THE DARK SIDE OF GETTING AHEAD: CAPTURING DARK TRAITS AND

RELATIONAL EFFECTIVENESS IN ASSESSMENT CENTERS

by

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(Under the Direction of Brian J. Hoffman)

ABSTRACT

Accumulating evidence suggests that assessment centers (ACs), a popular leader selection tool, fail to predict relational forms of performance, such as organizational citizenship behaviors and transformational leadership (LoPilato et al., 2016). It has been speculated that the failure to predict relational performance reflects bias in ACs toward rewarding candidates with a proclivity to dominate rather than cooperate, and more inclined to get ahead than get along (Hoffman et al., 2015; Meriac et al., 2014). The present study contributes to the literature by investigating this apparent deficiency in three primary ways. First, criterion-related validity analysis showed that AC ratings predicted subsequent ratings of task performance on the job, but not relational or leadership performance. Second, we investigated whether construct validity issues might lead ACs to be less predictive of relational outcomes. Specifically, we confirmed previous findings that ACs tend to reflect personality traits indicative of the propensity to get ahead to a greater extent than to get along. Further, while we found that the dark traits exert a curvilinear effect on job performance, they show a positive linear relationship with AC ratings, indicating that ACs fail to capture the negative effects associated with high levels of dark traits. Finally, we identified a boundary condition of the criterion-related validity of ACs; for

candidates high in dark traits, higher performance in ACs corresponded to lower relational

effectiveness at work. Implications for research and practice are discussed.

INDEX WORDS: Assessment Centers, Leadership Selection, Dark Personality

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DEDICATION

To the original Dr. Kennedy – I am here because I stand on the shoulders of giants. I love you, Papa.

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CHAPTER 1

INTRODUCTION AND LITERATURE REVIEW

Owing in part to consistent evidence for their criterion-related validity,

assessment centers (ACs) are widely supported as a valuable measure in the selection of potential

leaders (Jackson, Lance, & Hoffman, 2013). Given that ACs typically measure multiple

interpersonally oriented dimensions using several interpersonally oriented simulations of the job

context (Thornton, Rupp, & Hoffman, 2014), an implicit assumption is that ACs should be

especially effective predictors of performance in relationally oriented positions, such as

leadership roles. Yet recent evidence has questioned this assumption. Two recent meta-analyses

examining the nomological network of AC ratings suggest that scores on both AC dimensions

and AC exercises correlate more strongly with personality traits reflecting candidates'

propensities to dominate and get ahead in social situations than their tendencies toward

collaborating, cooperating, and get along with others (Hoffman, Kennedy, LoPilato, Monahan &

Lance, 2015; Meriac, Hoffman & Woehr, 2014). Further, a recent analysis of five separate

samples of AC ratings found that ACs were not significantly associated with a variety of

relational behaviors such as organizational citizenship behaviors (OCB), cooperation, and

individualized consideration (LoPilato, Hoffman, Buckett, Melchers, Kleinmann, Christiansen,

Annen, et al., 2016). Given the importance of relational behaviors for effective leadership

performance (DeRue, Nahrgang, Wellman & Humphrey, 2011), it is important to understand the

causes underlying these unexpected and troubling findings.

The present study seeks to examine more directly the effectiveness of ACs for capturing and predicting relational behaviors. This broader question is examined using three overarching types of analysis. First, we replicate and extend recent research by examining whether ACs are associated with relational job performance competencies. As noted above, only one existing study has directly tested this question and it found that in most cases ACs failed to predict interpersonally oriented work behaviors, such as OCB, cooperation, and consideration (LoPilato et al., 2016). We consider these results in light of the impression management that occurs in a maximum performance context like an AC and seek to replicate those surprising findings. As ACs are commonly used in the assessment of individuals occupying managerial roles, it is important to provide further evidence as to whether they are associated with these key criterion variables.

Second, on the basis of socioanalytic theory, we extend recent research (Hoffman et al., 2015; Meriac et al., 2014) investigating the overlap between AC ratings and personality constructs by directly testing the relationships between performance in ACs and personality traits indicative of *getting ahead* and *getting along* (Hogan & Holland, 2003). This analysis builds on research that has, based on relationships with Big Five personality constructs, speculated that AC ratings correlate with getting ahead to a greater extent than getting along; to this end we directly examine the association between AC ratings and two personality measures specifically developed around the personality domains expounded by Hogan and Holland (2003). We also test whether ACs are associated with dark personality traits, a defining feature of which is their association with problems building and maintaining effective relationships (Blair, Hoffman & Helland, 2008; Hogan, Hogan, & Kaiser, 2010; Judge, LePine, & Rich, 2006; Khoo & Burch, 2008). This analysis contributes to the literature by providing one of few direct analyses of the

association between ACs and dark side personality traits (cf. Brunell, Gentry, Campbell, Hoffman, Kuhnert & DeMaree, 2008) and in doing so provides needed evidence indicating whether ACs effectively identify leaders with dark personality traits. This issue is especially critical as there is evidence that other selection instruments such as interviews (Schnure, 2010) and situational judgment tests (SJTs; Slaughter, Christian, Podsakoff, Sinar, & Lievens, 2014) may fail to detect the presence and negative impact of dark traits in candidates. In sum, this study examines the capability of the AC to identify and screen out individuals who are more motivated to get ahead of others than to get along, exhibit higher levels of dark traits, and, as a result, are presumably less likely to display relational behaviors at work.

Finally, we propose and test a potential explanation for the previous finding that ACs may not consistently predict relational behaviors. Specifically, we examine whether dark traits moderate the relationship between AC ratings and performance ratings. The management literature has observed an emergence/effectiveness paradox in the relationship between dark traits and leader effectiveness (Judge, Piccolo & Kosalka, 2009). That is, individuals higher in dark traits are likely to emerge as leaders (Brunell et al., 2008; Grijalva, Harms, Newman, Gaddis & Fraley, 2015) and may gain higher financial and hierarchical attainment in organizations (Wille, de Fruyt, de Clercq, 2013). Yet these individuals are simultaneously less likely to display positive relational behaviors in the workplace (Judge et al., 2006; O'Boyle, Forsyth, Banks & McDaniel, 2012; Penney & Spector, 2002). This paradox underscores the need to understand the process by which those with destructive traits rise to leadership roles and how this process can be mitigated. We argue that the maximum performance conditions of the AC may render it vulnerable to individuals higher in dark traits, those who may appear interpersonally savvy but are unlikely to demonstrate relational effectiveness on the job.

Accordingly, we test whether AC ratings are less valid predictors of relational performance for individuals high in dark traits and, as a result, less useful for screening out ineffective and potentially harmful leaders.

In sum, this study contributes to the leader assessment literature by: (a) replicating and extending the criterion-related validity for predicting relational traits, (b) directly examining the association between getting ahead and dark personality traits and AC performance, and (c) testing whether ACs are less valid predictors for participants higher in dark traits.

Assessment Centers and Relational Performance on the Job

While the criterion-related validity of ACs and job performance is well-documented (Arthur, Day, McNelly & Edens, 2003; Meriac et al., 2008; 2014; Hoffman et al., 2015), the prediction of relational behaviors, specifically, is less clear. Only one study known to the authors explicitly examined this relationship (LoPilato et al., 2016); they found that AC performance largely failed to predict relational outcomes in the job, including individualized consideration, cooperation, and OCB. Given that rather unexpected finding, the second overarching purpose of this study is to replicate the findings of LoPilato et al. (2016). We use the theory of typical and maximum performance and research on impression management to explain why the relationship between AC ratings and important relational criteria may be attenuated.

Over the past few decades, the criterion domain has expanded to encompass a variety of relational behaviors. Although different domains have ascribed different labels to these relational behaviors, including considerate leadership (Dinh, Lord, Gardner, Meuser, Liden, & Hu, 2014; Stogdill & Coons, 1957), interpersonal OCBs (Organ, 1988), contextual performance (Borman & Motowidlo, 1993), interpersonal dealings and communication (Borman & Brush, 1993), and behaviors indicative of the drive to get along with others (Hogan & Holland, 2003), at their core

each set of behaviors involves effectively building and maintaining relationships with others. Research across diverse substantive areas suggests that these types of behaviors are critical for team success (Stevens & Campion, 1994), effective leadership (DeRue et al., 2011), and workforce productivity (Podsakoff, Whiting, Podsakoff, & Blume, 2009).

The nature of modern work is increasingly team-oriented and interdependent in nature (Wood & Hoffman, 2012), and the role of the manager, in particular, is characterized by high levels of social demands (Dierdorff et al., 2009). The leadership literature has consistently supported the importance of relational behaviors in leadership effectiveness (Stogdill & Coons, 1957; DeRue et al., 2011; Judge et al., 2004). For instance, leader-member exchange (Dienesch & Liden, 1986) and transformational leadership (and one of its primary components, individualized consideration; Bass, 1985) focus on the quality of the interpersonal relationship between the leader and follower and are among the most commonly studied leader variables in recent years (Dinh et al., 2014). Further, a recent meta-analysis found that consideration-related behaviors were the single strongest predictor of leader effectiveness relative to several other trait and behavioral variables (DeRue et al., 2011).

Given the documented importance of relational behaviors to leader effectiveness, recent research has sought to investigate the criterion-related validity of various selection tools in predicting relational effectiveness (Bono & Judge, 2004; Hoffman & Dilchert, 2012; Chiaburu, Oh, Berry, Li, & Gardner, 2011). ACs are a popular tool for evaluating leaders because of their high fidelity and high criterion-related validity. ACs purport to activate and assess leadership skills that are relational in nature in addition to task-based abilities. This is evidenced by interpersonal nature of the situations with which candidates are presented (e.g., role-play) as well as interpersonally oriented dimensions that are commonly rated in ACs (e.g., consideration of

others, influencing others; Arthur et al., 2003; Meriac et al., 2014). ACs are among the few selection tools that directly assess the interpersonal behaviors they are intended to predict; this behavioral fidelity to the criterion domain of the managerial role is thought to be a key strength of the method (Thornton et al., 2014).

That said, scant research has examined the capacity for ACs to predict relational behaviors, specifically. The only study to date that explicitly examines this relationship found that overall AC performance consistently failed to predict relational behaviors such as OCB and relationship-oriented leadership competencies (LoPilato et al., 2016). Those findings were surprising given that ACs are considered a superior selection tool for interpersonally oriented roles (i.e., management), are made of up of exercises that are interpersonal in nature, and explicitly include dimensions described as relational skills. In the present study we apply the theory of typical and maximum performance in order to understand why ACs may predict relational behaviors less strongly or less consistently than expected.

One potential explanation for the weak observed relationship between AC performance and relational behaviors is that ACs are a measure of maximum performance and the criterion of interest, relational effectiveness, is an indicator of typical performance. Maximum performance tests assess the candidate's performance when they are acting with maximum effort in a short-term situation while under observation (Sackett, 2007). ACs meet the criteria for a maximum performance episode because candidates are aware that their performance over a relatively short episode is being evaluated and are instructed to respond to the situations in the most effective manner possible (Beus & Whitman, 2012; Lim & Ployhart, 2004; Marcus, Goffin, Johnston & Rothstein, 2007; Ployhart, Lim & Chan, 2001). Performance under these circumstances is understood to be primarily a function of ability because motivation to exert maximum effort is

constrained to be high for all respondents (Sackett, Zedeck, & Fogli, 1988; Klehe & Anderson, 2007). Consistent with this suggestion, past reviews have consistently found that ACs are more strongly associated with general mental ability than personality (Hoffman et al., 2015; Meriac et al., 2008; Meriac et al., 2014).

Relational effectiveness, on the other hand, is best conceptualized as typical performance because those behaviors are observed over long periods of time in the absence of an explicitly evaluative context (Sackett et al., 1988; DuBois et al., 1993; Klehe & Anderson, 2007). Unlike under maximum performance conditions, which reduce variance due to motivation, performance in typical performance contexts are largely related to motivation (Klehe & Anderson, 2007; Marcus et al., 2007). The distinct etiologies of typical and maximum performance are thought to be the cause of their modest relationship (Beus & Whitman, 2012) and also threaten the validity of selection measures, most of which (e.g., ACs, work samples, interviews, knowledge SJTs; Beus & Whitman, 2012; Marcus, 2009; Marcus et al., 2007) simulate conditions of maximum performance whereas criterion variables, such as coworker ratings of performance on the job, are more indicative of typical performance.

When applied to the measurement of interpersonal skills, this typical-maximum performance disconnect can also be viewed in light of impression management, the conscious or unconscious attempt to influence one's impression during an interpersonal interaction (Ellis, West, Ryan, & DeShon, 2002; McFarland, Ryan, & Kriska, 2003). Impression management in the selection context is most often discussed in the context of response distortion on personality measures (e.g., Stark, Chernyshenko, Chan, Lee & Drasgow, 2001; McFarland & Ryan, 2000; Guan, Carter, Tryba, & Griffith, 2014). There is reason to believe that faking behaviors have different effects and impact depending on the type of selection tool (Marcus, 2009), but only a

handful of studies have investigated response distortion in behavioral selection tools such as interviews (Stevens & Kristof, 1995; Levashina & Campion, 2007), SJTs (Nguyen, Biderman, & McDaniel, 2005; Peeters & Lievens, 2005), and virtually none in the context of ACs (cf. Konig, Melchers, Kleinmann, 2007). In the context of SJTs, Peeters and Lievens (2005) simulated honest and faking conditions by asking respondents to select the response that best describes what they would do or the response that would be rated most highly, respectively. The same instructions were used to distinguish between SJT performance under typical and maximum performance conditions (i.e., what applicants *would* do versus what they believe they *should* do; McDaniel, Hartman, Whetzel, & Grubb, 2007). In other words, the conditions that elicit maximum performance also elicit impression management from applicants.

