Journal of Applied Psychology
2014, Vol. 99, No. 1, 162–179

0021-9010/14/$12.00 DOI: 10.1037/a0034285

RESEARCH REPORT

Personality and Adaptive Performance at Work: A Meta-Analytic Investigation

Jason L. Huang
Wayne State University

Ann Marie Ryan
Michigan State University

Keith L. Zabel
Wayne State University

Ashley Palmer
Hogan Assessment Systems, Tulsa, Oklahoma

We examined emotional stability, ambition (an aspect of extraversion), and openness as predictors of adaptive performance at work, based on the evolutionary relevance of these traits to human adaptation to novel environments. A meta-analysis on 71 independent samples (N = 7,535) demonstrated that emotional stability and ambition are both related to overall adaptive performance. Openness, however, does not contribute to the prediction of adaptive performance. Analysis of predictor importance suggests that ambition is the most important predictor for proactive forms of adaptive performance, whereas emotional stability is the most important predictor for reactive forms of adaptive performance. Job level (managers vs. employees) moderates the effects of personality traits: Ambition and emotional stability exert stronger effects on adaptive performance for managers as compared to employees.

Keywords: adaptive performance, emotional stability, ambition, personality

> Life is like a box of chocolates. You never know what you're gonna get.
>
> —Forrest Gump

> Change is the law of life. And those who look only to the past or present are certain to miss the future.
>
> —John F. Kennedy

The importance of workers' ability to adapt to novel situations in the workplace and perform at an elevated level may currently be more crucial than ever. Changing technologies result in ever-changing work design to which workers must quickly adapt. Interconnected global economies entail constant change and require adaptation (e.g., training or expatriation abroad, meeting clients of different backgrounds). Structural business changes such as mergers and acquisitions require that workers adjust to new environments (e.g., location, position, company culture). Thus, adapting plays a vital role in the success of employees and, in turn, organizations (Bhattacharya, Gibson, & Doty, 2005; Griffin, Neal, & Parker, 2007; Ilgen & Pulakos, 1999).

This recognition of the importance of adaptation at work has been considered in three separate streams of research. First, *adaptive performance* has been examined as part of one's job behavior that pertains to meeting unexpected or changing demands of one's work environment (e.g., Hesketh & Neal, 1999; Johnson, 2001; Pulakos, Arad, Donovan, & Plamondon, 2000; cf. Baard, Rench, & Kozlowski, 2013). Second, research on *adaptive transfer* emphasizes the generalization of newly acquired knowledge and skills (Blume, Ford, Baldwin, & Huang, 2010) to unpredictable and dynamic task environments (e.g., Ford, Smith, Weissbein, Gully, & Salas, 1998; Kozlowski et al., 2001) and predominantly utilizes the task-change paradigm in a laboratory setting (e.g., Chen, Thomas, & Wallace, 2005; LePine, Colquitt, & Erez, 2000). Finally, *newcomer adaptation* focuses on newcomers' experiences during organizational entry as they negotiate unfamiliar work roles and establish new interpersonal relationships (e.g., Chan & Schmitt, 2000; Wang, Zhan, McCune, & Truxillo, 2011). In the current paper, we focus on individuals' job behavior at work, or adaptive performance.

Our paper makes two contributions to the literature. First, by examining personality variables theoretically derived as predictors of adaptive performance, our study can enable organizations to identify individuals most likely to exhibit adaptive performance in

This article was published Online First September 9, 2013.

Jason L. Huang, Department of Psychology, Wayne State University; Ann Marie Ryan, Department of Psychology, Michigan State University; Keith L. Zabel, Department of Psychology, Wayne State University; Ashley Palmer, Hogan Assessment Systems, Tulsa, Oklahoma.

Ashley Palmer, who is now at Retro Den, Tulsa, Oklahoma, was at Hogan Assessment Systems during the research process.

A previous version of this article was presented at the annual conference of the Society for Industrial and Organizational Psychology, Houston, Texas, April 2013. We are indebted to Deidra Schleicher for her invaluable comments that enabled us to substantially improve our article.

Correspondence concerning this article should be addressed to Jason L. Huang, Department of Psychology, Wayne State University, 5057 Woodward Avenue, Detroit, MI 48202. E-mail: jasonhuang@wayne.edu

their talent acquisition and management practices (HR Policy Association, 2010). To date, researchers have identified general cognitive ability as a positive predictor of adaptive performance (e.g., Allworth & Hesketh, 1999; Pulakos et al., 2002), but the findings on personality traits have been mixed (Allworth & Hesketh, 1999; Neal, Yeo, Koy, & Xiao, 2012; Pulakos et al., 2002). In this study, we seek to inform employee selection research and practice by examining the role of personality traits, underscoring the importance of emotional stability, extraversion (specifically, the ambition aspect of extraversion), and openness, the traits suggested most strongly by evolutionary theory to potentially be strategic in adaptation.

A second contribution of this study is to the understanding of adaptive performance as having two interrelated forms: *reactive adaptation* that deals with prescribed demands versus *proactive adaptation* that deals with changes initiated by the focal individual (Berg, Wrzesniewski, & Dutton, 2010; Ployhart & Bliese, 2006). Aside from the research literature, this distinction in adaptation is captured in fiction and recorded in history, as shown in the quotes at the start of this paper: A stable, unfrazzled (reactive) acceptance of changes in life characterized Forrest Gump's eventful yet smooth transition in life, and an ambitious, enthusiastic (proactive) pursuit of changes propelled John F. Kennedy's ascendance to the presidency and his accomplishment thereafter. In this study, we extend previous conceptual development on the distinction by empirically assessing the differential effects of emotional stability and ambition on reactive versus proactive forms of adaptive work performance. In so doing, we provide theoretical and empirical insight into the criterion space of adaptive performance.

Adaptive Performance

Organizational agents, employees and managers alike, need to attune to changes at work and adjust their behavior accordingly due to uncertainty in organizational environments (Duncan, 1972; Katz & Kahn, 1978). Adaptive performance is considered a separate dimension from task and contextual performance (Hesketh & Neal, 1999; Pulakos et al., 2000), although successfully performing adaptive behaviors may contribute to both task and contextual performance (see Johnson, 2001). Pulakos et al. (2000) represents the only work to date that articulated the construct space for adaptive performance. It defined adaptive performance as the proficiency with which an individual alters his or her behavior in response to the demands of a new task, event, situation, or environmental constraints. Using a content analytic procedure to map critical incidents at work onto different dimensions of adaptive performance, Pulakos et al. (2000) created an eight-dimensional taxonomy (see Table 1). However, a single factor was found to underlay supervisor ratings of soldiers' performance (Pulakos et al., 2002). Similarly, Ployhart and Bliese (2006) proposed an adaptability second-order factor to account for covariation across the eight behavioral dimensions. Griffin et al. (2007) situated adaptive performance at three work role contexts—individual, team, and organization—and subsequently obtained empirically distinct measures of adaptability in each work context; however, each of their adaptability measures collapses across behavioral dimensions (e.g., coping with changes, learning) and captures overall adaptive performance. Thus, to date, despite acknowledgment that there are different behaviors that may be labeled as adaptive performance, there is a lack of empirical support for considering adaptive performance as multidimensional.

An alternative framework for considering adaptation would be to distinguish the drivers behind the changes: Workers may engage in *reactive changes* in response to the demands of the environment (e.g., handling a crisis, adjusting to different people) imposed upon them, and they may pursue *proactive changes* to modify the environment and adjust their behaviors accordingly (e.g., implementing a new method, developing oneself). Although adaptive performance can be narrowly defined as a response to environmental change (e.g., Griffin et al., 2007), several researchers have considered the proactive form of adaptation. Ashford and Taylor (1990) emphasized the active role employees play in their work environments to facilitate effective adaptation. Ployhart and Bliese

Table 1
Mapping of Validation Study Competencies to Adaptive Performance Dimensions

Dimensions from Pulakos et al. (2000)	Validation study competency	Focus	Competency definition
Handling emergencies or crisis situations	1. Stress tolerance	Reactive	Handles pressure without getting upset, moody, or anxious
Handling work stress	1. Stress tolerance	Reactive	Handles pressure without getting upset, moody, or anxious
Solving problems creatively	2. Initiative	Proactive	Takes action without the direction of others
	3. Innovation	Proactive	Generates creative ideas and perspectives
Dealing with uncertain and unpredictable work situations	4. Ambiguity tolerance	Reactive	Deals comfortably with unclear situations and problems
	5. Managing change	Proactive	Effectively implements new methods and systems
Learning work tasks, technologies, and procedures	6. Self-development	Proactive	Actively acquires knowledge, skills, and abilities to remain current with job requirements
Demonstrating interpersonal adaptability	7. Flexibility	Reactive	Willing to receive and accept new ideas, approaches, and strategies
	8. Political awareness	Proactive	Recognizes and works within the political environment of an organization
Demonstrating cultural adaptability	9. Valuing diversity	Reactive	Respects, values, and leverages individual differences
Demonstrating physically oriented adaptability	None		

(2006) argued that an adaptive individual may proactively change his or her behavior to achieve desired outcomes upon recognizing an old behavior's being ineffective, even in an unchanged environment. Similarly, Shoss, Witt, and Vera (2012) noted that adaptive performance can occur in anticipation of changes, in addition to in response to changes. In both reactive and proactive adaptation, workers need to modify their behaviors (Shoss et al., 2012), but they take on different foci: Changes are externally determined in reactive adaptation and self-initiated in proactive adaptation.

Evolutionary Psychology, Personality, and Adaptive Performance

It has long been suggested that personality traits underlie human's adaptation to the environment and influence biological fitness (Hettema, 1979; Nettle, 2006). Gordon Allport (1937) posited that personality traits "ultimately derive their significance from the role they play in advancing adaptation within, and mastery of, the personal environment" (p. 342). Evolutionary personality psychology theory argues that personality structure (e.g., Big Five) is the result of "species-typical, relatively domain-specific psychological mechanisms that have evolved over human evolutionary history because they solved the adaptive problems ancestral humans confronted" (Michalski & Shackelford, 2010, p. 511).

Evolutionary psychology theory considers individual differences as theoretically important because of their role in social adaptive problems (e.g., mating, achieving status, detecting who is trustworthy versus a danger; Buss, 2009). That is, individuals change their behavior in response to their environment (Confer et al., 2010), and individual differences may arise because of different but functionally adaptive ways to adjust to environments.[1] For example, Wiggins (1991) discussed agency and communion striving (motives underlying extraversion and agreeableness) from an evolutionary perspective, noting how they relate to reproductive adaptive problems of intrasexual competition and parental investment in children. Buss (1991, 1996) further described how each of the Big Five characteristics might provide resources for successfully solving the most important social adaptation questions individuals face (e.g., Who is high in the social hierarchy? Who can I trust? With whom shall I mate?). The interesting question that adaptive performance in the workplace raises is, What differences relate to ability to adapt to environments that are not constant but changing?

