor model of personality (Digman, 1990; Hogan & Holland, 2003), with the

exception that in the HPI, Extraversion is broken down into Ambition and Sociability, and Openness to Experience is broken down into Inquisitiveness and Learning Orientation. There is both empirical as well as conceptual support for creating both factors (Hogan & Hogan, 1995). Furthermore, extensive research has been conducted to demonstrate the relationship between the HPI and the 5-factor model of personality as measured by various inventories (e.g., Goldberg's Big Five factor markers, the NEO Personality Inventory-Revised, the Interpersonal Adjective Scales; as reported by Hogan & Holland, 2003). More recently, Salgado, Moscoso, and Alonso (2013) showed that the factor structure of the HPI resembles the 5-factor model. Thus, we felt it was appropriate to use the 5-factor model terminology for consistency. Ambition and Sociability scales were combined to form an Extraversion scale, and Inquisitiveness and Learning Orientation scales were combined to form an Openness to Experience scale. The reliabilities for the composite scales were .56 and .49 for Extraversion and Openness to Experience, respectively.

Second, in order to prepare the data for LCA, personality scale scores were transformed into three-level indicators. Transforming the personality scale scores into categories facilitates interpretation of the profiles and enables a more meaningful way to examine differences between profiles. Using the HPI user manual as a guide, scores were categorized as high (above the 65th percentile), moderate (between the 36th and 64th percentiles), or low (below the 35th percentile). This categorization provides more differentiation, especially when comparing those scoring high and low on the personality variables.

Following data preparation, analyses were run in *SAS 9.3*. Latent class models with one through seven classes were run using *SASPROC LCA* (Lanza Dziak, Huang, Wagner, & Collins, 2013). For each model, we used 100 random sets of starting values to ensure that the model was identified. Selection was conducted using fit statistics (e.g., G^2 , *AIC*, *BIC*) as well as interpretability of the latent classes. Furthermore, to ensure the stability and validity of our latent class structure, a validation analysis was performed using a separate sample of leaders. Similar procedures were used to find this solution. Finally, using the selected latent class model for our core sample, each performance factor was examined as a distal outcome in the latent class model to determine how personality latent class membership predicted performance. The *LCA_distal SAS* macro (Lanza, Tan, & Bray, 2013), was used for this part of the analysis.

Results

Descriptive statistics for the personality traits and performance factors are shown in Tables 1, 2, and 3, respectively. Table 1 presents means, standard deviations, and intercorrelations among all the personality traits and performance competencies. The intercorrelations among the personality traits are low to moderate, which is typical (Schmitt, 2014, Van der Linden, te Nijenhuis, & Bakker, 2010). Table 2 shows the proportion of individuals coded as low, moderate, and high on each personality trait. A majority of the sample was identified as high on both Extraversion and Conscientiousness, which have been shown to be important for leadership (e.g., DeRue et al., 2011; Judge et al., 2002). Table 3 presents the means and intercorrelations among the performance factors. On average, individuals were rated as moderately effective or less than effective (range 1.86 — 2.00; see Table 2), which is typical

of assessment center scores because the majority of assessment centers are geared towards development. Furthermore, the correlations among factors ranged from 0.11 to 0.34 (see Table 3), indicating that these are mostly distinct performance factors.

Model Selection

Model fit information for the models with one through seven latent classes are shown in Table 4. The *AIC* was smallest, indicating an optimal balance between fit and parsimony, for seven classes, whereas the *BIC* was smallest for four classes. After careful inspection of models with four to seven classes, we selected the six-class solution, which had low fit statistics and good model interpretability ($G^2 = 160.95$; $AIC = 290.95$; $BIC = 668.49$; $df = 177$).