Impression management in behavioral selection contexts is particularly relevant for the measurement of relational skills. Under evaluative conditions like ACs, in which applicants know they are expected to exert maximum effort, most candidates are able to display positive relational behaviors (or at least inhibit negative relational behaviors) for a short period of time. In other words, whereas it is not possible to fake more cognitively loaded AC dimensions, it seems probable that a motivated candidate could display concern and consideration for others in a maximum performance situation. Although research in this area is limited, one recent study suggests that SJTs intended to predict interpersonal skills, specifically, may be less predictive than previously thought (Slaughter et al., 2014), and the results suggest that more investigation is required before applying selection methods to interpersonal skills.

Accordingly, the relationship between a maximum performance episode as measured in an AC and typical performance criterion may be specifically deficient in the assessment of

getting along behaviors. As a result, candidates' maximum performance in ACs may fail to predict relational behaviors on the job. Accordingly, we hypothesize the following:

Hypothesis 1: AC ratings will relate more strongly to task performance than relational performance.

Assessment Centers and Personality

One way to examine the propensity for ACs to capture and predict relational behaviors is to examine whether ACs are associated with personality traits known to be associated with interpersonal effectiveness. If AC ratings relate to personality traits linked to cooperation and getting along with others, they will identify those with greater tendencies to engage in effective relational behaviors (Hogan & Holland, 2003). Based on past research (Hoffman et al., 2015; Meriac et al. 2014) we apply socioanalytic theory as an organizing framework to propose relationships between AC ratings and both bright and dark side personality (Hogan, 1983; 1991; 1996; Hogan & Holland, 2003).

Socioanalytic theory proposes two overarching motivational patterns that comprise behavior in interpersonal contexts: "Behavior designed to *get along* with other members of the group and behavior designed to *get ahead* or achieve status vis-à-vis other members of the group" (Hogan & Holland, 2003, p. 100). This theory is an extension of Digman's (1997) work, which posits two higher-order factors of personality: alpha, which comprises the agreeableness, conscientiousness, and emotional stability facets of the five-factor model (FFM) of personality, and beta, which includes extraversion and openness to experience. These higher-order factors map conceptually onto getting along and getting ahead, respectively. Importantly, both getting along and getting ahead refer to interpersonal style and skill; the distinguishing factor is whether the actor seeks to gain status over others or to cultivate relationships with others.

Organizational research indicates that both getting ahead and getting along behaviors are related to important work and leadership outcomes. Getting ahead traits such as extraversion and openness tend to predict leader emergence (Grijalva et al. 2015), training performance (Hurtz & Donovan, 2000), and components of transformational leadership (Judge & Bono, 2000). Getting along traits, such as conscientiousness, agreeableness, and emotional stability tend to be linked to OCB (Chiaburu et al., 2011), contextual performance (Hurtz & Donovan, 2000), individualized consideration (a facet of transformational leadership; Bono & Judge, 2004), and ethical leadership (Walumbwa & Schaubroeck, 2009). Consequently, in order to identify effective leaders, selection tools should capture candidates' tendencies to both get ahead and get along in work settings. Given the increasingly interdependent nature of modern work (Wood & Hoffman, 2012) and high social demands of the managerial role (Dierdorff, Rubin, & Morgeson, 2009), the ability to getting along is crucial for working in interpersonal contexts, and it is important that leadership selection tools (such as the AC) capture that ability.

ACs incorporate multiple high- to moderate-fidelity simulations of key job tasks, which are used to elicit behaviors relevant to multiple dimensions. Exercises differ with respect to their interpersonal demands, or the extent to which a given exercise might activate relational skills (Hoffman et al., 2015: Lievens, Chasteen, Day & Christiansen, 2006). Performance on these exercises is typically rated with respect to various dimensions which may be conceptually linked to getting along (e.g., consideration of others) or getting ahead (e.g., drive, decisiveness; Lievens et al., 2006). Previous research has used trait activation theory (Tett & Burnett, 2003) to describe which AC contexts will activate getting ahead and getting along traits, hypothesizing that more cooperative exercises and dimensions should activate getting along traits while more competitive

exercises and dimensions should activate getting ahead (Lievens et al., 2006; Hoffman et al., 2015; Meriac et al., 2014), but these hypotheses are not always upheld.

The accumulated literature, including recent meta-analyses (Hoffman et al., 2015; Meriac et al., 2014; Meriac, Hoffman, Woehr & Fleisher, 2008) seeking to establish the relationship between AC dimensions and exercises with personality variables, points to a potential deficiency. These reviews demonstrate that AC exercises and dimensions are consistently associated with traits indicative of getting ahead, especially extraversion and openness (Hoffman et al., 2015; Meriac et al., 2014). On the other hand, getting along traits (i.e., agreeableness, conscientiousness, and emotional stability) were largely unrelated to AC exercises and dimensions, even those intended to activate relationally-oriented behaviors (Hoffman et al., 2015; Meriac et al., 2014). Based on these results, the authors speculated that those who perform well in ACs tend to have an interpersonal style oriented toward getting ahead but not getting along. In other words, the pattern suggests that ACs do predict interpersonal skills, but only those associated with getting ahead rather than getting along.

A shortcoming of the aforementioned studies is that they use the five-factor model (FFM) as a proxy for the getting along / getting ahead framework rather than a measure more closely aligned with socioanalytic theory. Unlike the FFM, the seven-factor Hogan Personality Instrument (HPI) was designed based on socioanalytic theory, and the traits measured by the HPI were explicitly designed to map onto getting along and getting ahead (Hogan & Holland, 2003). Prudence, Interpersonal Sensitivity, and Adjustment together make up the getting along component of the HPI (Hogan & Holland, 2003). Getting ahead, on the other hand, is comprised of Ambition, Sociability, Inquisitiveness, and Learning Orientation (Hogan & Holland, 2003). Specific definitions for each of these traits can be found in Table 1.

In order to extend the existing research and more directly test the nomological relationships between AC performance and getting along and getting ahead traits, we test the correlations between AC ratings and HPI dimensions. Despite the fact that the interpersonal nature of ACs is thought to make them apt to measure both getting along and getting ahead traits, in light of the meta-analytic findings to the contrary, we hypothesize:

> *Hypothesis 2: AC ratings will relate more strongly with getting ahead traits (Ambition, Sociability, Inquisitiveness, and Learning Orientation) than with getting along traits (Prudence, Interpersonal Sensitivity, and Adjustment).*

Assessment Centers and Dark Side Personality

Another strategy to evaluate the capacity of ACs to predict relational effectiveness is to test whether ACs effectively screen out individuals with dark traits, who are unlikely to display relational and cooperative behaviors at work. Dark traits have received increasing attention in the literature as relevant predictors for work behaviors, with particularly salient implications for leadership and relational performance (Spain, Harms, & LeBreton, 2014; O'Boyle et al., 2012; Wu & LeBreton, 2011). For instance, narcissism and psychopathy have been found to predict destructive relational outcomes including counterproductive work behavior (CWB; O'Boyle et al., 2012), reduced leadership effectiveness (Judge et al., 2006), and adverse subordinate outcomes (Mathieu, Neumann, Hare & Babiak, 2013). At the same time, however, those same traits were found to predict hierarchical and financial attainment in organizations (Wille et al., 2013), which begs the question as to how employees with destructive interpersonal tendencies are advancing to leadership roles. Particularly in light of evidence that individuals high in dark traits tend to perform well on some selection tools (such as leaderless group discussion and interviews; Brunell et al., 2008; Schnure, 2010), it is important to know whether a premier leader

selection tool fails to capture these dark traits, which in turn have a negative impact on relational behavior.

This reveals a critical gap in the research: the essential lack of investigation into the role of dark side personality in AC performance despite extensive work in the area of dark traits and leadership. The only known study to examine the relationship between dark traits and AC performance found a positive relationship between narcissism and performance in leaderless group discussions, one popular AC exercise (Brunell et al., 2008); as this study only examined one trait in one type of AC exercise, however, the broader relationship between AC performance ratings in dark traits is largely unknown. The present study addresses that gap by analyzing how AC ratings relate to a wider array of dark traits. This is an extension of the previous meta-analytic findings that ACs tend to associate with extraversion and openness but not conscientiousness, agreeableness, and emotional stability; interestingly, the etiology of many of the dark traits is consistent with this pattern. For instance, narcissism and psychopathy tend to be characterized by higher levels of extraversion and lower levels of agreeableness and conscientiousness (Paulhus & Williams, 2002; Miller, Dir, Gentile, Wilson, Pryor & Campbell, 2010). Some scholars have suggested that these features might lead individuals higher in dark traits to emerge as leaders (Brunell et al., 2008; Judge et al., 2009). Indeed, Grijalva et al. (2015) found that extraversion mediated the relationship between narcissism and leader emergence. As AC ratings tend to associate with getting ahead but not getting along, our goal is to assess whether they may fail to relate to the dark traits that conform to the same pattern.

One of the most popular and longstanding models of dark personality is the Hogan Development Survey (HDS; Hogan et al., 2009). The instrument is based on an established tradition of research on the derailment of managers (Bray & Howard, 1983; Gentry &

Chappelow, 2009; McCall & Lombardo, 1983; McCauley & Lombardo, 1990; Rasch, Shen, Davies, & Bono, 2008; Thornton & Byham, 1982), which indicates that relational dysfunction is a consistent and prevailing factor in the failure of managers (Hogan et al., 2009). The HDS framework is derived from Horney's (1950) model of flawed personalities, which distinguishes between three factors: (a) moving against others, which includes facets Bold, Colorful, Mischievous, and Imaginative; (b) moving away from others, which consists of Excitable, Skeptical, Cautious, Reserved, and Leisurely; and (c) moving toward others, which comprises Dutiful and Diligent. The definitions of these traits can be found in Table 1. These trait groups also can be nested according to socioanalytic theory in order to predict how they relate to performance in ACs: the traits belonging to the moving toward others factor, described as "ingratiation" (p. 13, Hogan et al., 2009), sit at the high extreme of getting along. The remaining traits, those associated with moving against and moving away from others, are characterized by "manipulation" and "intimidation" (p. 13, Hogan et al., 2009), respectively, and describe individuals who are more highly motivated to get ahead of others at the expense of getting along. Accordingly, these nine traits (i.e., those corresponding to moving against and moving away from others in the list above) are our primary focus because they embody getting ahead rather than getting along, and they are at odds with relevant relational behaviors.

The link between the HDS traits and the motivation to get ahead as well as the reduced tendency to get along is evident in their relationships with different criteria. For instance, Bold (the corollary of narcissism) relates negatively with idealized consideration, a relationally oriented component of transformational leadership but relates positively to idealized influence, a more achievement-striving type of behavior (Khoo & Burch, 2008). Another study found psychopathy (analogous to Colorful and Mischievous HDS scales) to be related positively to

strategic thinking and communication skills, but negatively to management and team skills (Babiak, Neumann & Hare, 2010). Similarly, while employees high in psychopathy and narcissism were more likely to engage in CWB (O'Boyle et al., 2012), they also tended to achieve higher hierarchical and financial attainment (Wille et al., 2013). Overall, the pattern of empirical results suggests that these dark traits' relationships with leadership outcomes depends on the criterion; that is, these traits characterized by higher motivation to get ahead and lower motivation to get along are often unrelated or even positively related to task or achievement-based criteria but have a negative impact on relational outcomes.

In the context of the present study, we use these established measures to determine whether ACs effectively screen out leaders with dark personality traits. As discussed above, AC ratings tend to relate positively to getting ahead personality traits but are largely unrelated to getting along traits (Hoffman et al., 2015; Meriac et al., 2014). As nine of the 11 traits in the HDS taxonomy are characterized as more motivated to get ahead and unmotivated to get along, it is possible that ACs will fail to identify or worse, will reward individuals high in these traits. This is consistent with the single previous study in this area, which found that narcissists excelled in leaderless group discussion exercises (Brunell et al., 2008). These findings are suggestive of a potential blind spot in ACs: those with darker personality traits and a corresponding deficit in maintaining effective relationships are evaluated equally or even more effective than others. However, the study by Brunell et al. (2008) only examined one dark trait, narcissism, in one type of AC exercise, the leaderless group discussion.