Among the Big Five traits, emotional stability and extraversion receive consistent coverage in major trait theories (e.g., Cattell, Eber, & Tatsuoka, 1988; Eysenck, 1970), manifest strong genetic underpinning (Keller, Coventry, Heath, & Martin, 2005; Viken, Rose, Kaprio, & Koskenvuo, 1994), and exert stable effects on objective life events (Magnus, Diener, Fujita, & Pavot, 1993). According to Eysenck, extraversion and emotional stability account for much of the variation in personality traits (Eysenck & Eysenck, 1985). Although previous research suggested two second-order traits can account for the covariation among the Big Five, such as Digman's (1997) Factors α and β (e.g., Mount, Barrick, Scullen, & Rounds, 2005), Chang, Connelly, and Geeza (2012) investigated higher order traits of the Big Five using a meta-analytically derived multitrait–multimethod matrix and revealed that Factor α is heavily loaded with emotional stability and Factor β appears to be nothing more than extraversion. As much of the evolution of humans as a species has to do with adapting to environmental changes, it is conceivable that extraversion and emotional stability played an important role in humans' adaptation to their environment. For example, extraversion predisposes individuals to actively explore their environment, while neuroticism activates the vigilant detection for imminent danger (Nettle, 2006). Although it might seem far-stretched to compare adaptive performance in the modern workplace with humans' early struggle with environmental threats and challenges,[2] the underlying response mechanisms related to emotional stability and extraversion can be informative.

Emotional stability is associated with the inclination to fight or flight in the presence of probable danger (Nettle, 2006). In the present workplace, the challenges workers confront and cope with are not ones where organizations would want them to retreat (i.e., "flight") but rather require individuals to utilize available resources to manage the change (i.e., "fight"). Thus, the unstable individual's general tendency to engage in threat appraisals (Gallagher, 1990) and avoidance self-regulation (Carver, Sutton, & Scheier, 2000; Elliot & Thrash, 2002) can be maladaptive in the face of changing task environments, whereas being emotionally stable can facilitate successful adaptation to scheduled or unforeseen changes in the workplace. Indeed, emotional stability has been positively linked to several mechanisms instrumental to adaptive performance, including training (Vasilopoulos, Cucina, & Hunter, 2007), transfer of training to new tasks or contexts (Blume et al., 2010), working in teams (Barrick, Mount, & Judge, 2001), coping with work stress (Liu, Wang, Zhan, & Shi, 2009), as well as adjusting to new contexts (Ali, Van der Zee, & Sanders, 2003; Brooks & DuBois, 1995). Further, when faced with a stressful novel task, emotionally stable individuals tend to engage in the more effective task-focused coping and eschew the less effective emotion-focused coping (Boyes & French, 2010). Pulakos et al. (2002) argued that emotional stability would relate to adaptive performance because of the propensity to stay calm and level-headed in the face of challenge and difficulty, and they found support for that relationship in their study of U.S. Army personnel. Therefore, we predict that emotional stability will positively predict adaptive performance (Hypothesis 1).

Extraversion is associated with reward seeking and bold exploratory activity (Nettle, 2006). Extraversion underlies individual differences in the activation of reward systems (Denissen & Penke, 2008) and brings evolutionary fitness through pursuit of sexual partners, establishment of social ties, and exploration of physical

[1] The question often posed to evolutionary psychologists is why large individual differences in personality traits continue to exist if, over time, one would expect natural selection based on the most adaptive genetic variations. There are a number of proposals as to why this is so (see Tooby & Cosmides, 1990). One perspective that fits with organizational psychology theory aligns with Schneider's attraction–selection–attrition model (Schneider, 1987) in that individuals with different personality traits seek and find environments that suit them (see Camperio Ciani, Capiluppi, Veronese, & Sartori, 2007, for an illustration of this in extraversion and openness differences over 20 generations among islanders, immigrants, and mainlanders in Italy).

[2] For examples of other applications of evolutionary psychology to workplace phenomena, see Tooby, Cosmides, and Price's (2006) discussion of cooperative behavior; Kish Gephart, Detert, Trevino, and Edmondson (2009) on fear at work; and Bourgeois and Perkins (2003) on sexual harassment.

environments (see Nettle, 2006). Extraverted individuals tend to adopt an approach orientation (Elliot & Thrash, 2002) and engage in challenge appraisal in stressful situations (Gallagher, 1990). Given a novel task or work environment, extraverted employees are more likely to welcome the challenge than to stay reluctant to adapt or change.

The notion that extraversion drives the pursuit of change and adaptability is corroborated by a recent meta-analytic study: Extraversion was positively associated with change-oriented citizenship behavior at work ($k = 6$, $N = 1{,}141$, $\rho = .13$; Chiaburu, Oh, Berry, Li, & Gardner, 2011). Furthermore, extraversion has been associated with behaviors characterized by change initiation, such as interests in enterprising activities (Barrick, Mount, & Gupta, 2003), decision to become entrepreneurs (Zhang et al., 2009), emergence to leadership positions in teams (Judge, Bono, Ilies, & Gerhardt, 2002), and constructive-change-oriented communication (LePine & Van Dyne, 2001).

A closer examination of extraversion's construct domain reveals that certain facets may be more predictive than others (see Judge & Kammeyer-Mueller, 2012). Personality and industrial/organizational psychologists have long differentiated between two primary aspects of extraversion (DeYoung, Quilty, & Peterson, 2007): ambition (dominance) that corresponds to the need for power and sociability that represents the need for social interaction (e.g., R. Hogan, 1982; Hough, 1992; Hough, Eaton, Dunnette, Kamp, & McCloy, 1990; Hough & Ones, 2001). Ambition primarily accounts for agentic and dominant tendencies (Trapnell & Wiggins, 1990) and is distinct from a proclivity to warmth, socialization, and self-disclosure (DeYoung et al., 2007). Ambitious individuals may engage in contextual performance as a means to get ahead (J. Hogan, Rybicki, Motowidlo, & Borman, 1998). There is no reason to presuppose that greater need of social interaction (sociability) would relate to adaptive performance, but one can easily posit that a need to acquire and maintain status and power (ambition) will lead one to be sensitive to and adjust to environmental change. Indeed, much evolutionary psychology work has focused specifically on gaining and maintaining status and prestige (e.g. Hawley, 1999; Lund, Tamnes, Moestue, Buss, & Vollrath, 2007), as negotiating hierarchies is seen as one of the key social adaptation problems evolutionarily. Buss (2009) has argued that the salience of an adaptive problem in a situation (i.e., the link between a change in the environment and potential loss and gain of status in this instance) is likely to indicate which individual differences come to the forefront in cost–benefit analyses of what behaviors to enact. We predict that the ambition aspect of extraversion will positively predict adaptive performance, but the sociability aspect will not predict adaptive performance (Hypothesis 2).

Other Personality Traits and Adaptive Performance

While an evolutionary psychology lens offers clear links between emotional stability and ambition with adaptation, the relation of the other Big Five traits and adaptive performance can be considered from this perspective as well.

Openness to experience has been described as a willingness to develop creative solutions to problems and seek out variety. The pursuit of novelty and complexity embodied in openness to experience may offer an advantage for evolutionary adaptation (Nettle, 2006). There is some evidence that openness relates to pursuit of new, changed environments (e.g., Camperio Ciani et al., 2007) and relates to adjustment to a new environment (e.g., students to college life; Kurtz, Puher & Cross, 2012; personnel adaptation to winter in Antartica, Grant et al., 2007). For example, openness aspects have been shown to predict the acceptance of expatriate assignments as well as subsequent adjustment in a large sample of expatriates (Albrecht, Dilchert, Deller, & Paulus, in press). Recognizing the theoretical relevance of openness to seeking (proactivity) and adjusting (reactivity) to new environments, we predict that openness will be positively associated with overall adaptive performance (Hypothesis 3).[3]

Conscientiousness is associated with long-term planning and goal striving that can benefit an individual's success in a particular environment. Considering conscientiousness' linkage to achievement striving (Barrick, Mount, & Li, 2013; Barrick, Stewart, & Piotrowski, 2002) and the tenacity with which individuals pursue their goals (Denissen & Penke, 2008), one can expect highly conscientious employees to consistently expend effort in their work environment, both in response to external changes and in search of new opportunities. Indeed, Pulakos et al. (2002) found that achievement orientation, an aspect of conscientiousness, predisposes employees to manage changes as a means to attain positive work outcomes. However, from an evolutionary perspective, the preference for routine and structure (the dependability aspect of conscientiousness) would be incompatible with an unpredictable and variable environment and thus limit adjustment (Nettle, 2006). Similarly, Barrick et al. (2013) argued that the positive effect of conscientiousness at work may be restricted when individuals receive limited feedback as in an ambiguous environment. Further, LePine et al. (2000) suggested that orderly and dutiful individuals may be too inflexible to cope with unannounced changes. As the data available in the current study do not allow for the examination of differential prediction across achievement orientation versus dependability aspects, we do not expect an overall positive effect of conscientiousness on adaptive performance.

Finally, agreeableness is important in interpersonal interactions, with its effect on fitness and adaptation hinging in large part on the group environment one is in (Nettle, 2006). Individuals high in agreeableness may see an adaptive advantage by establishing cooperative relationships and fostering supportive networks with others. However, unless adaptation requires interpersonal interaction and tolerance, agreeableness may not relate to adaptation more broadly. Thus, we explore the effect of agreeableness specifically on the interpersonal aspects of adaptability in Pulakos et al.'s (2000) model.

[3] Although Woo, Chernyshenko, Stark, and Conz's (2013) recent meta-analysis did not show openness to significantly relate to adaptive performance, their definition of adaptive performance was quite broad, including criteria such as creative performance and decision-making performance after task change. Their operationalization of adaptive performance also included self-ratings. Thus, our current hypothesis represents a more focused examination of the effect of openness on adaptive performance at work.

The Adaptive Performance Criterion Space: Proactive Versus Reactive

As noted above, employees' attempts at adaptive performance can take on reactive versus proactive forms. Emotional stability primarily enables employees to stay calm and unperturbed in the face of emergency or unexpected changes. When facing changes imposed by external task environments, employees with high emotional stability can better utilize existing resources to deal with the novel demands, whereas employees with low emotional stability may resort to unproductive ways to cope with the deviation from the routine. In contrast, ambition primarily drives the desire and pursuit of changes in the workplace as a means to achieve status and power. Thus, an alignment of predictors and criteria would suggest that emotional stability will serve as a more important predictor for reactive forms of adaptive performance, while ambition will serve as a more important predictor for proactive forms of adaptive performance (Hypothesis 4). As proposed above, openness will be relevant for both reactive and proactive forms of adaptive performance. Thus, we do not put forth a differential prediction for the effect of openness.

Job levels may afford differential opportunities to engage in more proactive forms of adaptive performance (Berg et al., 2010). With position power (Yukl & Falbe, 1991), managers, rather than employees, are more likely to possess the legitimacy to be proactive in anticipation of change. Relative to nonmanagerial jobs, managerial jobs present greater autonomy to make various decisions (Morgeson & Humphrey, 2006). As Barrick and Mount (1993) argued and demonstrated, having insufficient autonomy on the job restricts individuals' possible range of behaviors and limits the predictive validity of personality traits. Further, in their meta-analytic work, Tornau and Frese (2013) identified three constructs that compose proactive behavior, two of which—exercising voice and taking charge—are expected in-role behaviors for managers but not to the same extent (or at all) for lower level employees. Following our earlier argument on the effect of ambition, the ambitious manager may anticipate imminent adjustments, take the initiative to bring forth changes, actively pursue improvement over the status quo, and transform how business objectives get accomplished. Such opportunities can be quite limited for employees (Berg et al., 2010), who do not have the same level of voice or ability to take charge (i.e., proactive behavior is not as role prescribed), thus restricting the effect of ambition at the lower job level. We predict that the opportunity to engage in proactive adaptation, as captured in job level (manager vs. employees), will moderate the effect of ambition, such that ambition will act as a more important predictor for managers than for employees (Hypothesis 5).