Table 5 shows the prevalence of each latent class and, for each latent class, the probability of having low, moderate, or high levels of each personality trait. Latent classes were interpreted and labeled based on these item-response probabilities. Individuals in the first latent class were characterized by low Emotional Stability, Agreeableness, and Conscientiousness (0.76, 0.83, and 0.98, respectively) and this class was therefore labeled as Unpredictable Leaders with Low Diligence. Approximately 7.3% of individuals belonged to this class. Individuals in the second class, labeled Conscientious, Backend Leaders (3.6%), were likely to be high on Conscientiousness (0.95) but low on Agreeableness (0.66) and Extraversion (0.86). Latent class three (8.6%) was labeled Unpredictable Leaders because they had high probabilities of low Emotional Stability and Agreeableness (0.51 and 0.61, respectively). Individuals in the fourth latent class (20.8%), labeled Creative Communicators, had high probabilities of high Extraversion (0.74) and Openness to Experience (0.60) but low Conscientiousness (0.56). Latent class five (32.4%) was labeled Power Players because members of this class had high probabilities for high scores on all five personality traits. This was the most common personality profile among the leaders. Finally, latent class six (27.1%), Protocol Followers, comprised individuals who were likely to be high on Emotional Stability and Conscientiousness (0.71 and 0.74, respectively).

In order to validate the six-class solution, we replicated this analytic procedure using an independent sample of leaders. LCA results using the validation sample also suggested a six-class solution ($G^2 = 238.50$; $AIC = 368.50$; $BIC = 803.94$; $df = 177$). Despite the fact that class prevalences were slightly different across samples, the characteristics of the classes remained essentially the same (see Table 6). Thus, we felt confident that our six-class solution was valid and could generalize to a broader population of leaders.

Class Membership and Performance

In order to test whether and how class membership predicts performance, each performance factor was separately included in the latent class model as a distal outcome. Omnibus tests revealed that class membership was significantly associated with all three performance factors ($p < 0.001$ for each). Table 7 shows the standardized mean differences of performance outcomes conditional on personality latent class membership. To compute the standardized mean differences, we subtracted the lowest average score on each performance factor to the other scores within that factor. For the performance factors Defining the Strategy and

Executing the Strategy, Conscientious, Backend Leaders and Power Players had the highest means, and Protocol Followers and Unpredictable Leaders had the lowest means. Thus, Conscientious, Backend Leaders and Power Players showed high performance on defining and implementing strategies. For the performance factor, Building Partnerships and Translating the Message, Creative Communicators and Power Players had highest means whereas Conscientious, Backend Leaders and Unpredictable Leaders with Low Diligence had the lowest means. As such, Creative Communicators and Power Players demonstrated relatively high performance in terms of communicating with others and building networks.

We then examined the data from a different perspective by looking at performance within each personality profile to elucidate strengths and weaknesses of each type of leader. For example, Power Players scored relatively high on all performance factors. In comparison to their peers, they either had the highest or second highest performance score on each factor. Alternatively, Unpredictable Leaders performed more poorly in Defining the Strategy and Executing the Strategy and moderately in Building Partnerships and Translating the Message, relative to their peers. Other classes tend to have more complex relationships. For example, Conscientious, Backend Leaders, excelled in Defining the Strategy and Executing the Strategy but showed the worst performance in Building Partnerships and Translating the Message. Additionally, Creative Communicators performed well on Building Partnerships and Translating the Message but only scored moderately on the other performance factors.

Discussion

The purpose of this study was to characterize different profiles of leaders based on their composite personality structure using a novel, person-oriented statistical approach and to determine how individuals with these leader profiles perform on competencies important for leadership as measured in an assessment center. The results of the current study offer some unique contributions in a few areas. First, results demonstrated that there are six different profiles of leaders when examining their personality composite. While previous research has examined individual personality factors of leaders, this study is one of the first to examine personality holistically. Furthermore, this exemplifies that there is not a “one size fits all” personality model for leadership; rather, there are several different subpopulations of leaders based on their composite personality structure.

Another contribution is that our results showed how these different profiles of leaders perform on competencies necessary for leadership. Much can be gained by examining these classes and their performance. The most prevalent class, Power Players, on average performed well on all performance factors. Members of this class also tend to be emotionally stable, agreeable, conscientious, social, and open to new ideas and therefore are likely to appeal to a broad audience. Given their charismatic nature and business savvy skills, they may excel in a wide range of situations. Because Power Players tended to be high on all the personality dimensions, there may be some concern as to whether participants were responding in a socially desirable manner. However, research has demonstrated that social desirability is not a great concern in real-life work settings and that relationships between personality and job performance do not appear to be suppressed by social desirability (Hough, 1998; Hough, Eaton, Dunnette, Kamp, & McCloy, 1990; Hough &

Oswald, 2008; Hough & Oswald, 2011; Ones, Viswesvaran, & Reiss, 1996). Furthermore, it is possible that these individuals may be better at impression management, which is important for effective leadership.