Thus, this study extends Brunell et al. (2008) by examining the relationship between multiple dark traits and multiple AC exercises and dimension ratings. We use the HDS to assess a wider array of dark traits in ACs and examine their association with a more traditional AC

characterized by multiple different dimensions and multiple different exercises. Although ACs

intend to activate and measure constructs relevant to interpersonal effectiveness (Lievens et al.,

2006), there is also evidence that those with dark traits tend to emerge as leaders. Given the

pattern of relationships in the nomological network of ACs and the link between dark traits and

leadership emergence, we hypothesize the following:

>*Hypothesis 3: AC ratings will fail to relate to dark side traits (Bold, Mischievous,*
>
>*Excitable, Colorful, Imaginative, Skeptical, Reserved, Leisurely, and Cautious).*

Another proposed factor contributing to inconsistent relationships between dark traits and

performance criteria is a nonlinear relationship (Judge et al., 2009). The creators of the HDS

suggest that conceptually, these traits should demonstrate curvilinear relationships with

leadership outcomes, with "optimum performance associated with more moderate scores" (p.

176, Hogan & Kaiser, 2005), but this proposition has rarely been tested empirically. Recently,

one study found an inverted U-shaped curvilinear relationship between narcissism (similar to

Bold) and leadership (Grijalva et al., 2015), and another found a similar relationship between

Machiavellianism (analogous to Skeptical) and OCB (Zettler & Solga, 2011). It is possible that

other dark traits may also exhibit nonlinear relationships with relational outcomes, which may

obscure linear relationships. Based on the conceptual definition and previous research, we offer

the following hypothesis:

>*Hypothesis 4: Dark side traits will demonstrate a curvilinear relationship with (a) AC*
>
>*ratings and (b) performance ratings.*

Moderation of the Criterion-Related Validity of ACs

The first and second issues raised in this study address whether ACs relate to the

personality traits and on-the-job behaviors reflective of effective relationship building. In the

third and final analysis, we draw from a recent study that found that the predictive validity of SJTs was moderated by a personality trait, angry hostility (Slaughter et al., 2014). That study revealed that scores on an interpersonally oriented SJT under maximum performance conditions (i.e., under instruction to select the best response) failed to predict ratings of work performance for individuals high in angry hostility. We extrapolate this phenomenon to the context of the AC. First, angry hostility is a component of several dark traits: for instance, individuals high in Skeptical are described as retaliatory, violent, and accusatory; Excitable is often associated with volatile and unpredictable and prone to emotional eruptions; Bold is characterized by "narcissistic rage" (p. 14, Hogan et al., 2009).

Further, several dark traits are associated with behaviors that may seem positive in the short term. For instance, individuals high in Bold (or narcissism) are perceived as "energetic, charismatic, leader-like, and willing to take initiative" (Hogan et al., 2009; p. 15); previous research indicates that they are more likely to self-nominate for challenging tasks (Rosenthal & Pittinsky, 2006), demonstrate confidence in decision-making (Hogan, Raskin & Fazzini, 1990), and are rated as more favorably and more leader-like when evaluated over shorter rather than longer periods (Grijalva et al., 2012; Paulhus, 1998). Mischievous and colorful individuals (definitionally similar to psychopaths) are described as charming, clever, and self-confident; they appear charismatic and decisive in the short-term (Boddy, 2005) and demonstrate a willingness to take risks, make hyper-rational decisions, and achieve despite high costs (Yang & Raine, 2008; Babiak et al., 2010). Skeptical and excitable (analogous to Machiavellian) individuals tend to aspire to management positions and demonstrate higher motivation to lead (Mael, Waldman & Mulqueen, 2001), and are rated higher in charisma (Deluga, 2001) and political skill and

influence (Dingler-Duhon & Brown, 1987). Leisurely employees are described as seeming interpersonally skilled but privately uncooperative (Hogan et al., 2009).

In the long term, however, research shows that individuals higher in these traits are poor in maintaining relationships. Boldness (or narcissism) has been linked to aggression (Bushman & Baumeister, 1998; Twenge & Campbell, 2003), antisocial behavior (Williams, McAndrew, Learn, Harms, & Paulhus, 2001), and lack of integrity and ethics (Blair et al., 2008; Soyer, Rovenpor, & Kopelman, 1999). Similarly, Mischievous and Colorful (or psychopathic) individuals are more likely to engage in CWB (O'Boyle et al., 2012) and even gain satisfaction from harming others (Wu & LeBreton, 2011). Skeptical and Excitable individuals tend to exhibit hostile, unethical, and antisocial behavior (Christie & Geis, 1970; Fehr, Samson, & Paulhus, 1992; Kish-Gephart, Harrison, & Treviño, 2010) and engage in theft (Harrell & Hartnagel, 1976) and workplace deviance (Dahling, Whitaker, & Levy, 2009; O'Boyle et al., 2012; Williams et al., 2001).

Accordingly, we expect that individuals high in these traits are capable of engaging in impression management by displaying effective interpersonal skills in the short-term, maximum performance conditions of the AC, but are unlikely to consistently engage in relational behaviors under conditions of typical performance. In other words, ACs will not be as effective a predictor for those higher in dark traits, because these individuals are adept at portraying effective interpersonal skills in the short-term maximum context. But once on the job and in a typical performance setting, they are expected to engage in destructive interpersonal behaviors. Thus, despite higher scores on the AC, these individuals are expected to be less effective when back on the job. Accordingly, we test for a moderation effect by examining whether AC ratings will be

poorer predictors of relational behaviors for individuals higher in dark traits, and whether this may be a contributing factor to the weak criterion-related validity in relational domains.

>*Hypothesis 5: Dark side, getting ahead traits (Bold, Mischievous, Excitable, Colorful, Imaginative, Skeptical, Reserved, Leisurely, and Cautious) will moderate the relationship between AC ratings and relational performance, such that the relationship will be weaker when dark traits are high.*

CHAPTER 2

METHOD

Participants

The participants for the present study were drawn from an archival sample consisting of

employees from a large Fortune 500 corporation in the retail sector. The sample includes 371

managers, of whom 67.6% are male, with a mean age of 42.5 and range from 26 to 63; 73.5% of

participants were White, 8.9% Black, 8.2% Hispanic, 6.7% Asian, and less than 3% American

Indian, Pacific Islander, or multiracial. All participants had some experience in a management

role, with years of experience ranging from one year to 45 years, with a mean of 15.4 years.

Procedure

Three measures were administered. First, an in-person AC intended for use selection and

promotion; second, an online assessment of personality, also for use in hiring decisions,

administered at the same time as the AC; and third, a performance rating assessment used for

feedback and development. Each of these measures was administered through an external

consulting firm.

The AC was administered between May 2009 and April 2011, and included five

exercises: (a) an in-basket task, (b) a case analysis and presentation, (c) a role-play with a

customer, (d) a role-play with a direct report, and (e) a role-play with a peer. Performance in the

AC was rated by trained assessors, who were employed by the consulting firm. All assessors

took part in a three-day training session, which involved a comprehensive review of the exercises

and dimensions and instructions and practice activities for observing, recording, evaluating, and

integrating behavior with the scoring frame of reference. Immediately prior to their participation in the AC, candidates completed the personality assessment in an online survey.

Participants later participated in the performance rating assessment where they were rated by their supervisors with respect to a number of dimensions. Those ratings were collected between June 2010 and January 2015.

Measures

Personality. Participants completed the HPI (Hogan, 1992) and the HDS (Hogan, 1997) online. The HPI is a 206-item true-false inventory that is comprised of subscales Adjustment, Ambition, Sociability, Interpersonal Sensitivity, Prudence, Inquisitiveness, and Learning Approach. The coefficients alpha and test-retest reliabilities of these subscales range from .71 to .89 and .74 to.83, respectively (Hogan & Holland, 2003). The HDS includes 154 true-false items, and is comprised of Bold, Cautious, Colorful, Diligent, Dutiful, Excitable, Imaginative, Leisurely, Mischievous, Reserved, and Skeptical, with previously reported coefficients alpha and test-retest reliabilities ranging from .50 to .78 and .64 to .75, respectively (Hogan, 1997).

AC Ratings. Performance in the AC was rated on behaviors corresponding to four competencies: coaching, influence, leading teams, and judgment (Table 2).

Job Performance. Supervisors rated participants on 59 items reflecting 11 dimensions, which included the four competencies captured in the AC as well as adaptability, execution, customer service, planning and organizing, talent management, judgment, and building relationships (Table 3).

CHAPTER 3

ANALYTICAL APPROACH

Missing data

Criterion data was not available for all participants. The personality and AC ratings (i.e., the predictors) were administered to 371 applicants and used for decision-making in a selection and promotion process. Criterion data could only be collected for those who were selected and chose to participate in the developmental feedback process. Criterion data was available for 233 participants (62.8% of the sample). We retained those with only predictor data in order to preserve our statistical power to detect significant effects and to curtail the restriction of range, and used full information maximum likelihood to account for this missingness, as recommended by Newman (2009).

Measurement model

First we sought to determine factor structure of the HPI and HDS. This step is guided by the theoretical frameworks (i.e., Hogan & Holland, 2003; Hogan et al., 2009) that underlie these measures. Because only the facet scores for the personality measures were available to the researchers (i.e., rather than raw response data), factor analyses of the items themselves could not be conducted. Instead, we examined the meta-trait groups outlined for the HPI (getting along and getting ahead; Hogan & Holland, 2003) and the HDS (moving against, moving away, moving toward; Hogan et al., 2009) by treating the facet scores as items in the factor analysis and examining the internal consistency among the facet scores. These meta-traits represent a more parsimonious model with which to explore the pattern of relationships between personality with

other criteria. This approach also allows us to examine the relationships across a broader variety

of traits without inflating the family-wise error rate.

Next, we determined the factor structure of the AC ratings and performance ratings using

exploratory and confirmatory factor analysis on randomly split halves of the sample.

Hypothesis testing

Substantive hypotheses were tested using structural equation modeling. Correlations were

also examined but not used in formal hypothesis testing.

CHAPTER 4

RESULTS

Means and standard deviations of study variables and intercorrelations are presented in

Table 4.

Measurement model

HPI. Before testing the hypotheses, we explored the structure of personality constructs

using confirmatory factor analysis (CFA). First, we sought to determine the structure of the HPI

relative to the structure proposed by Hogan & Holland (2003). Relying on Hogan and Holland's

(2003) articulation of the trait groupings, we used CFA to apply a two-factor model to the HPI

wherein Adjustment, Interpersonal Sensitivity and Prudence were loaded onto one (getting

along) factor, and Ambition, Inquisitiveness, Learning Orientation and Sociability were loaded

onto a second (getting ahead) factor. This two-factor model fit was not satisfactory according to

traditional standards, but showed significantly better than a single-factor model ($\Delta\chi^2(1) = 202.89$,

$p < .01$; Table 5). Given that was a factor analysis of the trait scores rather than items, it is not

surprising that the fit was lower than traditional standards. That said, the internal consistency of

the two trait groups (coefficients alpha of .51 and .61 for getting ahead and getting along,

respectively) was deemed sufficient to retain the two factors identified by socioanalytic theory.

HDS. For the HDS, we used CFA to test the theoretical model put forth by Horney

(1951) and applied by Hogan and Hogan (2009), which consisted of three factors: moving

against (consisting of Bold, Colorful, Imaginative, and Mischievous), moving away (made up of

Leisurely, Reserved, Cautious, and Excitable) and moving toward (comprised of Diligent and

Dutiful). This model showed poor fit with respect to traditional standards, which was, again, not surprising given that item-level fit could not be analyzed (Table 5). The internal consistency of the moving against and moving away factors (coefficients alpha of .69 and .59, respectively) was sufficient to aggregate those trait groups. The moving toward factor consists of only two traits, and these two correlated at lower than expected ($r = .12$). Accordingly, we retain this meta trait in the manner suggested by Hogan et al. (2009) because of the conceptual similarities of these two facets, but interpret the empirical results with caution.

AC ratings. To determine the structure of the AC ratings, the sample was randomly split and exploratory factor analysis (EFA) was conducted (Table 2). The EFA yielded a four-factor solution which was consistent with the four rating dimensions. This solution is in contrast to the findings by Meriac et al. (2014), where a meta-analytic CFA produced a three-factor solution, consisting of relational, administrative, and drive. When the EFA was constrained to extract three factors, however, the solution was not interpretable and showed poor fit (Table 2). Thus, we retained the four-factor model consisting of coaching, influence, leading teams, and judgment. We then tested this model using a confirmatory approach on the other half of the sample, and found acceptable fit (Table 5). The factors articulated in this model represent coaching (e.g., "Provides timely feedback"), influence (e.g., "Makes a compelling case"), leading teams (e.g., "Promotes team processes), and judgment (e.g., "Integrates information").

Performance ratings. Similarly, to analyze the structure of performance ratings we split the sample randomly in half before conducting an EFA and CFA. We compared EFA models where one, two, three, four, and five factors were extracted (Table 3). The three-factor solution produced the most interpretable and parsimonious solution based on grouping of like items, lower crossloadings, and redundancy between the latent factors. Items with low factor loadings

and high crossloadings were dropped. We compared these models using CFA on the holdout sample (Table 5). The difference between the three- and four-factor model solutions was significant ($\Delta\chi^2(3) = 287.97$, $p <. 05$), but the other fit indices were nearly identical. The fit for the two-factor model, on the other hand declined sharply ($\Delta\chi^2(1) = 1205.92$, $p <. 05$). Based on these EFA and CFA results, we concluded that the three-factor solution maximized interpretability, parsimony and fit. These three factors consisted of relational (e.g., "Fosters developmental relationships"), leadership (e.g., "Gains commitment"), and task performance (e.g., "Analyzes information"). This structure is consistent with the general performance literature, which consistently supports three-factor models of performance (e.g., interpersonal dealings and communication, leadership and supervision, and technical activities; Borman & Brush, 1993; Conway, 1999; Hoffman & Woehr, 2009).