We conducted a meta-analytic investigation using the data archive from Hogan Assessment Systems. A simultaneous search of the literature revealed only a handful of studies, but none of them contained a measure of ambition; nor did they enable the examination of the reactive versus proactive forms of adaptive performance. Considering the limitations, we focused our tests in the Hogan datasets and present a meta-analysis for the other studies in Appendix A.

Method

Identifying Datasets

The Hogan Competency Model (Hogan Assessment Systems, 2009) contains competencies that comprehensively map onto behavior across various job domains, allowing the identification of behavioral dimensions related to adaptive performance. Jason L. Huang and Ann Marie Ryan reviewed the definitions of all 56 competencies in the Hogan Competency Model to determine if each competency could serve as a component under one of Pulakos et al.'s (2000) adaptive performance dimensions. Of the 56 competencies, nine were deemed sufficiently similar to components of Pulakos et al.'s definition; these were further classified into reactive versus proactive foci (see Table 1).

Next, a comprehensive search was conducted to identify criterion-related validation studies from Hogan Assessment Systems' data archive (Hogan Assessment Systems, 2010), where at least two of those nine competencies served as criteria. Seventy-one independent datasets were extracted, with each sample containing two to seven competencies relevant to adaptive performance. In a criterion-related validation study for a particular position, important competencies were typically identified using subject matter experts' ratings of relevance to successful job performance. Supervisors then rated incumbents on these competencies. The majority of the validation studies ($k = 64$) were conducted using concurrent validation designs. Only one study employed a predictive validation design, and relevant validity design information was unavailable for six other samples.

Samples

The 71 datasets extracted included 18 managerial samples and 53 employee samples from a variety of industries, such as pharmaceutical, agriculture, and communications (total $N = 7{,}535$). Sample sizes for individual studies ranged from 20 to 416. The average age in the samples ranged from 25 to 51. Approximately 67% of the ratees were male. These 71 datasets served as the basis for our meta-analytic investigation (see Appendix B).

Personality Measures

The seven-factor Hogan Personality Inventory (HPI; R. Hogan & Hogan, 2007) maps strongly onto the Big Five (mean r between corresponding factor(s) = .54; J. Hogan & Holland, 2003). The seven factors are *Adjustment, Ambition, Sociability, Interpersonal Sensitivity, Prudence, Inquisitive,* and *Learning Approach*.[4] As described in J. Hogan and Holland (2003), Adjustment maps onto emotional stability, Ambition and Sociability map onto extraversion, Interpersonal Sensitivity maps onto agreeableness, Prudence maps onto conscientiousness, and Inquisitive and Learning Approach map onto openness to experience. It should be noted that while Inquisitive reflects the global openness factor (Connelly, Ones, Davies, & Birkland, 2013), Learning Approach is only

[4] The factor names represent the current naming for the HPI (see R. Hogan & Hogan, 2007). Interpersonal sensitivity, inquisitive, and learning approach were previously named likeability, intellectance, and school success in J. Hogan and Holland (2003).

moderately correlated with openness (J. Hogan & Holland, 2003) and largely reflects the intellectual efficiency facet of openness (Woo, Chernyshenko, Longley, et al., 2013).

The seven HPI factors have shown acceptable levels of internal consistency (Cronbach's alphas for the seven factors above are .89, .86, .83, .71, .78, .78, and .75) and test–retest reliability (average short-term test–retest reliability: $r = .80$; R. Hogan & Hogan, 2007).

Results

Adaptive Performance Measure

Pulakos et al. (2002) reported a single factor represented supervisory ratings of adaptive performance on the eight dimensions in their taxonomy. To examine if an overall adaptive performance factor would emerge in our study as well, we performed exploratory factor analyses (EFA) with principal axis factoring on the competency ratings. We identified and obtained eight datasets for the EFA using the following two criteria: (a) containing at least five of the nine relevant competencies; and (b) having a sample size of at least 50.

We summarize the factor analytic results in Table 2. Across the four managerial samples and four employee samples, a single-factor structure emerged as the only interpretable solution. In cases where a competency loaded weakly on the first factor, that competency was measured with a single item in that analysis. Given the evidence of unidimensionality, we proceeded to create an overall adaptive performance score in each dataset. It should be noted that the emergence of an overall adaptive performance dimension, rather than separate reactive versus proactive dimensions, may be due to two considerations. First, as Pulakos et al. (2002) suggested, supervisors may have inferred from a general judgment and thus failed to produce the distinction between reactive and proactive dimensions. Second, the exploratory factor analysis may have underfactored due to the limited representation of adaptive performance dimensions in the datasets (see Wood, Tataryn, & Gorsuch, 1996). Indeed, only Dataset M1 contained more than two competencies from each of the reactive and proactive domains. Thus, the results may have been biased toward the emergence of an overall adaptive performance factor. Given these limitations of the exploratory factor analysis as well as our conceptualization of the adaptive performance criterion space, we considered whether responses were reactions to the environment or initiated behaviors (reactive vs. proactive).

Meta-Analysis

With the availability of 71 independent studies, we were able to utilize meta-analytic techniques to handle potential between-study differences in parameter estimates due to statistical artifacts such as sampling error and range restriction. We first obtained the zero-order correlation between each HPI personality factor and adaptive performance at the study level and subjected the correlation coefficients to meta-analysis. We corrected for measurement error in the criterion using internal consistency estimates for the overall adaptive performance measure at the study level. Following the steps outlined by Hunter, Schmidt, and Le (2006), we corrected for direct or indirect range restriction at the study level using information from the HPI manual (R. Hogan & Hogan, 2007). For the six samples with unknown validation design, we adopted the direct range restriction formula on these datasets to provide a conservative estimate (Hunter & Schmidt, 2004). As no interrater reliability estimates were available, the corrected validity estimates (ρ_{op}s) in the current study would be the lower bound estimates for operational validity (e.g., Viswesvaran, Ones, & Schmidt, 1996).

The meta-analytic estimates of overall effects are presented in Table 3. The results provided initial support for Hypotheses 1 and 2 in that Adjustment ($\rho_{op} = .16$) and Ambition ($\rho_{op} = .14$) were significantly associated with overall adaptive performance, as their 95% confidence intervals did not include zero. In contrast, the effect for Sociability ($\rho_{op} = .01$) was nonsignificant. We further assessed whether Ambition had a significantly stronger effect on overall adaptive performance than Sociability, using Steiger's Z for two dependent correlations obtained on the same participants (Steiger, 1980). The result of the test was significant ($Z = 9.93$, $p < .001$), further supporting the notion that Ambition rather than Sociability drives adaptive performance.

In contrast, although Inquisitive and Learning Approach had significant positive associations with overall adaptive performance, their validity coefficients were quite small ($\rho_{op} = .03$ and

Table 2
Summary for Exploratory Factor Analyses

Sample	*N*	Competencies	Second factor eigenvalue	% variance	Average loading	α
M1	106	1, 2, 3, 4, 6, 7, 8	0.97	57	.71	.89
M2	77	1, 2, 4, 7, 8, 9	0.77	61	.73	.87
M3	135	1, 3, 5, 8, 9	0.93	55	.65	.70
M4	210	1, 2, 3, 6, 8	0.90	46	.58	.71
E1	103	1, 2, 4, 6, 7	0.76	63	.73	.83
E2	92	2, 4, 6, 7, 9	1.03[a]	53	.61	.73
E3	86	1, 2, 4, 7, 9	0.95	69	.77	.86
E4	84	1, 2, 3, 6, 7	0.80	55	.66	.78

Note. Principal axis factoring on competency scores (indirect item factor analysis; Gorsuch, 1997) with a one-factor solution. M1–M4: managerial samples; E1–E4: employee samples. For competencies, refer to Table 1. % variance = variance accounted for by the first factor. Average loading refers to loadings on the first factor. α = internal consistency estimate for the overall adaptive performance scale.

[a] Following the Kaiser criterion, which tends to overfactor (Tabachnick & Fidell, 2007), a second factor eigenvalue of 1.03 suggested the possibility of a two-factor solution. However, the second factor thus extracted was poorly defined (Tabachnick & Fidell, 2007), being loaded by only a single competency (No. 9, valuing diversity). Thus, a single-factor solution was retained.

Table 3
Meta-Analytic Relationships Between Personality Variables and Adaptive Performance

Variable	*K*	*N*	$\bar{r}$	SD_r	ρ_{op}	SD_ρ	% variance	95% CI Lower	95% CI Upper	80% CV Lower	80% CV Upper
Overall adaptive performance											
Adjustment	71	7,535	.12	.11	.16	.08	70	.09	.15	.02	.29
Ambition	71	7,535	.11	.11	.14	.11	61	.08	.14	−.04	.32
Sociability	71	7,535	.01	.13	.01	.10	59	−.02	.04	−.16	.18
Interpersonal sensitivity	71	7,535	.08	.11	.07	.06	72	.05	.10	−.03	.18
Prudence	71	7,535	.07	.13	.09	.11	58	.04	.10	−.09	.27
Inquisitive	71	7,535	.03	.10	.03	.00	100	.01	.05	.03	.03
Learning approach[a]	69	7,395	.06	.10	.05	.03	91	.03	.08	.00	.11
Reactive forms of adaptive performance											
Adjustment	69	7,314	.14	.11	.20	.09	68	.11	.17	.05	.35
Ambition	69	7,314	.09	.11	.13	.09	76	.06	.12	−.01	.27
Sociability	69	7,314	.00	.11	.00	.06	81	−.03	.02	−.10	.11
Interpersonal sensitivity	69	7,314	.08	.11	.09	.06	77	.06	.11	−.01	.18
Prudence	69	7,314	.07	.12	.10	.11	59	.04	.10	−.09	.28
Inquisitive	69	7,314	.02	.09	.02	.00	100	.00	.04	.02	.02
Learning approach	67	7,174	.04	.10	.04	.02	98	.02	.06	.02	.07
Proactive forms of adaptive performance											
Adjustment	65	7,093	.08	.11	.12	.10	64	.05	.11	−.05	.29
Ambition	65	7,093	.11	.11	.17	.10	70	.09	.14	.01	.34
Sociability	65	7,093	.02	.12	.02	.11	62	−.01	.05	−.15	.20
Interpersonal sensitivity	65	7,093	.06	.11	.06	.08	69	.03	.08	−.07	.18
Prudence	65	7,093	.06	.12	.08	.12	60	.03	.09	−.11	.27
Inquisitive	65	7,093	.03	.10	.05	.06	86	.01	.06	−.04	.14
Learning approach[a]	63	6,953	.06	.10	.07	.05	86	.04	.08	−.01	.14

Note. Reactive forms of adaptive performance: stress tolerance, ambiguity tolerance, flexibility, and valuing diversity. Proactive forms of adaptive performance: initiative, innovation, managing change, self-development, and political awareness. K = number of independent samples; N = total sample sizes for each analysis; $\bar{r}$ = sample-size-weighted mean observed (uncorrected) correlation; SD_r = sample-size-weighted observed standard deviation of correlations; ρ_{op} = mean operational correlation corrected for unreliability in the criterion using coefficient alpha and range restriction; SD_ρ = standard deviation of the corrected correlations; % variance = percentage of variance attributed to sampling error, criterion unreliability, and range restriction; 95% CI = 95% confidence interval around $\bar{r}$; 80% CV = 80% credibility interval around ρ_{op}.
[a] Learning approach was not measured in two studies, which thus have a smaller K than the other predictors.

.05), reflecting the power from the current large sample size rather than substantive effect. Thus, these findings provided limited support for Hypothesis 3.