Protocol Followers, the second most prevalent class, tended to be emotionally stable and conscientious yet performed lower on Defining the Strategy and Executing the Strategy. This class of leaders, on average, was moderately good at forging interpersonal relationships and developing others, but they do not have the skills needed to identify future directions for the organization and drive those changes.

The third most prevalent class, Creative Communicators, tended to be very social and open to new ideas but somewhat less diligent in their actions. Their personality tendencies come across in their performance as they excelled in Building Partnerships and Translating the Message but were less skilled in developing and implementing strategies. Thus, this class of leaders may be instrumental in gaining appeal from followers for new innovations but because they are less diligent, they may not do as well in strategy formation and implementation.

The final three classes demonstrated more complex relationships with the performance factors. Unpredictable Leaders, who tended to be less stable and agreeable, did not perform as well in formulating and implementing strategies. Additionally, Conscientious, Backend Leaders, who tended to be stable and diligent yet less agreeable and social, were adept at developing and acting on strategies but did not excel at conveying the message or gaining mass appeal. These leaders are much more pragmatic and less likely to come across as charismatic and persuasive. Finally, Unpredictable Leaders with Low Diligence lacked skills in networking and communication and also tended to be less emotionally stable, agreeable, and conscientious. In turn, they may not be perceived as appealing and therefore may be unable to win relationships and persuade others.

Despite the sample being executive leaders and having several years of experience in management positions, the six profiles varied in the degree to which they were effective in the three performance factors. The magnitude between the performance factors varied relative to each other suggesting leaders can be effective in one area, but not necessarily another area. All of these leaders have learned how to be at least minimally effective in their roles in order to advance in their careers. Therefore, it is quite possible these leaders may have learned how to successfully leverage their strengths and downplay their weaknesses. Additionally, leadership is not only about the individual. Rather, leaders are a part of a broader team and organization. Leaders who are able to surround themselves by individuals who can make up for their limitations may be more successful on the job.

Implications

The results from this study have several theoretical and practical implications for leadership and personality research. Regarding theoretical implications, this study helped to elucidate how personality, when examined holistically, relates to assessment center-based leadership. There have been several calls to examine combinations of personality traits, as opposed to studying traits individually (Barrick & Mount, 2005); this study answers this call.

Furthermore, this research found that there is not one profile of a leader. Rather, many different personality compositions make up leaders, some of which are more effective than others. Each profile has different strengths and weaknesses across a range of performance criteria. Examining personality holistically, and how personality profiles relate to multiple performance criteria, helped to tease apart this complex relationship.

Regarding practical implications, this study highlights some of the important personality patterns of leaders and their resulting performance. These combinations can then be used as a supplement for personnel selection. While the use of personality for selection has been met with some controversy, if personality is matched for the purposes of the specific situation, then it may add value to the selection system (e.g., Morgeson et al., 2007a; Morgeson et al., 2007b; Murphy & Dzieweczynski, 2005; Ones, Dilchert Viswesvaran & Judge, 2007). For example, if an organization is seeking a leader who can build networks and gain acceptance from employees on new changes occurring, then it may be important to focus on finding Creative Communicators. Alternatively, if an organization is seeking a leader who can develop a new vision for the future and execute that vision, then an organization may be better suited to identify Conscientious, Backend Leaders.

Some organizations might be tempted to use personality profiles to screen out leaders who do not seem to fit the ideal personality profile for a specific position. While there is some merit to this approach, a more balanced approach combines data from measures of personality, behavior, experience, and motivation (Barrick & Mount, 2005). This holistic view recognizes that high levels of motivation or practice can overcome natural tendencies inherent in personality styles. A good example would be a Conscientious Backend leader who is introverted, but pushes oneself to network with others in an effort to further one's career. While many organizations seek streamlined and low-cost selection methods, they will likely miss out on strong candidates if they rely too much on personality measures to drive their decisions.