Hypothesis Testing

AC ratings and performance. First we investigated the relationship between AC ratings and performance. Hypothesis 1 stated that AC ratings would relate more strongly to task performance than relational performance. The model specified relationships between the four AC dimensions and three performance dimensions. Results showed that the only significant relationship in the model was the effect of AC ratings of judgment on task performance ($b = .30$, $SE = .10$, $p < .01$). In support of Hypothesis 1, this relationship was significantly stronger than the relationships among any of the other dimensions, and none of the AC dimensions predicted relational performance (Table 6).

Personality and ACs. Hypothesis 2 proposed that AC ratings would relate more strongly to getting ahead than getting along traits of the HPI. To test this, we regressed the four AC dimensions onto the two HPI factors and found that getting ahead significantly predicted AC

ratings of influence (b = .18; SE = .07, p < .05) and judgment (b = .37, SE = .07, p < .05). The corresponding relationships between HPI getting along traits and influence and judgment, respectively (b = -.06; SE = .07, p = .34; b = -.06, SE = .07, p = .39), were significantly lower and not significantly different from zero (Table 7). Neither group of HPI traits significantly predicted AC ratings of coaching or leading teams. These differences provide support for Hypothesis 2, suggesting that AC ratings reflect candidates' tendencies to get ahead to a greater extent than their propensities to get along.

The bivariate correlations follow a similar pattern, wherein getting ahead traits (Ambition, Inquisitiveness, and Learning Orientation [but not Sociability]) tend to relate significantly to AC ratings. For getting along traits, only Inquisitiveness related positively to any of the AC dimensions (leading teams), while all other bivariate relationships were either negative (Interpersonal Sensitivity and Prudence with coaching) or nonsignificant.

Hypothesis 3 proposed that moving against HDS traits would relate positively to AC ratings and was tested with a SEM regressing the four AC domains onto the three groups of HDS traits. Moving against traits related significantly and positively to AC ratings of influence (b = .12, SE = .04, p < .05) and judgment (b = .15; SE = .04, p < .05). Neither the moving away nor moving toward trait factors showed significant relationships, and none of the three trait factors related to AC ratings of coaching or leading teams (Table 8). We interpret these findings as partial support of Hypothesis 3.

The bivariate correlations between individual HDS traits and AC ratings yielded similar results. Three of the four moving against HDS traits (Bold, Imaginative, and Mischievous) correlated positively with at least one AC dimension. Notably, the relationship between Bold and coaching was the only significant negative correlation of the moving against traits. Of the

moving away traits, only two showed significant negative relationships (Excitable with influence and judgment and Skeptical with leading teams). Skeptical and Leisurely related positively to influence and coaching, respectively. From the moving toward trait group, Dutiful related positively to ratings of influence and leading teams; Diligent did not relate to any of the AC dimensions.

Curvilinear effects. Hypothesis 4 investigated the presence of curvilinear relationships between the three HDS groups of traits and ratings in the AC and performance measure. None of the three HDS trait factors showed significant quadratic relationships with any of the four AC dimensions (Table 9).

Next we investigated the nature of the relationship between the HDS trait factors and job performance, and whether that relationship was curvilinear. First, we examined the correlations between HDS traits and performance (Table 3). We observed that, with the exception of Excitable (which failed to predict any of the performance dimensions), the moving away and moving toward trait factors related negatively with at least one of the performance dimensions, most often interpersonal performance. On the other hand, the moving against trait factor displayed positive and significant relationships with all three performance factors.

We were most interested in the presence of curvilinear effects of the HDS, as is proposed in their original definitions (Hogan et al., 2009). The moving against HDS factor demonstrated curvilinear relationships with relational performance ($b = -.001$, $SE = .00$, $p < .01$), leadership performance ($b = -.001$, SE .00, p < .01), and task performance ($b = -.01$, $SE = .00$, $p < .01$; Figure 1; Table 10). The moving away HDS factor also demonstrated significant quadratic relationships with relational ($b = -.002$, $SE = .00$, $p <. 01$), leadership ($b = -.002$, $SE = .00$, $p <$ .01) and task performance ($b = -.003$, $SE = .00$, $p < .01$; Figure 2). The same was true for the

moving toward factor, which showed significant curvilinear effects on relational ($b = -.001$, $SE = .00$, $p < .05$), leadership ($b = -.002$, SE $= .00$, $p < .05$), and task performance ($b = -.003$, SE $= .00$, $p < .05$; Figure 3). The relationship between HDS traits and performance ratings is characterized in the plots as an-inverse U shape, where the most favorable performance ratings are found in individuals with moderate levels of HDS traits, as opposed to extremely high or extremely low levels. Thus, we found support for Hypothesis 4b but not 4a.

Moderation effects. Hypothesis 5 proposed that the moving against HDS traits would moderate the relationship between AC ratings and performance such that the relationship is weaker when moving against dark traits are high. To test this model we computed a product term with the moving against trait score and the overall AC rating (OAR) and entered this into a model including the OAR and trait score. In addition, because the previous hypothesis found a curvilinear effect of HDS traits on performance, it was necessary to ensure that the interaction effect was not statistically confounded with the quadratic effect of the moderator. Consequently, as recommended by Cortina (1993) and Ganzach (1998), the quadratic term and quadratic product term for the HDS were included in the test for moderation (Table 11).

The interaction was significant for relational performance ($B = -.04$, $SE = .01$, $p < .05$) but not leadership or task performance. To investigate in more detail, simple slopes were analyzed. The relationship between OAR and performance was nonsignificant when moving against traits were low and significant and negative when those traits were high ($B = -.28$, $SE = .11$; Figure 3). In other words, for those higher on moving against traits, better performance in the AC was actually associated with reduced relational performance on the job. These findings support the proposition that moving against traits moderate the relationship between AC ratings and relational and leadership performance on the job. That said, the nature of the interaction was

different than hypothesized: we expected that, for individuals high in those traits, the relationship between AC ratings and relational performance would be weaker when in fact it was stronger and negative. We expected that the relationship between AC ratings and relational performance would be positive for candidates low in moving against traits, but that relationship was nonsignificant.

CHAPTER 5

DISCUSSION

The aim of the present study was to investigate whether ACs are associated with relational variables as intended. In doing so, this study expands our understanding of the constructs measured in ACs in a few primary ways. First, this study extends past studies by replicating the finding that ACs are related to more task-oriented aspects of performance but not interpersonal aspects of performance. Second, this research extends past studies that have speculated that ACs capture traits indicative of getting ahead but not getting along by directly examining the association between AC ratings and measures designed to measure these meta-traits. The results suggest that individuals with a dispositional tendency to get ahead tend to perform better in ACs and further, ACs reward candidates with high levels of dark traits. Finally, we sought to shed light on a potential explanation for the failure of ACs to identify managers who have difficulty building effective relationships. The results show that dark traits moderate the validity of ACs such that for those higher in dark traits, ACs were actually negatively related to performance on the job. Together, these findings hold key implications for understanding the type of leaders that are promoted when ACs are used, whether ACs effectively screen out leaders higher in dark traits, and suggest multiple areas of future inquiry critical to improving the value of the AC method.

Main Findings

ACs and performance. The first aim of the study was to investigate the relationship between AC ratings and relational performance. The only known existing study to examine this

question found that AC ratings were largely unrelated to relational behaviors, including OCB, individualized consideration, and cooperation behaviors (LoPilato et al., 2016). We interpreted this finding through the lens of typical/maximum performance and expected that a maximum performance assessment like the AC would fail to predict relationship management behaviors, which are more aptly characterized as typical performance outcomes. In support of this hypothesis, we found that AC ratings significantly predicted task performance but not leadership or relational performance. This finding fits with the extensive literature supporting the criterion-related validity of ACs (Arthur et al., 2003, Hoffman et al., 2014; Meriac et al., 2008; 2014) but refutes the assumption that the interpersonal format of the AC makes it a valid predictor of interpersonal effectiveness.

Personality and ACs. The subsequent aim of the study was to investigate potential explanations for the weak and non-significant relationships between ACs and relational performance dimensions. We turned to previous examinations of the nomological network of AC ratings, which use socioanalytic theory to interpret the pattern of findings that ACs relate more consistently to the tendency to get ahead than get along (Hoffman et al., 2015; Meriac et al., 2014). We tested these relationships with a measure more consistent with socioanalytic theory (Hogan & Holland, 2003), and extended the investigation to dark side traits. We describe these results and how they shed light on the troubling null relationship between AC ratings and interpersonal aspects of performance.

We found support for the hypothesis that AC ratings would relate more strongly to getting ahead traits than getting along traits as measured by the HPI. While getting along traits were consistent predictors of performance ratings, AC ratings only related consistently to getting ahead traits. Socioanalytic theory suggests that getting along traits should relate to relationally

oriented AC dimensions like coaching (Hogan & Holland, 2003; Lievens et al., 2006) but this was not the case. Of the getting along traits, only one (Interpersonal Sensitivity) related positively to any AC dimension (leading teams), but the same trait was significantly negatively related to AC ratings of coaching. Getting ahead traits (with the exception of Sociability) showed numerous positive relationships with AC dimensions, including some of the more interpersonally oriented domains like influence and leading teams. These results extend the literature by replicating findings consistent with previously articulated meta-analytic relationships between AC ratings and dimensions of the Big Five (Hoffman et al., 2015; Meriac et al., 2008; 2014) with the HPI instrument, which was constructed based on socioanalytic theory (Hogan & Holland, 2003).

Dark personality and ACs. Another main contribution of the study was the exploration of the relationship between dark traits and AC ratings. The only study to date in this area found a positive relationship between narcissism and performance in one type of AC exercise, the leaderless group discussion (Brunell et al., 2008). The present study aimed to extend the scope of those questions to a broader range of dark traits and AC domains. The HDS traits characterized as moving against are most germane to the functioning of ACs, as this factor is associated with dominance, charisma, and skill in interpersonal manipulation. We expected that, consistent with the results from the Brunell et al. (2008) study, moving against HDS traits would relate positively to AC ratings. This proposition was supported by the findings that the moving against trait factor related to AC ratings of influence and judgment. We propose that the dominant interpersonal style characteristic of these traits gives raters the impression of effective influence. This was not the case for their performance on dimensions more relational in nature (i.e., coaching and leading teams). Moving against traits demonstrated null relationships with those

dimensions rather than negative relationships as would be expected based on the negative interpersonal outcomes associated with those traits (Penney & Spector, 2002; O'Boyle et al., 2012). Unlike the moving against traits, moving away and moving toward were unrelated to AC performance. The overall conclusion is that AC ratings generally fail to identify individuals high in HDS traits as ineffective leaders. Further, candidates high in a certain group of dark traits associated with grandiosity and manipulation tend to be rated as effective in some AC dimensions.

Curvilinear effects. One potential explanation for the null relationships between AC ratings and dark personality is that the relationship is actually curvilinear in nature. As defined by Hogan et al. (2009), these dark traits are presumed to display curvilinear relationships with performance outcomes; individuals with trait levels at the low and high extremes are expected to have impaired performance while those with moderate levels are predicted to be most effective. This inverse-U relationship has been observed with some dark traits including narcissism (with leadership effectiveness; Grijalva et al., 2012) and Machiavellianism (with OCB; Zettler & Solga, 2011). Such relationships are posited as one factor that might obscure relationships between personality and performance when only linear relationships are tested. We found that, contrary to existing theory and results, none of the three trait factors displayed quadratic effects on any of the AC dimensions. Accordingly, we conclude that positive relationships between the moving against trait group and AC ratings on influence and judgment do not obscure a curvilinear effect at the higher extreme. Further, this suggests that the null relationships between HDS traits and AC ratings of coaching and influence are not the result of undetected curvilinear relationship.

We next explored the nature of the relationship between HDS traits and performance ratings. After all, if HDS traits are also unrelated to performance ratings, then we might conclude that those traits are not in fact as destructive as once thought. After determining that a three-factor model of performance, consisting of relational, leadership, and task dimensions was most appropriate (consistent with past literature; Borman & Brush, 1993; Conway, 1999; Hoffman & Woehr, 2009), we analyzed the relationship of each of these with the three HDS factors. The bivariate correlations show that the moving away and moving toward factors relate negatively to all three performance domains, but, surprisingly the moving against factor positively predicted each of the three domains. At first glance, this result seems to belie the presumption that all of these HDS traits have a negative impact on performance.