Hypothesis 4 states that emotional stability will be a more important predictor for reactive forms of adaptive performance, and ambition will be a more important predictor for proactive forms of adaptive performance. We created adaptive performance composites (i.e., reactive and proactive; see Table 1) in each primary study and meta-analyzed the effects of each personality trait on these composites (see Table 3). Zero-order meta-analyzed effects follow the pattern suggested by Hypothesis 4: For reactive forms of adaptive performance, Adjustment had a larger operational validity than Ambition ($Z = 5.46$, $p < .001$), whereas for proactive forms of adaptive performance, Ambition had a larger operational validity than Adjustment ($Z = 3.98$, $p < .001$).

Hypothesis 5 states that ambition will act as a more important predictor of overall adaptive performance in managers than in employees. We conducted the hypothesized moderator analysis (see Table 4). In initial support of the hypothesis, overall adaptive performance was more strongly associated with Ambition in managerial samples ($\rho_{op} = .26$) than in employee samples ($\rho_{op} = .12$). Comparing the two independent correlations (Cohen, Cohen, West, & Aiken, 2003) revealed a significant difference ($Z = 5.45$, $p < .001$). Although not hypothesized, the effect of Adjustment was slightly stronger in managerial samples ($\rho_{op} = .20$) as well, relative to employee samples ($\rho_{op} = .14$; $Z = 2.31$, $p < .05$). To better discern the moderating effects, we performed separate meta-analyses for reactive and proactive forms of adaptive performance across job levels (see Table 4).

To further assess Hypotheses 4 and 5 in terms of predictor importance, we employed meta-analytically derived multiple regression (Viswesvaran & Ones, 1995) together with relative weights analysis (Johnson & LeBreton, 2004). We first obtained the meta-analytic correlation matrix among the personality variables for managerial and employee samples (see Table 5). Combining the correlation matrix with parameter estimates from Table 4 as input matrices for the managerial and employee positions (Ns = 1,864 and 5,531), we regressed adaptive performance onto all seven predictor variables simultaneously to determine the relative importance of correlated predictors.

Regression analysis with relative weights further supported Hypothesis 4 (see bottom section of Table 6). When adaptive performance had a reactive focus, Adjustment was the most important predictor in manager and employee samples (βs = .20 and .16), accounting for 51% and 62% of predictable variance. In sharp contrast, when adaptive performance had a proactive focus, Am-

Table 4
Predictor Effects on Adaptive Performance: Managers Versus Employees

Variable	Managers								Employees							
	K	*N*	$\bar{r}$	ρ_{op}	CI_L	CI_U	CV_L	CV_U	*K*	*N*	$\bar{r}$	ρ_{op}	CI_L	CI_U	CV_L	CV_U
Overall adaptive performance																
Adjustment	18	1,864	.14	.20	.08	.21	−.04	.44	53	5,671	.11	.14	.09	.14	.08	.21
Ambition	18	1,864	.17	.26	.12	.21	.04	.49	53	5,671	.09	.12	.06	.12	−.02	.26
Sociability	18	1,864	.02	.03	−.04	.08	−.12	.18	53	5,671	.00	.00	−.03	.04	−.17	.18
Interpersonal sensitivity	18	1,864	.11	.12	.05	.17	−.01	.24	53	5,671	.07	.06	.04	.10	−.03	.14
Prudence	18	1,864	.07	.10	.01	.13	−.13	.32	53	5,671	.07	.09	.04	.11	−.08	.26
Inquisitive	18	1,864	.05	.08	.00	.10	−.03	.19	53	5,671	.02	.02	.00	.05	.02	.02
Learning approach	18	1,864	.09	.10	.04	.14	−.03	.23	51	5,531	.04	.04	.02	.07	.04	.04
Adaptive performance—reactive forms																
Adjustment	18	1,864	.16	.25	.10	.22	.03	.46	51	5,450	.13	.18	.10	.16	.07	.30
Ambition	18	1,864	.12	.20	.08	.17	.09	.31	51	5,450	.08	.11	.05	.11	−.02	.24
Sociability	18	1,864	.01	.02	−.04	.05	−.04	.08	51	5,450	.00	−.01	−.03	.03	−.12	.11
Interpersonal sensitivity	18	1,864	.10	.12	.05	.16	.02	.23	51	5,450	.07	.07	.05	.10	−.01	.16
Prudence	18	1,864	.05	.08	−.01	.11	−.17	.32	51	5,450	.08	.10	.05	.11	−.06	.27
Inquisitive	18	1,864	.04	.07	−.01	.10	−.08	.21	51	5,450	.01	.01	−.01	.03	.01	.01
Learning approach	18	1,864	.06	.07	.01	.12	−.05	.20	49	5,310	.03	.03	.01	.06	.03	.03
Adaptive performance—proactive forms																
Adjustment	17	1,823	.09	.15	.03	.16	−.11	.41	48	5,270	.08	.11	.05	.11	−.02	.24
Ambition	17	1,823	.18	.28	.13	.22	.28	.28	48	5,270	.09	.14	.06	.12	−.02	.29
Sociability	17	1,823	.04	.05	−.02	.10	−.13	.23	48	5,270	.01	.01	−.02	.04	−.16	.19
Interpersonal sensitivity	17	1,823	.09	.11	.03	.14	.00	.21	48	5,270	.04	.04	.01	.08	−.08	.16
Prudence	17	1,823	.07	.11	.01	.12	−.08	.30	48	5,270	.05	.07	.02	.09	−.12	.26
Inquisitive	17	1,823	.06	.09	.01	.11	−.01	.20	48	5,270	.03	.03	.00	.05	−.04	.11
Learning approach	17	1,823	.09	.11	.04	.14	.02	.21	46	5,130	.05	.05	.02	.07	.00	.10

Note. *K* = number of independent samples; *N* = total sample sizes for each analysis; $\bar{r}$ = sample-size-weighted mean observed (uncorrected) correlation; ρ_{op} = mean operational correlation corrected for unreliability in the criterion using coefficient alpha and range restriction; CI_L and CI_U = lower and upper bound of 95% confidence interval around $\bar{r}$; CI_L and CI_U = lower and upper bound of 80% credibility interval around ρ_{op}.

bition was the most important predictor in both samples (βs = .27 and .12), accounting for 68% and 55% of predictable variance.

The separate analyses of reactive and proactive forms of adaptive performance also revealed an area where openness might prove beneficial: Learning Approach had a positive zero-order correlation with proactive forms of adaptive performance in both manager and employee samples, with a positive lower bound of the 80% credibility interval. However, Learning Approach failed to explain unique variance in proactive forms of adaptive performance.

Meta-analytic regression and relative weights provided further support for Hypothesis 5 (see top section of Table 6): For managers, Ambition (β = .24) was the most important predictor, accounting for 60% of the predictable variance in adaptive performance, whereas for employees, Ambition (β = .08) was the second most important predictor, trailing Adjustment (β = .10), which accounted for 46% of the predictable variance.

To provide comparability to prior work using Pulakos et al.'s (2000) taxonomy, we included separate analyses for each competency in an exploratory manner (see Table 7). In general, these results conformed to the hypothesized directions, barring one notable exception: Ambition was negatively associated with valuing diversity in employee samples ($K = 4$, $N = 277$, $\rho_{op} = -.08$), although the result could have occurred due to second-order sam-

Table 5
Meta-Analytic Correlations Between Personality Variables

Variable	1	2	3	4	5	6	7	8
1. Adjustment	—	.42	−.01	.40	.48	.16	.24	−.28
2. Ambition	.44	—	.35	.26	.15	.32	.31	−.35
3. Sociability	.05	.36	—	.20	−.24	.44	.12	−.03
4. Interpersonal sensitivity	.40	.30	.28	—	.34	.14	.09	−.16
5. Prudence	.43	.18	−.20	.31	—	−.05	.14	−.10
6. Inquisitive	.16	.25	.39	.13	−.06	—	.33	−.04
7. Learning approach	.21	.25	.16	.11	.06	.35	—	−.07

Note. Correlations for managerial samples are presented below the diagonal ($K = 18$, $N = 1{,}864$). Correlations for employee samples are presented above the diagonal ($K = 53$, $N = 5{,}671$), except for correlations involving learning approach ($K = 51$, $N = 5{,}531$).

Table 6
Multiple Regression Analysis Predicting Adaptive Performance

Variable	Managers			Employees		
	β	Raw RW	% RW	β	Raw RW	% RW
Overall adaptive performance						
Adjustment	.09***	.02	22	.10***	.01	46
Ambition	.24***	.05	60	.08***	.01	31
Sociability	−.07*	.00	2	−.01	.00	1
Interpersonal sensitivity	.03	.01	6	−.01	.00	4
Prudence	−.01	.00	3	.03	.00	15
Inquisitive	.01	.00	3	−.01	.00	1
Learning approach	.01	.00	4	−.01	.00	2
N		1,864			5,531	
R^2		.08			.03	
Reactive forms of adaptive performance						
Adjustment	.20***	.04	51	.16***	.02	62
Ambition	.13***	.02	31	.06***	.01	18
Sociability	−.06*	.00	2	−.01	.00	1
Interpersonal sensitivity	.03	.01	8	−.01	.00	5
Prudence	−.05	.00	3	.02	.00	13
Inquisitive	.01	.00	2	−.02	.00	1
Learning approach	.02	.00	3	−.02	.00	1
N		1,864			5,310	
R^2		.08			.04	
Proactive forms of adaptive performance						
Adjustment	−.01	.01	8	.06***	.01	25
Ambition	.27***	.06	68	.12***	.01	55
Sociability	−.07*	.00	3	−.01	.00	2
Interpersonal sensitivity	.03	.00	4	−.02	.00	2
Prudence	.04	.01	6	.03*	.00	11
Inquisitive	.04	.00	4	.00	.00	2
Learning approach	.04	.01	6	.00	.00	4
N (*K*)		1,823			5,130	
R^2		.09			.02	

Note. Raw RW = raw relative weight; % RW = relative weight rescaled to the percentage of total R^2.
* $p < .05$. *** $p < .001$.

pling error. Supporting our supposition regarding the effect of agreeableness on interpersonally oriented adaptive performance dimensions, Interpersonal Sensitivity showed positive zero-order associations with Valuing Diversity in both samples and Flexibility and Political Awareness in the managerial samples. In addition, a visual examination of the corrected correlations also revealed the pattern as would be suggested by Hypothesis 4: The competencies more strongly associated with Ambition pertained more to proactive (e.g., Innovation, Initiative) rather than reactive (e.g., Stress Tolerance, Flexibility) adaptation, especially in the managerial samples. This is also consistent with the rationale behind Hypothesis 5 that higher level jobs afford more opportunity to engage in proactive forms of adaptive performance.

Discussion

Based on evolutionary psychology theory relating to personality, the current study highlighted the theoretical relevance of emotional stability and ambition to adaptive performance. The meta-analytic results indicate that those who harbor the desire for status and power while remaining calm and even-tempered are best able to adapt to novel situations in the workplace.

Building on previous conceptualization of the reactive and proactive distinction in adaptive performance, the current study sheds initial empirical light on this distinction. Although the EFAs revealed a single-factor solution, possibly due to raters' halo error, the theoretically derived hypotheses regarding differential predictors received clear support: Emotional stability contributes to reactive forms of adaptive performance, whereas ambition is instrumental to proactive forms of adaptive performance. The differential effects of ambition across job levels also attest to the notion that managers have more opportunities to engage in proactive forms of adaptive performance.