This study also questions the conventional belief that one leader is best suited to perform all job duties. While one leadership class, Power Players, excelled in all performance factors, the remainder of the classes displayed both strengths and weaknesses across the criteria. This highlights the notion that one leader may not always be appropriate. Rather, dual leadership may be more instrumental for the success of the organization. Although the importance of dual leadership has been acknowledged when leading for innovation (Hunter, Cushenbery, Fairchild, & Boatman, 2012), it may also be relevant in other situations. For example, if an organization is unable to find a well-qualified Power Player, then it may be an equally good alternative to hire a Conscientious, Backend Leader and a Creative Communicator. Alternatively, a leader with specific tendencies may create a team of strong players who are able to supplement or compensate for the leader's shortcomings (Humphrey, Hollenbeck, Meyer, & Ilgen, 2007). Imagine an Unpredictable Leader with Low Diligence who surrounds himself with emotionally stable, conscientious team members. By openly sharing personality profiles, team members can work together to counterbalance each other and stay on track. This "Great Team" model of leadership provides an interesting contrast to those who may subscribe to the "Great Man" hypothesis.

Additionally, this study provides insights for leadership development. Knowing to what personality class leaders belong may aid in identifying developmental opportunities for improving the leader's skills. For example, Conscientious, Backend Leaders should engage in developmental opportunities that will help them to develop their communication, coaching, and persuasion skills. An awareness of potential weaknesses in leadership performance provides an opportunity to preemptively build and develop relevant skills.

Finally, the personality profiles in the study might help to identify leaders with high potential who have not yet had the opportunity to demonstrate their skills. For example, organizations can attempt to identify associates in a group of engineers with a Power Player personality profile. This undiscovered high-potential leader could be presented with special development opportunities that would give him or her the chance to gain experience and hone leadership skills over time. Personality profiling can help source succession management programs by finding future leaders with the right "DNA" to fill open positions.

Study Limitations

Despite these unique contributions, a few limitations should be noted. First, assessment center ratings of performance, rather than on-the-job performance, were utilized. However, several meta-analyses have demonstrated support for assessment centers as predictors of on-the-job performance (e.g., Arthur, Day, Mcnelly, & Edens, 2003; Gaugler, Rosenthal, Thornton, & Bentson, 1987). Also, the activities in the assessment center were created to mimic on-the-job exercises and, therefore, provide a realistic view on performance. Having participants complete several exercises over the course of a full day helped to gather multiple pieces of information about the participants' performance.

Similarly, some of the average performance scores for the leader profiles were lower, which may suggest to some that not all the leaders in the sample were effective. However, it is often the case that in assessment centers focused on development, scores tend to be lower (Thornton & Rupp, 2006). Furthermore, assessment center ratings tend to balance criterion-referenced ratings with norm-referenced behavior. This implies that performance in the assessment center is not only being compared to an average leader, but rather the ratings also consider what is the "gold standard" for leadership performance. For example, research shows that most leaders struggle with common skills like execution, defining a strategy, and coaching (Paese, 2013). As such, lower scores, especially in these areas, do not necessarily indicate that the leader is less than effective, but rather confirms that most leaders struggle with some of these competencies.

Additionally, the reliabilities for the performance factors were lower than optimal. Reliability, however, generally acts as a suppressor of validity, suggesting that the results may serve as a lower bound estimate of effects (Greer, Dunlap, & Hunter, 2006). Thus, while our results are on the conservative side, they can be considered meaningful because lower reliabilities make it more challenging to identify significant results.

Finally, this sample included executive-level leaders who had on average 14 years of experience. Even though we found support that our personality profiles hold true across a broader sample of leaders with less experience, the relationship to performance is focused

solely on leader effectiveness, rather than leader emergence. It would be important to examine another sample of leaders with less tenure to identify how emergent leaders perform on these criteria.

Future Recommendations and Conclusions

The results and limitations from this study highlight the need to continue research in this area. While the majority of research examining personality and leadership effectiveness has focused on traits individually, there has been increasing attention and interest in examining personality holistically. Leadership research would benefit from broader use of a person-oriented approach to examine personality typologies in order to better understand leadership profiles and their associated effectiveness. This method accepts the notion that personality is complex and therefore may illuminate how personality traits interact with each other to form a profile. Thus, future research using LCA to examine personality and leadership effectiveness is warranted.