However, all three trait factors demonstrated significant quadratic effects on all three performance domains. The inverse-U shaped function suggests that highest levels of performance are associated with moderate scores on HDS traits. Interestingly, this was true not only for leadership and relational performance domains but also task performance. HDS traits are framed as sources of interpersonal dysfunction (Hogan et al., 2009), but it appears that, in high levels, these traits correspond to decreases in task performance. It is also possible that when raters observe the performance decrement associated with extreme levels of dark traits, they fail to distinguish between interpersonal and task domains. This pattern of curvilinear relationships is consistent with previous findings that dark traits display quadratic relationships with relational behaviors such as leadership (Grijalva et al., 2014) and OCB (Zettler & Solga, 2011) but in contrast with the strictly linear relationships between HDS traits and AC ratings. We conclude that the relationship between dark traits and job performance is most appropriately characterized

as curvilinear, but AC ratings do not capture the decrement in performance observed at the high and low extremes of the trait spectrum.

Moderating effects. The final goal of this study was to explore the possibility a moderating effect of dark traits might obscure the relationship between AC ratings and relational and leadership performance. We proposed that moving against HDS traits would have a moderating effect, wherein the relationship between ACs and relational performance would be positive for candidates low in dark traits and attenuated for candidates high in dark traits. Our results revealed a significant interaction, but the nature of the effect was different than hypothesized. AC ratings failed to predict relational performance even for candidates low in moving against traits. For candidates high in those traits, however, AC ratings negatively predicted relational and interpersonal performance. In other words, for candidates who are narcissistic, attention-seeking, and manipulative, higher AC ratings corresponded to poorer performance in relational domains on the job.

Theoretical Implications

A main finding of the present study, the null relationship between AC ratings and relational performance indicates a critical deficiency of ACs. As a popular tool for the identification of effective leaders, researchers and practitioners alike would expect that they predict the full domain of leadership performance. In the present study, however, the only substantial criterion-related validity of ACs was in predicting the aspects of managerial performance associated with judgment and decision-making. AC ratings, even those intended to assess relational effectiveness (e.g., coaching) failed to predict the interpersonal aspects of performance, which are among the most critical for managerial effectiveness (DeRue et al., 2011). Further, while the study by LoPilato et al. (2016) used OCB as a criterion for several of

their studies and used student samples, the criterion of the present study was a measure of job performance and used a managerial sample. Selection tools tend to be developed and validated based on job performance and not OCB domains, but the results of these two studies suggest that ACs fail to predict not only OCB, but also critical relational elements of leadership performance. Given that ACs are interpersonal in nature and explicitly seek to assess interpersonal capabilities, these null findings suggest that ACs do not capture relational behaviors as intended (Hoffman et al., 2015).

It is important to note that we cannot conclude that all ACs are unrelated to relational behaviors on the job. There is considerable variety in the structure and characteristics of ACs administered across job levels, organizations, and different purposes (Hoffman et al., 2016) and some of these ACs may well predict relational and leadership performance in their respective settings. Future research is necessary to test this relationship across different contexts, but we do note that of the limited research conducted thus far (LoPilato et al., 2016), there is little to no evidence to support ACs' prediction of relational behaviors. Accordingly, the results of the present study suggest that, at the very least, the interpersonal nature of ACs does not ensure the prediction of relational performance. Further, this pattern begs the question, if relational effectiveness in managers is not being predicted in ACs, what types of leaders are being promoted?

To address this question we turned to the pattern of relationships between personality and AC ratings. Instead, ACs correlate with personality constructs that are related to the tendency to "take initiative, seek responsibility, compete, and try to be recognized" (Hogan & Holland, 2003, p. 101), but not personality constructs indicative of being "good team players, organizational citizens, and service providers" (Hogan & Holland, 2003, p. 101). In other words, when AC

ratings are used, candidates who are higher in getting ahead are more likely to selected and promoted. This is not inherently problematic, as getting ahead traits relate positively to work outcomes including leader emergence (Grijalva et al. 2015), training performance (Hurtz & Donovan, 2000), and components of transformational leadership (Judge & Bono, 2000); we would expect that ACs should relate to these traits. If this pattern is extended, however, wherein getting along is essentially neglected and getting ahead is heavily rewarded, we see that the AC becomes vulnerable to candidates high in dark traits, namely those who are interpersonally dominant but poor at building effective relationships.

Accordingly, the next contribution of this study serves to synthesize the nomological network of ACs with HDS traits to see if the pattern extends to the dark side of personality. Conceptually, the HDS traits included in the moving against and moving away factors would be characterized as low in getting along. Hogan et al (2009) describe them as interpersonal dysfunction manifesting a lack of interest in others or intimidation and manipulation of others. In the same way that ACs fail to consistently capture bright side getting along traits (e.g., agreeableness, conscientiousness; Hoffman et al., 2015; Meriac et al., 2014), they also fail to capture dark side traits that represent the absence of the motivation to get along. Similarly, the moving against HDS traits share elements of interpersonal dominance, which makes them similar to bright side getting ahead traits like extraversion. Just as extraversion consistently and positively predicts AC ratings (Hoffman et al., 2015; Meriac et al., 2014), these moving against traits positively predicted some AC dimensions. In other words, to the extent that dark traits fall at the extremes of bright traits, the relationships between AC ratings and HDS traits follow the same pattern as the HPI trait relationships in addition to previous research on personality-AC relationships.

Overall, our results suggest that ACs do not function as expected for candidates who score highly on dark traits. Individuals high in HDS traits are characterized by interpersonal dysfunction (Hogan et al., 2009), but ACs ratings consistently fail to identify leaders who are high in these dark traits, and even reward certain dark traits despite the negative implications for leadership performance. Further, the moderation results indicate that those who are higher in dark traits and rated as most effective in the AC setting tend to be the lowest performers on the job. Our results stand in contrast with a previous study examining the impact of another dark trait, angry hostility on the validity of SJTs (Slaughter et al., 2014. Those researchers reasoned that, because individuals with high levels of hostility are more variable in their behavior, which in turn weakens the predictive relationship. Despite the fact that many of the HDS traits share elements of anger and impulsivity, the AC ratings of candidates high in these traits were not nonsignificant but rather significant negative predictors of their performance in the relational domain. Instead, our results are more consistent with a recent meta-analysis where narcissism is positively linked to leader emergence but shows a curvilinear relationship with leader effectiveness (Grijalva et al., 2012). These results suggest that the same traits that make high HDS candidates appear effective in an assessment center are simultaneously linked to their interpersonal dysfunction.

Finally, it is notable that, even at low levels of dark traits, ACs still did not significantly predict relational behaviors, indicating a gap in performance prediction. Previous research on the nomological network of AC ratings suggested that they may not capture getting along traits, but whereas the prediction of task performance is well-documented (e.g., Arthur et al., 2003), studies specifically linking AC ratings and relational behaviors were scant. The present study provides further evidence that ACs often fail to predict critical relational behaviors, even when accounting

for personality traits that indicate a propensity for interpersonal dysfunction. Based on this evidence, we conclude that although ACs do not effectively identify and screen out individuals high in dark traits, that phenomenon is not to blame for null relationship between AC ratings and relational performance.

Practical Implications

We identify a few notable implications for the practice of leader selection and development based on the findings of the present study. First, these results provide further evidence that ACs are not functioning the manner expected, as ACs failed to predict leader performance outside of the task domain. Accordingly, when organizations utilize ACs in a selection system, it is crucial not to assume that the interpersonal format of the AC will ensure the prediction of interpersonal elements of leadership and relational performance. Practitioners should conduct local validation studies to establish the link between ACs and the full domain of leadership performance.

Second, ACs also failed to relate as expected to a broad range of personality traits. Individuals who are predisposed to be reliable, stable, and sensitive colleagues are not consistently rated any higher in an AC, and are thus, not more likely to be selected, promoted, or identified as high potential employees if only AC ratings are used. Accordingly, personality measures should be used to supplement the predictor battery in order to ensure the prediction of critical leadership behaviors.

Third, when it comes to dark traits, we conclude that ACs do not operate effectively for individuals who are high in dark traits. Practitioners should consider that ACs will not screen out individuals who might show destructiveness in relational performance on the job. Individuals high in moving against HDS traits may actually be rated as effective in an AC; further, for those

individuals, higher ratings in an AC actually correspond to poorer relational and leadership performance. This result reinforces the importance of supplementing AC ratings with personality measures when used for selection and promotion.

Finally, while we suggest that personality measures are useful for selection, the curvilinear relationships found in this study suggest that personality should not be assumed to relate linearly with performance. Instead, our findings suggest that performance across criterion domains is expected to be lower for individuals at the extreme low and high ends of the spectrum. As a result, organizations that incorporate dark personality measures in selection systems ought not to assume that extremely low scores on dark traits are most desirable, and instead be sure to closely investigate the nature of the relationship between personality and performance.

Limitations

There are a few limitations of the present study that should be considered when interpreting the results. First, we note that the sample is subject to direct range restriction. Scores in the AC and personality instruments were used to select and promote candidates into leadership roles, in which performance ratings were later collected often years later. Individuals with low scores on the predictors were consequently less likely to be selected and those who were not selected or promoted were not evaluated in the performance assessment. Range restriction is also likely present in the criterion, which was derived from supervisor performance ratings used primarily for development. The means of the criterion scores tended to be high and standard deviations were small, particularly for relational and interpersonal performance. We might surmise either that leaders at this level tend to be skilled in these performance domains and / or that supervisors are likely to be lenient in this evaluation context. In spite of the restriction of

range, however, the observed relationships were not so attenuated to preclude finding significant effects, including curvilinear effects that span the range of the variable distributions.

Another shortcoming of the study is that the data were not complete for all participants. In addition to potential attenuation, the study design which introduced direct range restriction also created a pattern where criterion data was not missing at random. We addressed the issue of missingness by utilizing full information maximum likelihood estimation but cannot be certain that the estimates are free from bias. Further, because competencies and items included in the criterion measures were not delivered in a standardized set, sample sizes for each variable may be slightly different. As a result, sample sizes for bivariate correlations, for instance, may vary considerably.

Finally, because the item-level response data for the HPI and HDS were not available to us we could only conduct psychometric analyses at the scale level. For this reason, we could not fully explore and compare the item-level fit of the measurement models of personality. Further, a recent simulation study suggests that, when unfolding patterns are present in the underlying trait, scales constructed with a factor analytic approach and scored as sum scores tend to exhibit higher than expected Type I error rates when testing for curvilinear and interaction effects (Carter, Guan, Dalal, & LoPilato, 2015). Little information on the specific scoring procedures on the Hogan instruments can be found; that said, the HPI manual (Hogan & Hogan, 1992) describes its development with a factor analytic approach, and there is no publicly available information to suggest these inventories are scored using item response theory or unfolding models. Given recent evidence for unfolding patterns in many personality traits (Carter, Dalal, Boyce, O'Connell, Kung & Delgado, 2014), including dark side traits (Kennedy, et al., 2015), it is possible that the probability of a Type I error in some of the hypothesis tests in the present

study may be higher than expected. Unfortunately, we were not able to explore the item-level fit of the personality instruments, or assess the presence of curvilinear and interaction effects using unfolding models.

Future Research

The present study advanced our understanding of the interplay between dark traits and ACs, but this question remains relatively unexplored and future research can further this area of the leadership literature. One potential avenue for research would be to work to construct ACs that better elicit relational behaviors. AC researchers might sample a wider array of relationship-oriented dimensions and reexamine the design of ACs with respect to exercise characteristics. For instance, Hoffman et al. (2015) found that AC exercises rarely presented candidates with stimuli expected to elicit collaborative behavior; working to better stimulate and capture those behaviors and establish the expected nomological network with getting along traits. An AC that better simulates the interdependent nature of work and more accurately captures candidates' capacity for cooperation might more effectively screen out individuals who will manipulate and undermine others in the workplace.

This study also reinforces the notion that the validity of selection instruments may vary based on the personality (or other characteristics) of the applicant. Few empirical studies have investigated this issue (cf. Slaughter et al., 2014; Chan, 2006), but selection researchers should use theory to guide how various selection instruments might function differently across personality traits.

Finally, as discussed in the limitation section above, we were not able to apply item response theory modeling to the personality data. Given the potential for unfolding patterns in these traits, and the elevated Type I error rate when using a sum score approach in the presence

of an unfolding pattern, subsequent studies should replicate these findings in order to further probe the curvilinear and moderation effects between dark traits and various criteria.

Conclusion

The present study extended the literature by providing only the second investigation into the capacity for AC ratings to predict specifically relational behaviors on the job. We replicated that null relationship found by LoPilato et al. (2016), and used personality to investigate why ACs would fail to predict relational behaviors. We found that, for both HPI and HDS traits, AC ratings were positively related to the motivation to dominate and get ahead in social interactions, even when these traits fall on the dark side of personality. Further, ACs failed to capture the curvilinear effects of dark personality, including the decrement in performance at the high extreme of the HDS trait spectrum. Finally, we revealed that HDS traits exert a moderating effect on the criterion-related validity of AC ratings, but they failed to predict relational behaviors on the job, even for individuals low in moving against traits. As a result, we conclude that ACs do not effectively predict many of the intended relational work outcomes of interest, and these findings should be used to inform selection practices and AC design.

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Table 1. Categorization and Definitions of HPI and HDS Dimensions.