Our findings echo those of Pulakos et al. (2002) in the significant association between emotional stability and adaptive performance. To appropriately cope with changes that occur in the work environment, an individual needs to approach potentially stressful transitions rather than engage in avoidance behavior such as procrastinating and resorting to the now-outdated mode of operation. From an evolutionary psychology perspective, emotional stability represents functionally adaptive ways of responding to environmental threat, with high emotional stability reflecting a willingness to face and deal with change.

Table 7
Meta-Analytic Relationships Between Personality Variables and Adaptive Performance Competencies

Variable	Managers								Employees							
	K	*N*	$\bar{r}$	ρ_{op}	CI_L	CI_U	CV_L	CV_U	*K*	*N*	$\bar{r}$	ρ_{op}	CI_L	CI_U	CV_L	CV_U
DV = Stress tolerance																
Adjustment	13	1,285	.19	.28	.11	.26	.02	.54	42	4,095	.16	.22	.13	.19	.22	.22
Ambition	13	1,285	.12	.20	.06	.18	−.05	.44	42	4,095	.06	.08	.02	.09	−.04	.21
Sociability	13	1,285	.02	.04	−.06	.09	−.12	.20	42	4,095	−.03	−.04	−.06	.00	−.12	.05
Interpersonal sensitivity	13	1,285	.10	.12	.03	.17	.00	.24	42	4,095	.08	.07	.04	.11	−.02	.16
Prudence	13	1,285	.05	.08	−.01	.12	−.12	.27	42	4,095	.11	.14	.07	.14	.02	.25
Inquisitive	13	1,285	.00	.02	−.06	.07	−.16	.19	42	4,095	.01	.01	−.01	.03	.01	.01
Learning approach	13	1,285	.08	.09	.03	.14	.01	.17	40	3,955	.05	.05	.02	.08	.05	.05
DV = Initiative																
Adjustment	11	1,141	.09	.11	.01	.17	−.12	.33	39	3,793	.10	.12	.06	.14	−.03	.27
Ambition	11	1,141	.13	.18	.08	.19	−.06	.42	39	3,793	.10	.12	.06	.13	.00	.24
Sociability	11	1,141	−.01	.00	−.08	.07	−.14	.14	39	3,793	.00	.00	−.04	.05	−.17	.18
Interpersonal sensitivity	11	1,141	.05	.04	.00	.11	.04	.04	39	3,793	.06	.04	.02	.09	−.05	.14
Prudence	11	1,141	.07	.09	.01	.12	.04	.13	39	3,793	.08	.09	.04	.11	−.04	.23
Inquisitive	11	1,141	.00	.01	−.05	.06	−.04	.05	39	3,793	.01	.01	−.02	.05	−.02	.05
Learning approach	11	1,141	.04	.04	−.02	.11	−.07	.14	37	3,653	.06	.06	.02	.09	.06	.06
DV = Innovation																
Adjustment	6	630	.05	.11	−.05	.15	−.09	.32	8	624	.07	.12	.00	.14	.12	.12
Ambition	6	630	.17	.37	.09	.26	.13	.61	8	624	.09	.15	.02	.15	.15	.15
Sociability	6	630	.09	.13	.00	.17	.04	.21	8	624	.03	.06	−.04	.11	.06	.06
Interpersonal sensitivity	6	630	.07	.10	−.02	.17	−.01	.21	8	624	.02	.01	−.04	.09	.01	.01
Prudence	6	630	.07	.13	−.02	.15	−.02	.28	8	624	.05	.10	−.02	.13	.10	.10
Inquisitive	6	630	.07	.11	.04	.10	.11	.11	8	624	.06	.10	−.03	.15	−.01	.22
Learning approach	6	630	.10	.14	.04	.15	.14	.14	8	624	.05	.08	.00	.10	.08	.08
DV = Ambiguity tolerance																
Adjustment	3	216	.15	.28	.07	.22	.28	.28	8	583	.10	.14	.04	.15	.14	.14
Ambition	3	216	.20	.40	.17	.24	.40	.40	8	583	.08	.11	−.01	.17	−.07	.29
Sociability	3	216	.01	.01	−.03	.05	.01	.01	8	583	−.02	−.03	−.10	.07	−.14	.07
Interpersonal sensitivity	3	216	.13	.12	−.02	.28	−.15	.39	8	583	.03	.05	−.05	.12	−.03	.14
Prudence	3	216	.06	.12	−.06	.19	.12	.12	8	583	.04	.06	−.07	.15	−.22	.35
Inquisitive	3	216	−.01	−.01	−.09	.06	−.01	−.01	8	583	.03	.03	−.02	.08	.03	.03
Learning approach	3	216	.04	.06	.01	.07	.06	.06	8	583	.04	.05	−.04	.12	.05	.05
DV = Managing change																
Adjustment	5	342	.09	.19	.02	.17	.19	.19	0							
Ambition	5	342	.19	.49	.12	.27	.22	.77	0							
Sociability	5	342	.00	.00	−.07	.08	.00	.00	0							
Interpersonal sensitivity	5	342	.12	.14	.09	.15	.14	.14	0							
Prudence	5	342	.06	.14	−.04	.17	.09	.19	0							
Inquisitive	5	342	−.01	.01	−.10	.08	.01	.01	0							
Learning approach	5	342	.06	.08	−.01	.13	.08	.08	0							
DV = Self-development																
Adjustment	9	956	.04	.06	−.02	.11	−.02	.15	38	3,753	.06	.08	.03	.10	−.05	.21
Ambition	9	956	.16	.29	.10	.22	.29	.29	38	3,753	.08	.11	.05	.11	−.01	.23
Sociability	9	956	.06	.07	.00	.11	.07	.07	38	3,753	.00	−.01	−.04	.04	−.18	.17
Interpersonal sensitivity	9	956	.06	.08	−.02	.15	−.05	.21	38	3,753	.05	.05	.02	.08	−.03	.12
Prudence	9	956	.04	.05	−.04	.12	−.14	.24	38	3,753	.05	.07	.01	.09	−.14	.27
Inquisitive	9	956	.11	.16	.04	.17	.16	.16	38	3,753	.04	.06	.01	.07	.06	.06
Learning approach	9	956	.10	.13	.06	.14	.13	.13	38	3,753	.04	.04	.01	.07	.04	.04
DV = Flexibility																
Adjustment	13	1,192	.12	.19	.07	.17	.19	.19	31	3,545	.08	.11	.05	.11	.11	.11
Ambition	13	1,192	.09	.15	.03	.16	.02	.29	31	3,545	.06	.08	.02	.09	−.06	.21
Sociability	13	1,192	.01	.01	−.04	.05	.01	.01	31	3,545	.01	.02	−.03	.05	−.12	.15
Interpersonal sensitivity	13	1,192	.08	.09	.03	.13	.09	.09	31	3,545	.06	.05	.03	.09	−.03	.14

(*table continues*)

Table 7 (*continued*)

Variable	Managers								Employees							
	K	*N*	$\bar{r}$	ρ_{op}	CI_L	CI_U	CV_L	CV_U	*K*	*N*	$\bar{r}$	ρ_{op}	CI_L	CI_U	CV_L	CV_U
Prudence	13	1,192	.04	.08	−.03	.12	−.19	.34	31	3,545	.04	.06	.00	.08	−.04	.16
Inquisitive	13	1,192	.07	.11	.01	.13	.00	.21	31	3,545	.01	.01	−.02	.04	.01	.01
Learning approach	13	1,192	.04	.05	−.03	.11	−.11	.21	30	3,495	.01	.01	−.02	.04	.01	.01
DV = Political awareness																
Adjustment	4	493	.14	.28	.00	.28	.03	.53	0							
Ambition	4	493	.17	.34	.12	.22	.34	.34	0							
Sociability	4	493	.09	.14	−.03	.22	−.04	.32	0							
Interpersonal sensitivity	4	493	.19	.22	.07	.31	.09	.36	0							
Prudence	4	493	.08	.14	−.02	.17	.01	.27	0							
Inquisitive	4	493	−.02	−.02	−.07	.03	−.02	−.02	0							
Learning approach	4	493	.03	.04	−.07	.13	−.08	.16	0							
DV = Valuing diversity																
Adjustment	6	344	.08	.15	−.03	.18	.15	.15	4	277	.13	.19	.09	.17	.19	.19
Ambition	6	344	.12	.20	.01	.22	−.33	.74	4	277	−.03	−.08	−.12	.06	−.08	−.08
Sociability	6	344	−.05	−.07	−.11	.01	−.07	−.07	4	277	−.03	−.05	−.09	.03	−.05	−.05
Interpersonal sensitivity	6	344	.09	.11	.01	.18	.11	.11	4	277	.15	.20	.09	.21	.20	.20
Prudence	6	344	.10	.16	−.02	.21	.00	.32	4	277	.04	.05	−.07	.16	−.01	.12
Inquisitive	6	344	−.03	−.06	−.12	.06	−.06	−.06	4	277	−.02	−.03	−.12	.07	−.03	−.03
Learning approach	6	344	.07	.09	−.04	.19	−.04	.22	4	277	.06	.08	.03	.09	.08	.08

Note. When a given competency was measured with a single item in a study, the reliability of that item was estimated by applying the Spearman–Brown prophecy formula to multiple-item measures of the same competency in other studies. *K* = number of independent samples; *N* = total sample sizes for each analysis; $\bar{r}$ = sample-size-weighted mean observed (uncorrected) correlation; ρ_{op} = mean operational correlation corrected for unreliability in the criterion using coefficient alpha and range restriction; CI_L and CI_U = lower and upper bound of the 95% confidence interval around $\bar{r}$; CV_L and CV_U = lower and upper bound of the 80% credibility interval around ρ_{op}; DV = dependent variable.

Our findings also extend the evolutionary psychology perspective on the importance of extraversion for social adaptation problems (e.g., achieving status in a group, mating) by showing its value in adaptation to change in a work environment. Perhaps more important, the finding that ambition, but not sociability, predicts adaptive performance demonstrates the need to employ trait variables with appropriate specificity in organizational research (Judge & Kammeyer-Mueller, 2012; Ones & Viswesvaran, 1996). Ambitious employees and managers have the dispositional tendencies to anticipate change, proactively modify how objectives are achieved at work, and seize the opportunities to improve. In line with socioanalytic theory of personality (J. Hogan & Holland, 2003), our findings on ambition suggest that ambitious individuals may view adaptive performance as the means to get ahead and move upward in the organizational echelon or, in evolutionary adaptation terms, to gain and maintain status in the social hierarchy.

The meta-analytic estimates also provide some interpretative context for prior inconsistent findings (Allworth & Hesketh, 1999; Pulakos et al., 2002) regarding conscientiousness and openness. The wide credibility interval for conscientiousness may suggest variability in adaptive requirements and/or opportunities across jobs and hence variability in the predictive utility of conscientiousness. It is also possible that the potential positive effect of achievement orientation was concealed in the overall weak effect of conscientiousness (see Dudley, Orvis, Lebiecki, & Cortina, 2006), and separating out achievement orientation from dutifulness in future research will be more illuminating. Similarly, examining facets of openness might enable better insight into when it relates to adaptive performance. Additionally, as Learning Approach had a relationship with proactive forms of performance in both managerial and employee samples but did not contribute explanation above and beyond other predictors, considering the relative importance of traits may be useful. That is, for practitioners designing selection tools with concerns about efficiency in measurement, the lack of incremental value of openness may preclude adding it to a selection battery.