First, it would be important to replicate these results using another sample. In particular, we encourage examining objective performance or on-the-job performance measures to see whether any differences emerge. Additionally, it would be interesting to determine whether these profiles of leadership quantitatively or qualitatively differ across leader levels. It may be the case that executives may comprise a greater proportion of leaders with a particular personality profile compared to operational leaders. Furthermore, it may be interesting to identify whether the extent to which individual characteristics are associated with personality profiles or, perhaps more interestingly, whether links between personality profile and leadership performance differ across gender or leader levels.

Furthermore, recognizing the complexity of leadership, it will be also important to examine how various situational factors influence the relationship between the personality profiles and performance. For example, climate stability or culture may impact which type of leader excels. Additionally, taking a more macro-perspective, it would be interesting to learn how having different leader profiles affects organizational performance.

In conclusion, this study provides preliminary evidence for summarizing the synergistic relationship between distinct personality profiles of leaders and their associated performance on three factors. It is essential that we recognize the many pathways to successful leadership, whether we are considering personality or behavioral style. It is our hope that this study is a step in this direction and, more importantly, that it compels others to take similar steps.

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Table 1
Means, Standard Deviations, and Intercorrelations for Personality and Performance Criteria (N=2461)

Factor	Mean	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1. Emotional Stability	63.33	25.26															
2. Agreeableness	55.32	29.88	.39**														
3. Conscientiousness	59.81	25.62	.46**	.26**													
4. Extraversion	65.58	19.75	.25**	.33**	-.05*												
5. Openness to Experience	60.31	21.15	.14**	.13**	-.05*	.36**											
6. Strategic Thinking	1.85	.72	.02	-.03	-.05*	.10**	.22**										
7. Financial Acumen	1.89	.74	.06	-.01	.00	.10**	.17**	.38**									
8. Decision Making	2.26	.56	.05*	-.02	.00	.07**	.12**	.21**	.26**								
9. Execution	2.16	.62	.01	.02	.04	.07**	.07**	.24**	.23**	.30**							
10. Empowerment	1.71	.59	.05	.01	-.06	.04	.05	.08	.04	.36**	.11**						
11. Building Talent	1.80	.65	.01	.06*	.04	-.01	.00	.12**	.04	.10**	.15**	.09*					
12. Leading Change	1.87	.59	-.01	.06**	-.03	.07**	.10**	.30**	.15**	.22**	.22**	.15**	.19**				
13. Building Networks	2.00	.65	.04	.10**	-.01	.11**	.07**	.12**	.06*	.15**	.02	.11**	.11**	.16**			
14. Influence	1.87	.66	.06	.11**	.03	.20**	.11**	.12**	.16**	.21**	.11**	.16**	.08*	.16**	.34**		
15. Coaching	1.91	.65	.02	.08**	.00	.02	.02	.08**	.02	.11**	.04	.10**	.11**	.15**	.17**	.18**	
16. Communication	2.10	.33	.02	.06*	.02	.07**	.10**	.18**	.12*	.18**	.07**	.09*	.07	.10**	.17**	.22**	.16**

Table 2

Descriptive Statistics for Personality Traits (N=2461)

Indicators of Latent Class	Level	Frequency (%)
Emotional Stability	Low	434 (17.6%)
	Moderate	685 (27.8%)
	High	1342 (54.5%)
Agreeableness	Low	655 (26.6%)
	Moderate	929 (37.7%)
	High	877 (35.6%)
Conscientiousness	Low	559 (22.7%)
	Moderate	668 (27.1%)
	High	1234 (50.1%)
Extraversion	Low	205 (8.3%)
	Moderate	841 (34.2%)
	High	1404 (57.3%)
Openness	Low	346 (14.2%)
	Moderate	993 (40.6%)
	High	1106 (45.2%)

Table 3
Means, Standard Deviations, and Intercorrelations for Performance Indicators (N=2461)

Performance Factor	Mean	SD	1	2	3
1. Defining the Strategy	1.86	.64	.55		
2. Executing the Strategy	2.00	.39	.34**	.52	
3. Building Partnerships & Translating the Message	1.98	.43	.11**	.21**	.50

Note.

** $p < .01$;

Internal consistency values (Cronbach's alphas) appear in bold along the diagonal.