Meta-Trait	Dimension	Definition
HPI		
Getting ahead	Ambition	Initiative, competitiveness, and desire for leadership roles
	Sociability	Extraversion, gregarious, and need for social interaction
	Inquisitive	Imagination, curiosity, and creative potential
	Learning Orientation	Achievement orientation, valuing education
Getting along	Adjustment	Confidence, self-esteem, and composure under pressure
	Interpersonal Sensitivity	Tact, perceptiveness, and ability to maintain relationships
	Prudence	Self-discipline, responsibility, and thoroughness
HDS		
Moving away from others	Excitable	Moody, intense, easily annoyed by people and projects; fails to follow through
	Cautious	Reluctant to take risks as a result of being criticized
	Skeptical	Cynical, mistrusts others' intentions, argumentative and combative
	Reserved	Aloof and uncommunicative, insensitive to others' feelings
	Leisurely	Overtly cooperative, privately procrastinating, stubborn, resentful of requests for increased performance
Moving against others	Bold	Excessively self-confident; exhibits grandiosity and entitlement; unable to learn from mistakes
	Mischievous	Excessively takes risks and tests limits; bright, manipulative, deceitful, cunning, and exploitative
	Colorful	Expressive, animated, and dramatic; wants to be noticed and the center of attention
	Imaginative	Acts and thinks in creative but sometimes odd or eccentric ways
Moving toward others	Diligent	Meticulous, precise, perfectionistic, inflexible, intolerant of ambiguity
	Dutiful	Conforms and is eager to please superiors

Table 2. EFA Results for AC Items.

	4 Factor Model				3 Factor Model		
	1	2	3	4	1	2	3
Coaching							
Guides development		0.70		0.19		0.72	
Conveys performance expectations		0.36				0.38	
Clarifies performance		0.40				0.37	
Evaluates skill gaps		0.52		0.12		0.53	
Provides timely feedback	0.11	0.37			0.10	0.35	0.10
Fosters developmental relationships	0.14	0.49			0.15	0.48	
Influence							
Gains commitment	0.52				0.53		
Formulates influence strategy	0.93			0.13	0.92		
Makes a compelling case	0.52			0.11	0.54		
Seeks to understand	0.24				0.24		
Demonstrates interpersonal diplomacy	0.46	0.11		0.16	0.49	0.13	
Leading Teams							
Creates shared purpose	0.16			0.70	0.27	0.16	
Promotes team processes		0.11		0.48	0.17	0.24	
Celebrates success		0.12		0.46		0.24	
Stays close	0.15	0.12		0.27	0.19	0.19	
Judgment							
Analyzes information			0.99				1.00
Integrates information			0.58				0.58
χ^2			**120.48**				**205.35**
df			74				88

Note: Bolded values are statistically significant at $p < .05$

Factor loadings less than .1 are not reported.

Table 3. EFA Results for Supervisor Ratings

	5 Factor Model					4 Factor Model			
	1	2	3	4	5	1	2	3	4
Guides development	0.17	0.77	0.37		0.14	0.26	0.81	-0.11	0.15
Conveys performance expectations and implications	0.35	0.81	0.11	0.16		0.32	0.80	0.21	
Evaluates skill gaps	0.36	0.60	0.21	0.29		0.42	0.62	0.20	
Clarifies performance	0.40	0.42	0.42	0.23	0.21	0.55	0.48	0.10	0.23
Provides timely feedback	0.29	0.75	0.15	0.20		0.31	0.76	0.16	
Fosters developmental relationships		0.77	0.32		0.12	0.18	0.81	-0.23	0.13
Gains commitment	0.65	0.15	0.33			0.72	0.18		
Formulates influence strategy	0.54	0.33	0.30		0.16	0.59	0.36		0.16
Makes a compelling case	0.57	0.14	0.10		0.19	0.50	0.14	0.13	0.18
Seeks to understand	0.16	0.12	0.24			0.27	0.17		0.10
Demonstrates interpersonal diplomacy	0.20	0.14	0.43			0.37	0.22	-0.16	
Creates shared purpose	0.36	0.24	0.77		0.20	0.65	0.38	-0.14	0.23
Promotes team processes	0.30	0.29	0.65	0.22		0.55	0.41		
Celebrates success	0.21	0.32	0.62		0.29	0.44	0.44		0.31
Stays close	0.34	0.34	0.66		0.10	0.56	0.45		0.13
Integrates information	0.31	-0.12	-0.30	0.56		0.11	-0.15	0.91	
Analyzes information	0.29		-0.38	0.48				0.89	
Adapts to environment	0.48	0.12		0.12		0.41		0.22	
Shifts approach	0.44	0.26	0.25		0.10	0.49	0.28		0.11
Updates knowledge and skills	0.65				0.22	0.57		0.11	0.20
Seeks exposure to new ideas	0.67	0.13		0.14	0.19	0.56	0.11	0.28	0.16
Sponsors continuous learning	0.42	0.16	0.16		0.30	0.45	0.16		0.30
Translates initiatives into actions	0.48	0.17	0.36	0.17	0.15	0.60	0.21		0.16
Implements communication strategy	0.46	0.30	0.43	0.16		0.61	0.36		
Creates accountability	0.56	0.35	0.30	0.12		0.61	0.37	0.13	
Ensures skills and readiness	0.38	0.42	0.50	0.12	0.24	0.57	0.49		0.25
Aligns systems and process	0.66	0.21	0.18	0.28	0.15	0.67	0.23	0.27	0.15
Creates measurement discipline	0.56	0.13	0.29	0.15		0.61	0.17	0.17	
Identifies customer service issues	0.20	0.16	0.32	0.79		0.43	0.24	0.41	
Creates customer focused practices	0.21	0.19	0.18	0.88		0.38	0.24	0.51	
Assures customer satisfaction	0.22	0.14	0.20	0.79		0.39	0.20	0.41	
Stretches boundaries	0.41	0.57		0.16	0.12	0.33	0.55	0.25	0.10
Catalyzes change	0.64	0.21	0.26	0.18	0.14	0.71	0.22	0.12	0.15
Removes barriers and resistance	0.58	0.23	0.45			0.71	0.29		
Determines talent gaps	0.43	0.51	0.20		0.22	0.46	0.52		0.22
Recruits strategically	0.15	0.52		0.30	0.15	0.14	0.53	0.27	0.13
Champions talent development		0.39	0.26		0.46	0.20	0.42	-0.18	0.47
Promotes differential rewards		0.65	0.18		0.30		0.69	0.13	0.30
Emphasizes retention	0.17	0.75	0.27	0.11	0.19	0.25	0.79		0.19
Promotes ethical behavior	0.35	0.13	0.20	0.20	0.11	0.40	0.16	0.18	0.11
Communicates policies to associates	0.16	0.55	0.31	-0.12	0.18	0.23	0.59	-0.12	0.18
Demonstrates decisiveness action	0.67	0.11	0.30	0.15	0.16	0.73	0.13	0.14	0.17
Gathers information	0.60			0.26		0.53		0.43	
Selects the best of alternatives	0.65	0.23	0.30	0.28		0.73	0.26	0.22	

Note: Bolded values are statistically significant at *p* < .05. Factor loadings less than .1 are not reported.
Italicized items were eliminated from final measure.

Table 3, cont'd.

Organizes information	0.61	0.10		0.12	-0.16	0.53		0.23	-0.17
Involves others	0.56		0.28	0.33	0.18	0.64	0.13	0.27	0.19
Pursues initiatives					0.91				0.91
Develops external relationships	0.29	0.31	0.10	0.11	0.70	0.28	0.32	0.10	0.68
Favorably represent Company	0.13	0.31	0.11	0.15	0.68	0.16	0.33	0.11	0.68
Identifies partnership opportunities	0.49	0.19	0.13	0.10	0.11	0.49	0.20	0.12	0.10
Reaches out	0.57		0.27	0.16		0.65	0.11		
Supports partners	0.64	0.31	0.17	0.19	-0.13	0.64	0.31	0.20	-0.13
χ^2				**1446.38**				**1592.89**	
df				1076				1124	

Note: Bolded values are statistically significant at $p < .05$. Factor loadings less than .1 are not reported.

Italicized items were eliminated from final measure.

Table 3, cont'd.

	3 Factor Model			2 Factor Model		1 Factor Model
	1	2	3	1	2	1
Guides development	0.24	0.82	-0.11	0.10	0.87	0.68
Conveys performance expectations and implications	0.29	0.75	0.20	0.31	0.72	0.72
Evaluates skill gaps	0.40	0.62	0.20	0.42	0.62	0.73
Clarifies performance	0.54	0.54	0.11	0.49	0.60	0.78
Provides timely feedback	0.28	0.73	0.16	0.29	0.71	0.69
Fosters developmental relationships	0.16	0.81	-0.23		0.84	0.58
Gains commitment	0.71	0.18		0.59	0.31	0.64
Formulates influence strategy	0.59	0.40		0.46	0.50	0.68
Makes a compelling case	0.51	0.17	0.12	0.48	0.24	0.51
Seeks to understand	0.26	0.21		0.20	0.25	0.33
Demonstrates interpersonal diplomacy	0.36	0.21	-0.15	0.23	0.30	0.38
Creates shared purpose	0.63	0.45	-0.12	0.46	0.59	0.75
Promotes team processes	0.52	0.45		0.46	0.52	0.70
Celebrates success	0.43	0.52		0.31	0.61	0.66
Stays close	0.54	0.50		0.39	0.61	0.72
Integrates information	0.11	-0.13	0.91	0.47	-0.25	0.15
Analyzes information			0.89	0.38	-0.19	0.12
Adapts to environment	0.41	0.12	0.22	0.44	0.15	0.42
Shifts approach	0.48	0.32		0.43	0.39	0.58
Updates knowledge and skills	0.58	0.13	0.12	0.56	0.20	0.54
Seeks exposure to new ideas	0.57	0.15	0.28	0.61	0.20	0.57
Sponsors continuous learning	0.46	0.24		0.37	0.33	0.50
Translates initiatives into actions	0.60	0.26		0.54	0.35	0.63
Implements communication strategy	0.60	0.39		0.52	0.48	0.71
Creates accountability	0.60	0.39	0.14	0.57	0.46	0.73
Ensures skills and readiness	0.56	0.57		0.44	0.65	0.78
Aligns systems and process	0.66	0.27	0.27	0.71	0.31	0.72
Creates measurement discipline	0.60	0.20	0.17	0.59	0.27	0.61
Identifies customer service issues	0.42	0.27	0.41	0.55	0.24	0.56
Creates customer focused practices	0.37	0.26	0.51	0.56	0.20	0.53
Assures customer satisfaction	0.39	0.22	0.42	0.53	0.17	0.50
Stretches boundaries	0.32	0.55	0.24	0.36	0.52	0.62
Catalyzes change	0.71	0.26	0.12	0.68	0.35	0.72
Removes barriers and resistance	0.70	0.30		0.58	0.42	0.70
Determines talent gaps	0.45	0.57		0.42	0.60	0.72
Recruits strategically	0.12	0.55	0.28	0.21	0.48	0.48
Champions talent development	0.20	0.53	-0.16		0.59	0.46
Promotes differential rewards		0.75	0.14		0.72	0.50
Emphasizes retention	0.22	0.82		0.18	0.81	0.69
Promotes ethical behavior	0.40	0.20	0.18	0.44	0.21	0.46
Communicates policies to associates	0.21	0.63	-0.12		0.66	0.54
Demonstrates decisiveness action	0.74	0.18	0.14	0.70	0.28	0.69
Gathers information	0.52		0.43	0.65		0.50
Selects the best of alternatives	0.72	0.28	0.22	0.73	0.34	0.75

Note: Bolded values are statistically significant at *p* < .05. Factor loadings less than .1 are not reported.

Italicized items were eliminated from final measure.

Table 3, cont'd.

Organizes information	0.51		0.22	0.57		0.44
Involves others	0.65	0.18	0.27	0.69	0.22	0.64
Pursues initiatives		0.27			0.29	0.26
Develops external relationships	0.31	0.47	0.11	0.29	0.49	0.56
Favorably represent Company	0.19	0.47	0.12	0.19	0.47	0.46
Identifies partnership opportunities	0.49	0.22	0.11	0.48	0.26	0.53
Reaches out	0.65	0.11		0.61	0.20	0.57
Supports partners	0.62	0.27	0.19	0.63	0.32	0.67
χ^2	**1717.55**			**1880.24**		**2123.63**
df	1173			1223		1274

Note: Bolded values are statistically significant at $p < .05$. Factor loadings less than .1 are not reported.

Italicized items were eliminated from final measure.

Table 4. Means, Standard Deviations, and Correlations of Study Variables.