Although the current study included samples from diverse jobs, organizations, and industries, some notes about the study's limitations and interpretation are in order. First, limited by the use of archival data, we were unable to explicate the characteristics of the work environment beyond the job level. We acknowledge that behaviors at work stem not only from the person but also from the situation and the interaction between the person and the situation (Barrick, Mitchell, & Stewart, 2003; Barrick & Mount, 1993; Tett & Burnett, 2003). A closer understanding of the personality–adaptive performance relationship may be gained by directly assessing contextual influences such as situational strength (Meyer, Dalal, & Bonaccio, 2009), autonomy (Morgeson & Humphrey, 2006), and work climate (Han & Williams, 2008). Our finding on the moderating effect of job level contributes but a small piece to the puzzle.

Second, although we mapped the operationalizations of adaptive performance onto Pulakos et al.'s (2000) framework and also into categories of reactive and proactive behavior, the adaptive performance measure in each study consisted of different competencies measured using different items. Despite the evidence of an overall adaptive performance factor in eight exploratory factor analyses, the inability to use a uniform outcome measure may have contributed to the between-study variations in the results. From the fact that Managing Change and Political Awareness were not included in any employee samples (see Table 6), it seems likely that that

managers' heightened opportunity for proactive forms of adaptive performance may in part come from a broadened criterion domain.

Third, the use of a single personality inventory with validation data from the test publisher may limit the generalizability of the findings. The current pattern of findings does not seem to reflect any bias toward providing only data that support a measure, given variability in validity coefficients. Nevertheless, our study resembles a primary study rather than a typical meta-analysis in that the sample(s) afforded the opportunity to probe the research questions while constraining the degree to which results may apply to other measures.

The current findings also shed light on future research directions. For example, researchers may begin to examine the extent to which personality traits predict above and beyond cognitive ability or even interact with cognitive ability to affect adaptive performance. In addition, future studies may include personality measures outside the trait domain (Funder, 2001). In particular, recent research has examined how individuals may adjust their momentary personality dynamically in various situational contexts (Huang & Ryan, 2011; Minbashian, Wood, & Beckmann, 2010). Incorporating these dynamic personality constructs in future studies may further elucidate the role of personality in delivering adaptive performance.

Conclusion

With the increasing importance of adaptive performance in today's workplace, the identification of individuals who can adapt to changing tasks and dynamic situations can help businesses gain competitive advantage. Using validation data from 71 independent samples and 7,535 individuals and an approach based on evolutionary personality psychology theory, we identify emotional stability and ambition as two primary personality predictors for adaptive performance at work. The effects of these two traits, particularly ambition, are stronger in manager than employee samples. Our results provide a new look of the inconsistent findings in the literature regarding the effects of personality on adaptive performance.

References

References marked with an asterisk were included in the meta-analysis reported in Appendix A.

Albrecht, A., Dilchert, S., Deller, J., & Paulus, F. M. (in press). Openness in cross-cultural work settings: A multi-country study of expatriates. *Journal of Personality Assessment*.

Ali, A., Van der Zee, K., & Sanders, G. (2003). Determinants of intercultural adjustment among expatriate spouses. *International Journal of Intercultural Relations, 27,* 563–580. doi:10.1016/S0147-1767(03)00054-3

Allport, G. W. (1937). *Personality: A psychological interpretation*. New York, NY: Holt.

*Allworth, E., & Hesketh, B. (1999). Construct-oriented biodata: Capturing change-related and contextually relevant future performance. *International Journal of Selection and Assessment, 7,* 97–111. doi:10.1111/1468-2389.00110

Ashford, S. J., & Taylor, M. S. (1990). Adaptation to work transitions: An integrative approach. In G. R. Ferris & K. M. Rowland (Eds.), *Research in personnel and human resources management* (Vol. 8, pp. 1–39). Greenwich, CT: JAI Press.

Baard, S. K., Rench, T. A., & Kozlowski, S. W. J. (2013). Performance adaptation: A theoretical integration and review. *Journal of Management*. Advance online publication. doi:10.1177/0149206313488210

Barrick, M. R., Mitchell, T. R., & Stewart, G. L. (2003). Situational and motivational influences on trait–behavior relationships. In M. R. Barrick & A. M. Ryan (Eds.), *Personality and work: Reconsidering the role of personality in organizations* (pp. 60–82). San Francisco, CA: Jossey-Bass.

Barrick, M. R., & Mount, M. K. (1993). Autonomy as a moderator of the relationships between the Big Five personality dimensions and job performance. *Journal of Applied Psychology, 78,* 111–118. doi:10.1037/0021-9010.78.1.111

Barrick, M. R., Mount, M. K., & Gupta, R. (2003). Meta-analysis of the relationship between the five-factor model of personality and Holland's occupational types. *Personnel Psychology, 56,* 45–74. doi:10.1111/j.1744-6570.2003.tb00143.x

Barrick, M. R., Mount, M. K., & Judge, T. A. (2001). Personality and performance at the beginning of the new millennium: What do we know and where do we go next? *International Journal of Selection and Assessment, 9,* 9–30. doi:10.1111/1468-2389.00160

Barrick, M. R., Mount, M. K., & Li, N. (2013). The theory of purposeful work behavior: The role of personality, higher-order goals, and job characteristics. *Academy of Management Review, 38,* 132–153. doi:10.5465/amr.2010.0479

Barrick, M. R., Stewart, G. L., & Piotrowski, M. (2002). Personality and job performance: Test of the mediating effects of motivation among sales representatives. *Journal of Applied Psychology, 87,* 43–51. doi:10.1037/0021-9010.87.1.43

Berg, J. M., Wrzesniewski, A., & Dutton, J. E. (2010). Perceiving and responding to challenges in job crafting at different ranks: When proactivity requires adaptivity. *Journal of Organizational Behavior, 31,* 158–186. doi:10.1002/job.645

Bhattacharya, M., Gibson, D. E., & Doty, D. H. (2005). The effects of flexibility in employee skills, employee behaviors, and human resource practices on firm performance. *Journal of Management, 31,* 622–640. doi:10.1177/0149206304272347

*Blickle, G., Kramer, J., Schneider, P. B., Meurs, J. A., Ferris, G. R., Mierke, J., . . . Momm, T. D. (2011). Role of political skill in job performance prediction beyond general mental ability and personality in cross-sectional and predictive studies. *Journal of Applied Social Psychology, 41,* 488–514. doi:10.1111/j.1559-1816.2010.00723.x

Blume, B. D., Ford, J. K., Baldwin, T. T., & Huang, J. L. (2010). Transfer of training: A meta-analytic review. *Journal of Management, 36,* 1065–1105. doi:10.1177/0149206309352880

Bourgeois, M. J., & Perkins, J. (2003). A test of evolutionary and sociocultural explanations of reactions to sexual harassment. *Sex Roles, 49,* 343–351. doi:10.1023/A:1025160120455

Boyes, M. E., & French, D. J. (2010). Neuroticism, stress, and coping in the context of an anagram-solving task. *Personality and Individual Differences, 49,* 380–385. doi:10.1016/j.paid.2010.04.001

Brooks, J. H., & DuBois, D. L. (1995). Individual and environmental predictors of adjustment during the first year of college. *Journal of College Student Development, 36,* 347–360.

Buss, D. M. (1991). Evolutionary personality psychology. *Annual Review of Psychology, 42,* 459–491. doi:10.1146/annurev.ps.42.020191.002331

Buss, D. M. (1996). Social adaptation and five major factors of personality. In J. S. Wiggins (Ed.), *The five-factor model of personality: Theoretical perspectives* (pp. 180–207). New York, NY: Guilford Press.

Buss, D. M. (2009). How can evolutionary psychology successfully explain personality and individual differences? *Perspectives on Psychological Science, 4,* 359–366. doi:10.1111/j.1745-6924.2009.01138.x

Camperio Ciani, A. S., Capiluppi, C., Veronese, A., & Sartori, G. (2007). The adaptive value of personality differences revealed by small island population dynamics. *European Journal of Personality, 21,* 3–22. doi:10.1002/per.595

Carver, C. S., Sutton, S. K., & Scheier, M. F. (2000). Action, emotion, and personality: Emerging conceptual integration. *Personality and Social Psychology Bulletin, 26,* 741–751. doi:10.1177/0146167200268008

Cattell, R. B., Eber, H. W., & Tatsuoka, M. M. (1988). *Handbook for the Sixteen Personality Factor Questionnaire (16 PF)*. Champaign, IL: Institute for Personality and Ability Testing.

Chan, D., & Schmitt, N. (2000). Interindividual differences in intraindividual changes in proactivity during organizational entry: A latent growth modeling approach to understanding newcomer adaptation. *Journal of Applied Psychology, 85,* 190–210. doi:10.1037/0021-9010.85.2.190

Chang, L., Connelly, B. S., & Geeza, A. A. (2012). Separating method factors and higher order traits of the Big Five: A meta-analytic multitrait–multimethod approach. *Journal of Personality and Social Psychology, 102,* 408–426. doi:10.1037/a0025559

Chen, G., Thomas, B., & Wallace, J. (2005). A multilevel examination of the relationships among training outcomes, mediating regulatory processes, and adaptive performance. *Journal of Applied Psychology, 90,* 827–841. doi:10.1037/0021-9010.90.5.827

Chiaburu, D. S., Oh, I.-S., Berry, C. M., Li, N., & Gardner, R. G. (2011). The five-factor model of personality traits and organizational citizenship behaviors: A meta-analysis. *Journal of Applied Psychology, 96,* 1140–1166. doi:10.1037/a0024004

Cohen, J., Cohen, P., West, S. G., & Aiken, L. S. (2003). *Applied multiple regression/correlation analysis for the behavioral sciences*. Mahwah, NJ: Erlbaum.

Confer, J. C., Easton, J. A., Fleischman, D. S., Goetz, C. D., Lewis, D. M. G., Periloux, C., & Buss, D. M. (2010). Evolutionary psychology: Controversies, questions, prospects, and limitations. *American Psychologist, 65,* 110–126. doi:10.1037/a0018413

Connelly, B. S., Ones, D. S., Davies, S. E., & Birkland, A. (2013). Opening up openness: A theoretical sort following critical incidents methodology and a meta-analytic investigation of the trait family measures. *Journal of Personality Assessment*. Advance online publication. doi:10.1080/00223891.2013.809355

Denissen, J. J. A., & Penke, L. (2008). Motivational individual reaction norms underlying the five-factor model of personality: First steps towards a theory-based conceptual framework. *Journal of Research in Personality, 42,* 1285–1302. doi:10.1016/j.jrp.2008.04.002

DeYoung, C. G., Quilty, L. C., & Peterson, J. B. (2007). Between facets and domains: 10 aspects of the Big Five. *Journal of Personality and Social Psychology, 93,* 880–896. doi:10.1037/0022-3514.93.5.880

Digman, J. M. (1997). Higher-order factors of the Big Five. *Journal of Personality and Social Psychology, 73,* 1246–1256. doi:10.1037/0022-3514.73.6.1246

Dudley, N. M., Orvis, K. A., Lebiecki, J. E., & Cortina, J. M. (2006). A meta-analytic investigation of conscientiousness in the prediction of job performance: Examining the intercorrelations and the incremental validity of narrow traits. *Journal of Applied Psychology, 91,* 40–57. doi:10.1037/0021-9010.91.1.40

Duncan, R. B. (1972). Characteristics of organizational environments and perceived environmental uncertainty. *Administrative Science Quarterly, 17,* 313–327. doi:10.2307/2392145

Elliot, A. J., & Thrash, T. M. (2002). Approach–avoidance motivation in personality: Approach and avoidance temperaments and goals. *Journal of Personality and Social Psychology, 82,* 804–818. doi:10.1037/0022-3514.82.5.804

Eysenck, H. J. (1970). *The structure of human personality*. New York, NY: Methuen.