Table 4

Comparison of Baseline Models

No. of Classes	df	Likelihood Ratio G^2	AIC	BIC	Entropy R^2	Solution %
1	232	1467.43	1487.43	1545.51	1.00	100
2	221	666.81	708.81	830.79	0.58	100
3	210	347.83	411.83	597.70	0.66	100
4	199	244.43	330.43	580.19	0.63	100
5	188	187.94	295.94	609.59	0.63	94
6	177	160.95	290.95	668.49	0.67	19
7	166	138.83	290.83	732.27	0.65	18

Note. Boldface type indicates the selected model. Solution % is the percentage of times solution was selected out of 100 random sets of starting values.

AIC = Akaike's Information Criterion; BIC = Bayesian Information Criterion. $N=2461$

Table 5
Item-Response Probabilities for Six-Class Model: Probability of Endorsing Item Given Latent Class (N=2461)

	Latent Classes					
	1 (7.3%)	2 (3.6%)	3 (8.6%)	4 (20.8%)	5 (32.4%)	6 (27.1%)
Low						
Emotional Stability	.76	.18	.51	.26	.03	.02
Agreeableness	.83	.66	.61	.27	.02	.24
Conscientiousness	.98	.04	.00	.56	.09	.03
Extraversion	.20	.86	.36	.00	.01	.04
Openness	.22	.40	.28	.08	.04	.20
Moderate						
Emotional Stability	.20	.35	.37	.46	.15	.27
Agreeableness	.05	.16	.34	.54	.38	.38
Conscientiousness	.01	.01	.66	.35	.24	.23
Extraversion	.51	.05	.47	.26	.01	.77
Openness	.43	.52	.49	.32	.33	.51
High						
Emotional Stability	.05	.47	.12	.28	.82	.71
Agreeableness	.12	.19	.05	.19	.60	.38
Conscientiousness	.02	.95	.34	.08	.67	.74
Extraversion	.29	.09	.17	.74	.98	.21
Openness	.34	.07	.23	.60	.63	.29

Note. 1 = Unpredictable leader with Low Diligence; 2 = Conscientious, Backend Leader; 3 = Unpredictable Leader; 4 = Creative Communicator; 5 = Power Player; 6 = Protocol Follower; Probabilities greater than .50 in bold to facilitate interpretation

Table 6
Validation Results: Item-Response Probabilities and Class Membership Probabilities for Six-Class Model (N=5997)

	Latent Classes					
	1 (7.5%)	2 (9.1%)	3 (16.8%)	4 (27.7%)	5 (25.3%)	6 (13.6%)
Low						
Emotional Stability	.85	.49	.43	.32	.00	.00
Agreeableness	.88	.85	.55	.36	.06	.30
Conscientiousness	.79	.14	.28	.42	.10	.06
Extraversion	.29	.99	.00	.01	.00	.17
Openness	.25	.41	.19	.09	.07	.25
Moderate						
Emotional Stability	.15	.32	.38	.42	.17	.27
Agreeableness	.11	.12	.36	.49	.41	.43
Conscientiousness	.21	.31	.37	.33	.28	.14
Extraversion	.43	.01	.99	.11	.14	.75
Openness	.48	.47	.47	.41	.34	.55
High						
Emotional Stability	.01	.20	.19	.26	.83	.72
Agreeableness	.01	.03	.09	.15	.52	.28
Conscientiousness	.00	.55	.35	.25	.62	.79
Extraversion	.28	.00	.01	.88	.86	.07
Openness	.27	.13	.34	.50	.59	.20

Note. Probabilities greater than .50 in bold to facilitate interpretation

Table 7
Results Showing Performance Outcomes Conditional on Personality Latent Class Membership (N=2461)

Performance Factor	Latent Classes					Power Player	Protocol Follower
	Unpredictable Leader with Low Diligence	Conscientious, Backend Leader	Unpredictable Leader	Creative Communicator	Power Player		
Defining the Strategy	0.25	0.53	0.08	0.37	0.40	0.00	
Executing the Strategy	0.21	0.46	0.00	0.22	0.29	0.15	
Building Partnerships & Translating the Message	0.13	0.00	0.19	0.27	0.29	0.22	

Note. Standardize means were computed based on subtracting the lowest mean score from the other scores within each performance factor.