	Mean	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. Inquisitiveness	55.76	28.03	0.78													
2. Ambition	73.98	19.67	**0.22**	0.86												
3. Learning Orientation	61.18	27.64	**0.37**	**0.26**	0.75											
4. Sociability	54.41	27.02	**0.37**	**0.35**	**0.22**	0.83										
5. Adjustment	66.22	24.43	**0.14**	**0.31**	**0.20**	0.07	0.89									
6. Interpersonal Sensitivity	55.82	29.07	**0.20**	**0.31**	**0.17**	**0.32**	**0.34**	0.71								
7. Prudence	66.39	24.22	-0.08	**0.15**	0.07	-0.14	**0.46**	**0.27**	0.78							
8. Getting Ahead HPI	61.33	17.75	0.74	**0.60**	**0.69**	**0.71**	**0.27**	**0.35**	-0.02	0.56						
9. Getting Along HPI	62.81	19.55	0.12	**0.38**	**0.20**	0.13	**0.78**	**0.75**	**0.74**	**0.28**	0.61					
10. Bold	51.11	27.81	**0.22**	**0.20**	**0.22**	**0.33**	-0.01	0.05	-0.02	**0.35**	0.01	0.69				
11. Colorful	53.91	30.99	**0.25**	**0.42**	**0.24**	**0.63**	0.11	**0.20**	**-0.11**	**0.55**	0.10	**0.44**	0.59			
12. Imaginative	58.32	26.76	**0.46**	**0.14**	**0.18**	**0.42**	-0.11	0.10	**-0.37**	**0.45**	-0.15	0.17	**0.36**	0.64		
13. Mischievous	63.40	25.37	**0.45**	**0.19**	**0.20**	**0.48**	0.03	0.12	**-0.25**	**0.49**	-0.04	**0.40**	**0.41**	**0.45**	0.59	
14. Dutiful	49.07	26.65	**0.06**	**-0.13**	**-0.09**	0.00	-0.10	0.15	0.11	0.08	-0.02	-0.05	0.03	-0.02	0.50	
15. Skeptical	45.69	27.16	-0.05	**-0.18**	**-0.10**	-0.08	**-0.41**	**-0.19**	**-0.26**	**-0.14**	**-0.38**	0.16	-0.05	**0.15**	**0.14**	0.07
16. Leisurely	49.19	28.93	-0.05	**-0.17**	-0.06	-0.06	**-0.28**	**-0.16**	**-0.19**	**-0.11**	**-0.27**	0.21	0.01	0.00	**0.07**	**0.10**
17. Reserved	48.77	29.46	**-0.18**	**-0.40**	**-0.15**	**-0.46**	**-0.29**	**-0.42**	**-0.17**	**-0.42**	**-0.40**	**-0.14**	**-0.42**	**-0.07**	**-0.18**	0.01
18. Diligent	49.22	29.15	-0.04	-0.03	0.06	-0.07	**-0.09**	0.04	**0.25**	-0.03	0.08	**0.10**	-0.09	**-0.13**	**-0.10**	**0.12**
19. Cautious	50.96	26.25	**-0.13**	**-0.56**	**-0.17**	**-0.32**	**-0.45**	**-0.19**	**-0.14**	**-0.39**	**-0.34**	**-0.15**	**-0.40**	**-0.12**	**-0.21**	**0.27**
20. Excitable	67.00	21.93	-0.10	**-0.21**	**-0.14**	-0.02	**-0.51**	**-0.16**	**-0.17**	**-0.16**	**-0.36**	-0.03	-0.01	**0.09**	0.05	**0.11**
21. Moving Against HDS	56.69	20.17	**0.47**	**0.34**	0.29	**0.64**	0.01	**0.16**	**-0.25**	**0.64**	-0.02	**0.69**	**0.78**	**0.67**	**0.76**	-0.02
22. Moving Away HDS	52.32	16.49	**-0.16**	**-0.45**	**-0.17**	**-0.28**	**-0.56**	**-0.25**	**-0.15**	**-0.40**	**-0.56**	0.04	**-0.28**	-0.02	**-0.07**	**0.45**
23. Moving Toward HDS	49.15	20.92	0.01	**-0.10**	-0.02	-0.05	**-0.12**	0.12	**0.24**	-0.05	**0.11**	0.06	**-0.10**	**-0.07**	**-0.08**	**0.72**
24. AC Coaching	2.94	0.46	**-0.09**	-0.05	-0.06	0.01	-0.04	**-0.08**	**-0.13**	-0.07	**-0.11**	-0.08	0.03	0.03	-0.01	0.00
25. AC Influence	2.88	0.44	**0.14**	**0.08**	**0.10**	0.04	0.05	0.03	0.01	**0.13**	0.04	0.03	0.07	**0.16**	**0.11**	**0.13**
26. AC Leading Teams	2.94	0.40	**0.10**	-0.02	-0.07	0.03	0.06	**0.17**	0.07	0.02	**0.16**	-0.08	-0.06	0.10	0.07	**0.17**
27. AC Judgment	2.89	0.62	**0.23**	**0.15**	**0.22**	0.00	0.07	0.03	0.04	**0.22**	0.07	**0.10**	0.06	**0.12**	**0.12**	0.04
28. AC OAR	2.92	0.27	**0.21**	0.07	**0.10**	**0.13**	0.08	0.09	0.05	**0.13**	0.07	0.02	0.03	**0.19**	**0.14**	0.08
29. Relational Performance	3.40	0.77	0.12	0.06	**0.18**	0.20	**0.19**	**0.23**	**0.29**	**0.21**	**0.30**	0.13	**0.20**	0.12	**0.19**	-0.05
30. Leadership Performance	3.49	0.66	**0.30**	0.15	**0.20**	0.23	**0.26**	**0.35**	**0.28**	**0.33**	**0.38**	0.14	**0.18**	**0.19**	**0.28**	-0.01
31. Task Performance	3.39	1.01	0.14	0.12	**0.26**	0.20	**0.24**	**0.23**	**0.28**	**0.27**	**0.33**	**0.24**	**0.24**	**0.16**	**0.26**	**-0.14**

Note: Bolded values are statistically significant at $p < .05$

Values in parenthesis on the diagonal represent coefficients alpha. HPI and HDS reliabilities are from their respective manuals.

Table 4, cont'd.

	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
15. Skeptical	0.76																
16. Leisurely	**0.25**	0.58															
17. Reserved	**0.25**	**0.15**	0.66														
18. Diligent	**0.11**	**0.13**	0.02	0.65													
19. Cautious	**0.24**	**0.26**	**0.38**	**0.14**	0.73												
20. Excitable	**0.23**	0.12	**0.12**	0.05	**0.20**	0.78											
21. Moving Against HDS	**0.13**	0.10	**-0.29**	-0.08	**-0.31**	0.03	0.69										
22. Moving Away HDS	**0.58**	**0.56**	**0.54**	**0.44**	**0.67**	**0.45**	**-0.12**	0.59									
23. Moving Toward HDS	**0.12**	**0.15**	0.02	**0.77**	**0.26**	**0.10**	**-0.06**	**0.21**	0.20								
24. AC Coaching	-0.03	**0.21**	0.00	0.02	-0.01	0.02	-0.01	0.06	0.01	0.66							
25. AC Influence	**0.08**	0.03	-0.01	-0.03	-0.02	**-0.09**	**0.13**	0.00	0.06	**0.20**	0.68						
26. AC Leading Teams	**-0.10**	-0.04	-0.07	-0.06	0.03	-0.08	0.00	-0.08	0.07	**0.17**	**0.24**	0.56					
27. AC Judgment	0.01	-0.05	0.00	0.00	-0.02	**-0.10**	**0.14**	-0.05	0.02	**-0.12**	**0.16**	0.03	0.77				
28. AC OAR	-0.08	0.04	-0.03	-0.06	0.00	-0.07	**0.11**	-0.05	0.01	**0.56**	**0.64**	**0.55**	**0.62**	0.73			
29. Relational Performance	-0.10	**-0.27**	**-0.27**	-0.14	**-0.17**	0.08	**0.21**	**-0.26**	**-0.12**	**-0.22**	-0.08	-0.08	0.07	**-0.18**	0.92		
30. Leadership Performance	**-0.15**	**-0.30**	**-0.30**	**-0.22**	**-0.22**	-0.04	**0.26**	**-0.35**	**-0.15**	**-0.18**	0.08	0.07	0.06	0.02	**0.72**	0.92	
31. Task Performance	-0.10	**-0.28**	**-0.19**	-0.09	**-0.19**	0.03	**0.30**	**-0.26**	**-0.15**	**-0.19**	0.01	-0.14	**0.23**	0.04	**0.43**	**0.47**	0.88

Note: Bolded values are statistically significant at $p < .05$

Values in parenthesis on the diagonal represent coefficients alpha. HPI and HDS reliabilities are from their respective manuals.

Table 5. CFA Results for Measurement Models.

Model	df	χ^2	RMSEA	SRMR	CFI	TLI
HPI						
2F	13	**356.19**	0.11	0.05	0.88	0.80
1F	14	**559.08**	0.15	0.07	0.81	0.71
HDS						
3F	41	**631.87**	0.12	0.09	0.68	0.58
AC						
4F	113	**221.83**	0.04	0.05	0.93	0.91
3F	116	**313.12**	0.05	0.06	0.87	0.84
PR						
5F	340	**2597.10**	0.05	0.08	0.86	0.84
4F	344	**2663.28**	0.05	0.08	0.85	0.84
3F	347	**2951.25**	0.05	0.08	0.85	0.83
2F	349	**4157.17**	0.08	0.09	0.76	0.74
1F	350	**4811.82**	0.08	0.10	0.72	0.70

Note: Bolded values are statistically significant at $p < .05$

Table 6. Effects of AC Ratings on Performance Dimensions

	b	SE	R^2
Relational			0.05
Coaching	-0.17	0.11	
Influence	-0.01	0.11	
Leading Teams	-0.08	0.12	
Judgment	-0.05	0.08	
Leadership			0.03
Coaching	-0.10	0.07	
Influence	0.05	0.08	
Leading Teams	0.04	0.12	
Judgment	-0.02	0.05	
Task			**0.11**
Coaching	-0.17	0.10	
Influence	-0.10	0.12	
Leading Teams	0.06	0.12	
Judgment	**0.30**	0.10	

Note: Bolded values are statistically significant at $p <$ .05

Table 7. Effects of HPI Traits on AC Dimensions

	b	SE	R^2
Coaching			0.01
Getting along	-0.11	0.07	
Getting ahead	-0.09	0.07	
Influence			**0.04**
Getting along	-0.06	0.07	
Getting ahead	**0.18**	0.07	
Leading Teams			0.03
Getting along	0.24	0.13	
Getting ahead	-0.04	0.10	
Judgment			**0.05**
Getting along	-0.06	0.07	
Getting ahead	**0.37**	0.07	

Note: Bolded values are statistically significant at $p <$ .05

Table 8. Effects of HDS Trait Groups on AC Dimensions.

	b	SE	R^2
Coaching			0.01
Moving against	-0.02	0.06	
Moving away	0.09	0.06	
Moving toward	0.00	0.00	
Influence			**0.03**
Moving against	**0.12**	0.04	
Moving away	0.05	0.05	
Moving toward	0.09	0.05	
Leading Teams			0.01
Moving against	-0.07	0.06	
Moving away	0.11	0.10	
Moving toward	-0.10	0.07	
Judgment			**0.03**
Moving against	**0.15**	0.04	
Moving away	-0.02	0.05	
Moving toward	0.06	0.04	

Note: Bolded values are statistically significant at $p < .05$

Table 9. Linear and quadratic effects of HDS trait groups on AC dimensions.

	b	SE	R^2	ΔR^2
Coaching				
Moving against	-0.02	0.01	0.00	
Moving against (Quadratic)	0.00	0.00	0.00	0.00
Moving away	0.01	0.00	0.01	
Moving away (Quadratic)	0.00	0.00	0.01	0.00
Moving toward	0.00	0.00	0.00	
Moving toward (Quadratic)	0.00	0.00	0.00	0.00
Influence				
Moving against	**0.10**	0.07	**0.02**	
Moving against (Quadratic)	0.00	0.00	**0.02**	0.00
Moving away	0.00	0.00	0.00	
Moving away (Quadratic)	0.00	0.00	0.00	0.00
Moving toward	0.00	0.00	0.01	
Moving toward (Quadratic)	0.00	0.00	0.01	0.00
Leading Teams				
Moving against	0.01	0.02	0.00	
Moving against (Quadratic)	0.00	0.00	0.00	0.00
Moving away	-0.01	0.00	0.01	
Moving away (Quadratic)	0.00	0.00	0.01	0.00
Moving toward	**-0.01**	0.00	**0.02**	
Moving toward (Quadratic)	0.00	0.00	**0.02**	0.00
Judgment				
Moving against	**0.05**	0.01	**0.02**	
Moving against (Quadratic)	0.00	0.00	**0.02**	0.00
Moving away	0.01	0.01	0.00	
Moving away (Quadratic)	0.00	0.00	0.00	0.00
Moving toward	0.00	0.01	0.00	
Moving toward (Quadratic)	0.00	0.00	0.00	0.00

Note: Bolded values are statistically significant at $p < .05$

Table 10. Linear and Quadratic Effects of HDS Trait Groups on Performance Ratings.

	b	SE	R^2	ΔR^2
Relational				
Moving against	**0.10**	0.02	**0.02**	
Moving against (Quadratic)	**0.00**	0.00	**0.03**	**0.01**
Moving away	**0.09**	0.03	**0.00**	
Moving away (Quadratic)	**0.00**	0.00	**0.04**	**0.04**
Moving toward	0.03	0.02	0.00	
Moving toward (Quadratic)	**0.00**	0.00	**0.01**	**0.01**
Leadership				
Moving against	**0.07**	0.02	**0.05**	
Moving against (Quadratic)	**0.00**	0.00	**0.05**	**0.00**
Moving away	**0.07**	0.03	**0.02**	
Moving away (Quadratic)	**0.00**	0.00	**0.05**	**0.03**
Moving toward	0.00	0.00	0.00	
Moving toward (Quadratic)	**0.00**	0.00	**0.01**	**0.01**
Task				
Moving against	**0.10**	0.01	**0.12**	
Moving against (Quadratic)	**-0.01**	0.00	**0.13**	**0.01**
Moving away	**0.12**	0.03	**0.05**	
Moving away (Quadratic)	**0.00**	0.00	**0.13**	**0.07**
Moving toward	0.00	0.01	0.01	
Moving toward (Quadratic)	**0.00**	0.00	**0.03**	**0.02**

Note: Bolded values are statistically significant at $p < .05$

Table 11. Interaction Effects of Moving Against HDS Traits on the Relationship between AC Ratings and Performance Ratings.