Eysenck, H. J., & Eysenck, M. W. (1985). *Personality and individual differences: A natural science approach*. New York, NY: Plenum Press. doi:10.1007/978-1-4613-2413-3

Ford, J. K., Smith, E. M., Weissbein, D. A., Gully, S. M., & Salas, E. (1998). Relationships of goal orientation, metacognitive activity and practice strategies with learning outcomes and transfer. *Journal of Applied Psychology, 83,* 218–233. doi:10.1037/0021-9010.83.2.218

Funder, D. C. (2001). Personality. *Annual Review of Psychology, 52,* 197–221. doi:0066-4308/0201-0197

Gallagher, D. J. (1990). Extraversion, neuroticism and appraisal of stressful academic events. *Personality and Individual Differences, 11,* 1053–1057. doi:10.1016/0191-8869(90)90133-C

Gorsuch, R. L. (1997). Exploratory factor analysis: Its role in item analysis. *Journal of Personality Assessment, 68,* 532–560. doi:10.1207/s15327752jpa6803_5

Grant, I., Eriksen, H. R., Marquis, P., Orre, I. J., Palinkas, L. A., Suedfeld, P., . . . Ursin, H. (2007). Psychological selection of Antarctic personnel: The "SOAP" instrument. *Aviation, Space, and Environmental Medicine, 78,* 793–800.

*Griffin, B., & Hesketh, B. (2003). Adaptable behaviours for successful work and career adjustment. *Australian Journal of Psychology, 55,* 65–73. doi:10.1080/00049530412331312914

Griffin, M. A., Neal, A., & Parker, S. K. (2007). A new model of work role performance: Positive behavior in uncertain and interdependent contexts. *Academy of Management Journal, 50,* 327–347. doi:10.5465/AMJ.2007.24634438

*Han, T. Y. (2003). *Multilevel approach to individual and team adaptive performance* (Unpublished doctoral dissertation). University at Albany, State University of New York.

Han, T. Y., & Williams, K. J. (2008). Multilevel investigation of adaptive performance: Individual- and team-level relationships. *Group & Organization Management, 33,* 657–684. doi:10.1177/1059601108326799

Hawley, P. H. (1999). The ontogenesis of social dominance: A strategy-based evolutionary perspective. *Developmental Review, 19,* 97–132. doi:10.1006/drev.1998.0470

Hesketh, B., & Neal, A. (1999). Technology and performance. In D. R. Ilgen & E. D. Pulakos (Eds.), *The changing nature of performance: Implications for staffing, motivation, and development* (pp. 21–55). San Francisco, CA: Jossey-Bass.

Hettema, P. J. (1979). *Personality and adaptation*. New York, NY: North-Holland.

Hogan, J., & Holland, B. (2003). Using theory to evaluate personality and job–performance relations: A socioanalytic perspective. *Journal of Applied Psychology, 88,* 100–112. doi:10.1037/0021-9010.88.1.100

Hogan, J., Rybicki, S. L., Motowidlo, S. J., & Borman, W. C. (1998). Relations between contextual performance, personality, and occupational advancement. *Human Performance, 11,* 189–207. doi:10.1080/08959285.1998.9668031

Hogan, R. (1982). A socioanalytic theory of personality. In M. M. Page (Ed.), *Nebraska Symposium on Motivation: Personality*. Current theory and research (pp. 55–89). Lincoln: University of Nebraska Press.

Hogan, R., & Hogan, J. (2007). *Hogan Personality Inventory manual* (3rd ed.). Tulsa, OK: Hogan Assessment Systems.

Hogan Assessment Systems. (2009). *The development of the Hogan competency model*. Tulsa, OK: Author.

Hogan Assessment Systems. (2010). *The Hogan archive*. Tulsa, OK: Hogan Press.

Hough, L. M. (1992). The "Big Five" personality variables—construct confusion: Description versus prediction. *Human Performance, 5,* 139–155. doi:10.1207/s15327043hup0501&2_8

Hough, L. M., Eaton, N. K., Dunnette, M. D., Kamp, J. D., & McCloy, R. A. (1990). Criterion-related validities of personality constructs and the effect of response distortion on those validities. *Journal of Applied Psychology, 75,* 581–595. doi:10.1037/0021-9010.75.5.581

Hough, L. M., & Ones, D. S. (2001). The structure, measurement, validity, and use of personality variables in industrial, work, and organizational psychology. In N. Anderson, D. S. Ones, H. K. Sinangil, & C. Viswesvaran (Eds.), *Handbook of industrial, work and organizational psychology: Vol. 1. Personnel psychology* (pp. 233–278). New York, NY: Sage. doi:10.4135/9781848608320.n13

HR Policy Association. (2010). *Educating the 21st century workforce: The views of chief human resource offices regarding workforce development*. Washington, DC: Author.

Huang, J. L., & Ryan, A. M. (2011). Beyond personality traits: A study of personality states and situational contingencies in customer service jobs. *Personnel Psychology, 64,* 451–488. doi:10.1111/j.1744-6570.2011.01216.x

Hunter, J. E., & Schmidt, F. L. (2004). *Methods of meta-analysis: Correcting error and bias in research findings* (2nd ed.). Thousand Oaks, CA: Sage.

Hunter, J. E., Schmidt, F. L., & Le, H. (2006). Implications of direct and indirect range restriction for meta-analysis methods and findings. *Journal of Applied Psychology, 91,* 594–612. doi:10.1037/0021-9010.91.3.594

Ilgen, D. R., & Pulakos, E. D. (1999). Employee performance in today's organizations. In D. R. Ilgen & E. D. Pulakos (Eds.), *The changing nature of work performance: Implications for staffing, motivation, and development* (pp. 1–20). San Francisco, CA: Jossey-Bass.

Johnson, J. W. (2001). The relative importance of task and contextual performance dimensions to supervisor judgments of overall performance. *Journal of Applied Psychology, 86,* 984–996. doi:10.1037/0021-9010.86.5.984

Johnson, J. W., & LeBreton, J. M. (2004). History and use of relative importance indices in organizational research. *Organizational Research Methods, 7,* 238–257. doi:10.1177/1094428104266510

Judge, T. A., Bono, J. E., Ilies, R., & Gerhardt, M. W. (2002). Personality and leadership: A qualitative and quantitative review. *Journal of Applied Psychology, 87,* 765–780. doi:10.1037/0021-9010.87.4.765

Judge, T. A., & Kammeyer-Mueller, J. D. (2012). General and specific measures in organizational behavior research: Considerations, examples, and recommendations for researchers. *Journal of Organizational Behavior, 33,* 161–174. doi:10.1002/job.764

Katz, D., & Kahn, R. (1978). *The social psychology of organizations* (2nd ed.). New York, NY: Wiley.

Keller, M. C., Coventry, W. L., Heath, A. C., & Martin, N. G. (2005). Widespread evidence for non-additive genetic variation in Cloninger's and Eysenck's personality dimensions using a twin plus sibling design. *Behavior Genetics, 35,* 707–721. doi:10.1007/s10519-005-6041-7

Kish Gephart, J., Detert, J. R., Trevino, L. K., & Edmondson, A. C. (2009). Silenced by fear: The nature, sources, and consequences of fear at work. *Research in Organizational Behavior, 29,* 163–193. doi:10.1016/j.riob.2009.07.002

Kozlowski, S. W. J., Gully, S. M., Brown, K. G., Salas, E., Smith, E. M., & Nason, E. R. (2001). Effects of training goals and goal orientation traits on multidimensional training outcomes and performance adaptability. *Organizational Behavior and Human Decision Processes, 85,* 1–31. doi:10.1006/obhd.2000.2930

*Krischer, M., & Witt, L. A. (2010, April). *Predicting adaptive performance: The interactive effects of ability and leadership*. Paper presented at the meeting of the Society for Industrial and Organizational Psychology, Atlanta, GA.

Kurtz, J. E., Puher, M. A., & Cross, N. A. (2012). Prospective prediction of college adjustment using self- and informant-rated personality traits. *Journal of Personality Assessment, 94,* 630–637. doi:10.1080/00223891.2012.672506

LePine, J. A., Colquitt, J. A., & Erez, A. (2000). Adaptability to changing task contexts: Effects of general cognitive ability, conscientiousness, and openness to experience. *Personnel Psychology, 53,* 563–593. doi:10.1111/j.1744-6570.2000.tb00214.x

LePine, J. A., & Van Dyne, L. (2001). Voice and cooperative behavior as contrasting forms of contextual performance: Evidence of differential relationships with Big Five personality characteristics and cognitive ability. *Journal of Applied Psychology, 86,* 326–336. doi:10.1037/0021-9010.86.2.326

Liu, S., Wang, M., Zhan, Y., & Shi, J. (2009). Daily work stress and alcohol use: Testing the cross-level moderation effects of neuroticism and job involvement. *Personnel Psychology, 62,* 575–597. doi:10.1111/j.1744-6570.2009.01149.x

Lund, O. C. H., Tamnes, C. K., Moestue, C., Buss, D. M., & Vollrath, M. (2007). Tactics of hierarchy negotiation. *Journal of Research in Personality, 41,* 25–44. doi:10.1016/j.jrp.2006.01.002

Magnus, K., Diener, E., Fujita, F., & Pavot, W. (1993). Extraversion and neuroticism as predictors of objective life events: A longitudinal analysis. *Journal of Personality and Social Psychology, 65,* 1046–1053. doi:10.1037/0022-3514.65.5.1046

Meyer, R. D., Dalal, R. S., & Bonaccio, S. (2009). A meta-analytic investigation into the moderating effects of situational strength on the conscientiousness–performance relationship. *Journal of Organizational Behavior, 30,* 1077–1102. doi:10.1002/job.602

Michalski, R. L., & Shackelford, T. K. (2010). Evolutionary personality psychology: Reconciling human nature and individual differences. *Personality and Individual Differences, 48,* 509–516. doi:10.1016/j.paid.2009.10.027

Minbashian, A., Wood, R. E., & Beckmann, N. (2010). Task-contingent conscientiousness as a unit of personality at work. *Journal of Applied Psychology, 95,* 793–806. doi:10.1037/a0020016

Morgeson, F. P., & Humphrey, S. E. (2006). The Work Design Questionnaire (WDQ): Developing and validating a comprehensive measure for assessing job design and the nature of work. *Journal of Applied Psychology, 91,* 1321–1339. doi:10.1037/0021-9010.91.6.1321

Mount, M. K., Barrick, M. R., Scullen, S. M., & Rounds, J. (2005). Higher-order dimensions of the Big Five personality traits and the Big Six vocational interest types. *Personnel Psychology, 58,* 447–478. doi:10.1111/j.1744-6570.2005.00468.x

*Neal, A., Yeo, G., Koy, A., & Xiao, T. (2012). Predicting the form and direction of work role performance from the Big 5 model of personality traits. *Journal of Organizational Behavior, 33,* 175–192. doi:10.1002/job.742

Nettle, D. (2006). The evolution of personality variation in humans and other animals. *American Psychologist, 61,* 622–631. doi:10.1037/0003-066X.61.6.622

Ones, D. S., & Viswesvaran, C. (1996). Bandwidth-fidelity dilemma in personality measurement for personnel selection. *Journal of Organizational Behavior, 17,* 609–626. doi:10.1002/(SICI)1099-1379(199611)17:6<609::AID-JOB1828>3.0.CO;2-K

Ployhart, R. E., & Bliese, P. D. (2006). Individual adaptability (I-ADAPT) theory: Conceptualizing the antecedents, consequences, and measurement of individual differences in adaptability. In S. Burke, L. Pierce, & E. Salas (Eds.), *Understanding adaptability: A prerequisite for effective performance within complex environments* (pp. 3–39). San Diego, CA: Elsevier. doi:10.1016/S1479-3601(05)06001-7

Pulakos, E. D., Arad, S., Donovan, M. A., & Plamondon, K. E. (2000). Adaptability in the workplace: Development of a taxonomy of adaptive performance. *Journal of Applied Psychology, 85,* 612–624. doi:10.1037/0021-9010.85.4.612

*Pulakos, E. D., Schmitt, N., Dorsey, D. W., Arad, S., Hedge, J. W., & Borman, W. C. (2002). Predicting adaptive performance: Further tests of a model of adaptability. *Human Performance, 15,* 299–324. doi:10.1207/S15327043HUP1504_01

Schneider, B. (1987). The people make the place. *Personnel Psychology, 40,* 437–453. doi:10.1111/j.1744-6570.1987.tb00609.x

*Shoss, M. K., Witt, L. A., & Vera, D. (2012). When does adaptive performance lead to higher task performance? *Journal of Organizational Behavior, 33,* 910–924. doi:10.1002/job.780

Steiger, J. H. (1980). Tests for comparing elements of a correlation matrix. *Psychological Bulletin, 87,* 245–251. doi:10.1037/0033-2909.87.2.245

Tabachnick, B. G., & Fidell, L. S. (2007). *Using multivariate statistics* (5th ed.). Boston, MA: Allyn & Bacon.