	Relational				Leadership				Task			
	b	SE	R^2	ΔR^2	b	SE	R^2	ΔR^2	b	SE	R^2	ΔR^2
Step 1			**0.08**				0.02				0.01	
AC	**-1.12**	0.37			-0.48	0.32			0.19	0.32		
Step 2			**0.08**	0.00			**0.03**	**0.01**			**0.08**	**0.07**
AC	**-1.12**	0.38			-0.52	0.33			0.10	0.30		
HDS	0.00	0.00			**0.01**	0.00			**0.01**	0.00		
Step 3			**0.10**	**0.02**			**0.07**	**0.04**			**0.13**	**0.05**
AC	**-1.11**	0.38			-0.50	0.32			0.10	0.30		
HDS	**0.04**	0.02			**0.06**	0.02			**0.08**	0.02		
HDS (Quadratic)	**0.00**	0.00			**0.00**	0.00			**0.00**	0.00		
Step 4			**0.14**	**0.04**			**0.07**	0.00			**0.13**	0.00
AC	**-1.23**	0.37			-0.53	0.33			0.12	0.29		
HDS	0.03	0.02			**0.06**	0.02			**0.08**	0.02		
HDS (Quadratic)	0.00	0.00			**0.00**	0.00			**0.00**	0.00		
AC*HDS	**-0.04**	0.02			-0.01	0.02			0.01	0.02		
Step 5			**0.14**	0.00			**0.08**	0.01			**0.14**	0.01
AC	0.87	3.37			0.27	3.24			-3.83	4.10		
HDS	0.03	0.02			**0.06**	0.02			**0.08**	0.03		
HDS (Quadratic)	0.00	0.00			**0.00**	0.00			**0.00**	0.00		
AC*HDS	0.02	0.01			0.01	0.01			-0.11	0.12		
AC*HDS (Quadratic)	0.00	0.00			0.00	0.00			0.00	0.00		

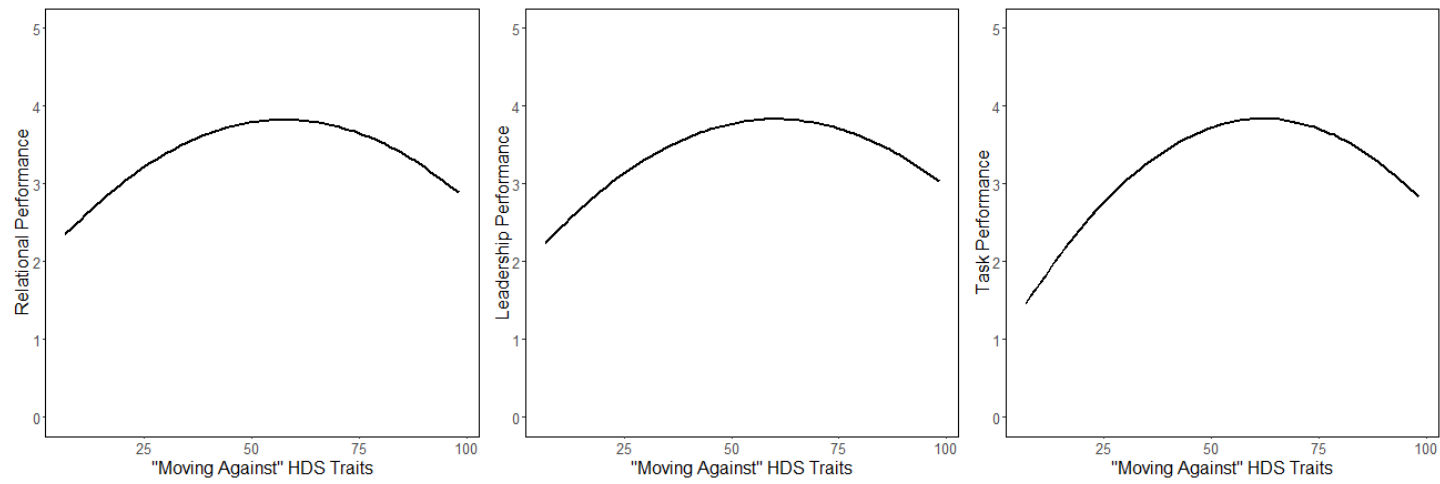Bolded values are significant at $p < .05$

Figure 1. Curvilinear Relationships between Moving Against HDS Factor and Performance.
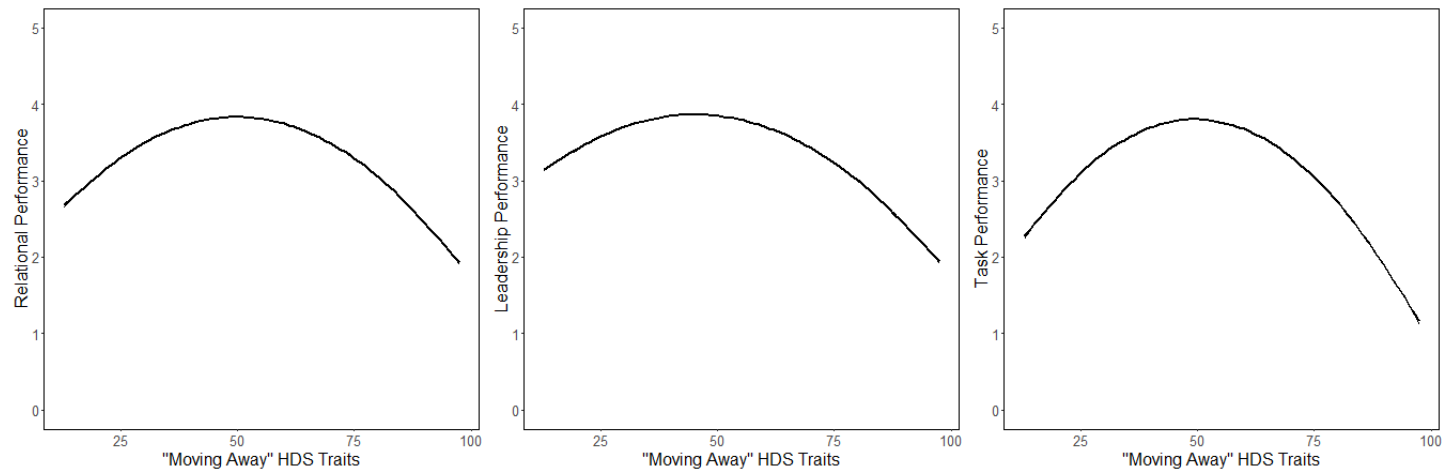
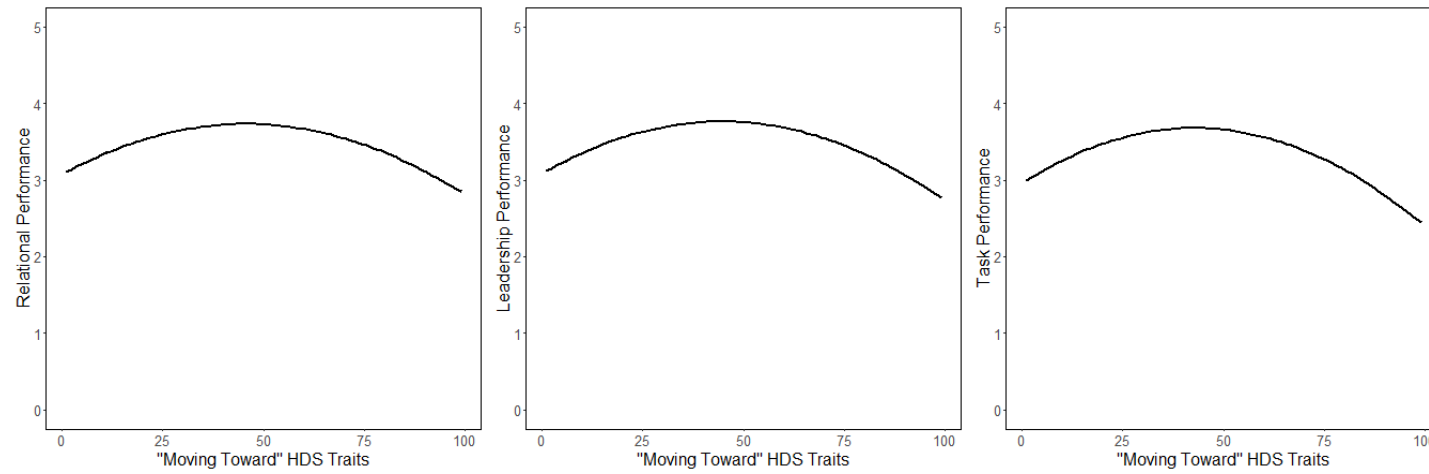Figure 2. Curvilinear Relationships between Moving Away HDS Factor and Performance.

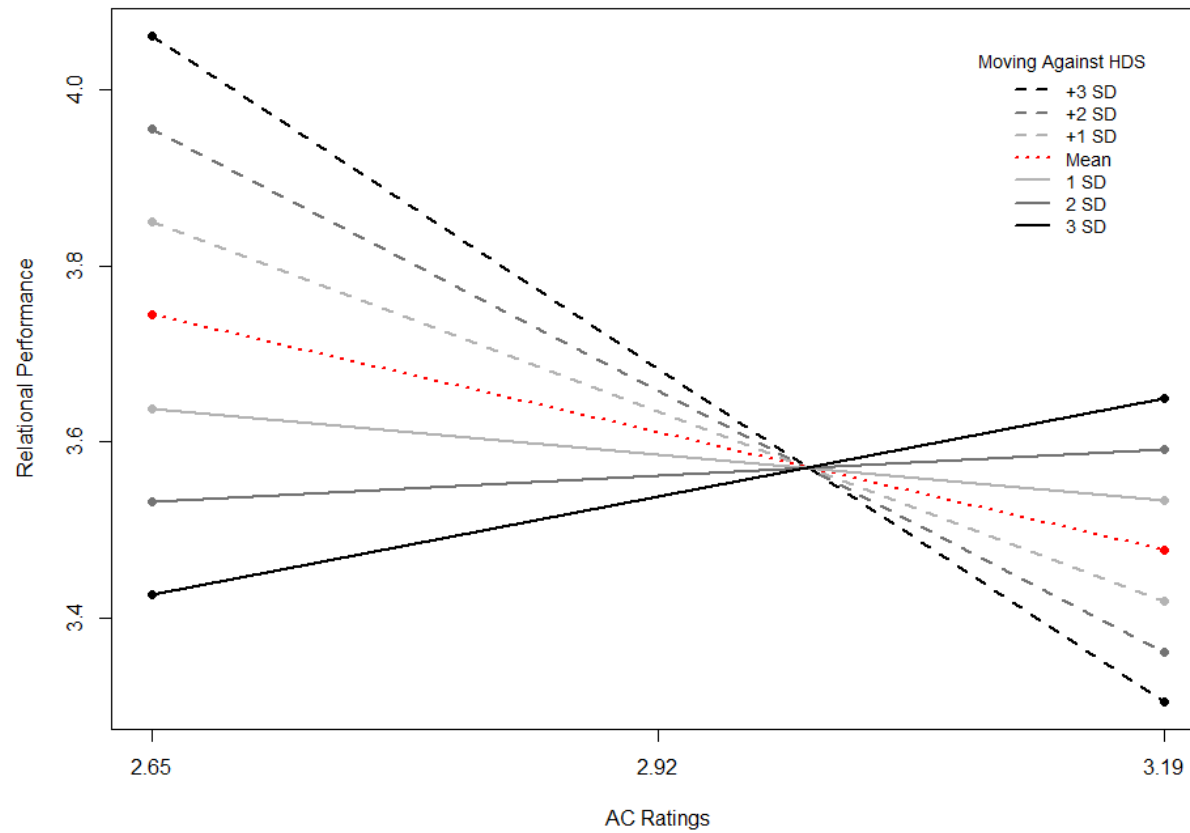Figure 3. Curvilinear Relationships between Moving Toward HDS Factor and Performance.

Figure 4. Interaction Between Moving Against HDS Factor and Relational Performance