Tett, R. P., & Burnett, D. D. (2003). A personality trait-based interactionist model of job performance. *Journal of Applied Psychology, 88,* 500–517. doi:10.1037/0021-9010.88.3.500

Tooby, J., & Cosmides, L. (1990). On the universality of human nature and the uniqueness of the individual: The role of genetics and adaptation.

Journal of Personality, 58, 17–67. doi:10.1111/j.1467-6494.1990.tb00907.x

Tooby, J., Cosmides, L., & Price, M. E. (2006). Cognitive adaptations for *n*-person exchange: The evolutionary roots of organizational behavior. *Managerial and Decision Economics, 27,* 103–129. doi:10.1002/mde.1287

Tornau, K., & Frese, M. (2013). Construct clean-up in proactivity research: A meta-analysis on the nomological net of work-related proactivity concepts and their incremental validities. *Applied Psychology, 62,* 44–96. doi:10.1111/j.1464-0597.2012.00514.x

Trapnell, P. D., & Wiggins, J. S. (1990). Extension of the interpersonal adjective scales to include the Big Five dimensions of personality. *Journal of Personality and Social Psychology, 59,* 781–790. doi:10.1037/0022-3514.59.4.781

Vasilopoulos, N. L., Cucina, J. M., & Hunter, A. E. (2007). Personality and training proficiency: Issues of bandwidth fidelity and curvilinearity. *Journal of Occupational and Organizational Psychology, 80,* 109–131. doi:10.1348/096317906X102114

Viken, R. J., Rose, R. J., Kaprio, J., & Koskenvuo, M. (1994). A developmental genetic analysis of adult personality: Extraversion and neuroticism from 18 to 59 years of age. *Journal of Personality and Social Psychology, 66,* 722–730. doi:10.1037/0022-3514.66.4.722

Viswesvaran, C., & Ones, D. S. (1995). Theory testing: Combining psychometric meta-analysis and structural equations modeling. *Personnel Psychology, 48,* 865–885. doi:10.1111/j.1744-6570.1995.tb01784.x

Viswesvaran, C., Ones, D. S., & Schmidt, F. L. (1996). Comparative analysis of the reliability of job performance ratings. *Journal of Applied Psychology, 81,* 557–574. doi:10.1037/0021-9010.81.5.557

Wang, M., Zhan, Y., McCune, E., & Truxillo, D. (2011). Understanding newcomers' adaptability and work-related outcomes: Testing the mediating roles of perceived P-E fit variables. *Personnel Psychology, 64,* 163–189. doi:10.1111/j.1744-6570.2010.01205.x

Wiggins, J. S. (1991). Agency and communion as conceptual coordinates for the understanding and measurement of interpersonal behavior. In D. Cicchetti & W. M. Grove (Eds.), *Thinking clearly about psychology: Essays in honor of Paul E. Meehl: Vol. 2. Personality and psychopathology* (pp. 89–113). Minneapolis: University of Minnesota Press.

Woo, S. E., Chernyshenko, O. S., Longley, A., Zhang, Z.-X., Chiu, C.-Y., & Stark, S. E. (2013). Openness to experience: Its lower level structure, measurement, and cross-cultural equivalence. *Journal of Personality Assessment*. Advance online publication. doi:10.1080/00223891.2013.806328

Woo, S. E., Chernyshenko, O. S., Stark, S. E., & Conz, G. (2013). Validity of six openness facets in predicting work behaviors: A meta-analysis. *Journal of Personality Assessment*. Advance online publication. doi:10.1080/00223891.2013.806329

Wood, J. M., Tataryn, D. J., & Gorsuch, R. L. (1996). Effects of under- and overextraction on principal axis factor analysis with varimax rotation. *Psychological Methods, 1,* 354–365. doi:10.1037/1082-989X.1.4.354

Yukl, G., & Falbe, C. M. (1991). Importance of different power sources in downward and lateral relations. *Journal of Applied Psychology, 76,* 416–423. doi:10.1037/0021-9010.76.3.416

Zhang, Z., Zyphur, M. J., Narayanan, J., Arvey, R. D., Chaturvedi, S., Avolio, B. J., . . . Larsson, G. (2009). The genetic basis of entrepreneurship: Effects of gender and personality. *Organizational Behavior and Human Decision Processes, 110,* 93–107. doi:10.1016/j.obhdp.2009.07.002

Appendix A

Meta-Analysis Based on External Literature Search

In this appendix, we describe the method to locate published and unpublished studies on adaptive performance at work and present the meta-analytic results.

Literature Search

We conducted a comprehensive search of studies that contained estimates of any of the Big Five factor-level personality traits and adaptive performance at work. On PsycINFO, we searched for journal articles, book chapters, and unpublished dissertations using the keywords listed below. The keywords for adaptive performance include *adaptive performance, adaptation, adaptability,* and *adaptivity.* The keywords for personality include *personality* and *trait.* We manually screened the resulting entries for pertinent studies.

To ensure comprehensiveness, we also searched for *adaptive performance* in the title or abstract of an entry and manually screened for studies that included any of the Big Five traits as a control variable. We also manually searched the conference programs for the Society for Industrial and Organizational Psychology and for the Academy of Management from 2008 to 2013. Finally, we contacted authors who had recently published on adaptive performance to request unpublished manuscripts and results.

Inclusion Criteria

We included a study in the meta-analysis if (a) the study contained adaptive job performance, rated by individuals other than the focal employee, and (b) the study reported a correlation coefficient between adaptive performance and any of the Big Five factor-level personality measures. We were able to locate six published and two unpublished papers, all based on employee samples.

Meta-Analytic Results

We present results for the meta-analysis in Table A1 below, noting that these results provided only a limited opportunity to examining our hypotheses. The effects of emotional stability provided support for Hypothesis 1, with an operational validity of .14.

(*Appendices continue*)

Table A1
Meta-Analytic Results of Personality–Adaptive Performance Relationship Based on External Search

Variable	*K*	*N*	$\bar{r}$	SD_r	ρ_{op}	SD_ρ	% variance	95% CI		80% CV	
								Lower	Upper	Lower	Upper
Emotional Stability	6	2,621	.14	.08	.14	.02	81	.07	.20	.10	.18
Extraversion	4	1,753	.03	.12	.04	.05	52	−.09	.15	−.04	.12
Agreeableness	4	1,753	.05	.12	.06	.04	66	−.06	.17	.00	.12
Conscientiousness	8	2,414	.13	.11	.13	.05	55	.05	.20	.04	.22
Openness	8	2,878	.06	.13	.06	.07	39	−.03	.15	−.05	.17

Note. K = number of independent samples; N = total sample sizes for each analysis; $\bar{r}$ = sample-size-weighted mean observed (uncorrected) correlation; SD_r = sample-size-weighted observed standard deviation of correlations; ρ_{op} = mean operational correlation corrected for unreliability in the criterion using coefficient alpha; SD_ρ = standard deviation of the corrected correlations; % variance = percentage of variance attributed to sampling error, criterion unreliability, and range restriction; 95% CI = 95% confidence interval around $\bar{r}$; 80% CV = 80% credibility interval around ρ_{op}.

Failing to support Hypothesis 3, the relationship between openness and adaptive performance was weak and nonsignificant, with an operational validity of .06. Although the other hypotheses could not be tested in this small-scale meta-analysis, we explored the relationships between the other three Big Five factors and adaptive performance. Conscientiousness had a positive association with adaptive performance (ρ_{op} = .13). The other two personality dimensions, extraversion (ρ_{op} = .04) and agreeableness (ρ_{op} = .06), did not share significant associations with adaptive performance.

(*Appendices continue*)

Appendix B

Summary of Study Level Input for Meta-Analysis

		Adaptive performance		Adjustment		Ambition		Sociability		Interpersonal sensitivity		Prudence		Inquisitive		Learning			
Study ID	*N*	Competencies	α	*r*	*u*	*r*	*u*	*r*	*u*	*r*	*u*	*r*	*u*	*r*	*u*	*r*	*u*	Validation design	Industry
M1	103	1, 2, 3, 4, 6, 7, 8	.89	.25	0.85	.24	0.77	.08	0.94	−.01	1.12	.01	0.84	.08	0.97	.10	0.89	Concurrent	Pharmaceutical
M2	77	1, 2, 4, 7, 8, 9	.87	.17	0.75	.15	0.80	−.07	0.98	.28	0.79	.33	0.79	−.14	0.87	−.05	0.95	Concurrent	Technology
M3	103	1, 3, 5, 8, 9	.68	−.08	0.59	.16	0.40	−.07	0.87	−.02	0.82	−.13	0.79	−.10	0.76	.16	0.78	Concurrent	Retail
M4	210	1, 2, 3, 6, 8	.71	.18	0.89	.30	0.83	.24	1.09	.32	1.34	.11	0.84	.03	0.88	.09	0.99	Concurrent	Agriculture
M5	331	6, 7	.77	.06	0.96	.20	0.91	.11	1.11	.06	1.17	.02	0.91	.20	0.97	.14	1.06	N/A	Retail
M6	290	1, 2	.83	.33	0.69	.21	0.36	−.11	0.87	.16	0.99	.18	0.84	.03	0.86	.13	0.88	Concurrent	Business services
M7	140	1, 2, 3, 7	.70	−.01	0.90	.01	0.85	−.08	1.12	−.01	1.09	.08	0.95	−.06	1.00	−.04	1.12	Concurrent	Energy and utilities
M8	130	1, 2, 7	.58	.26	0.98	.11	0.93	.12	0.97	.12	0.99	.06	0.92	.14	1.00	.35	1.00	Concurrent	Food service
M9	121	5, 6, 7	.62	.11	0.77	.02	0.65	−.12	1.03	.22	1.28	.12	0.80	.06	0.87	.01	0.87	Concurrent	Communications
M10	58	1, 2, 7	.91	.13	0.95	−.01	0.86	−.06	0.89	−.09	1.21	−.18	0.85	.04	0.78	−.20	1.02	Concurrent	Transportation
M11	49	3, 5, 6, 7, 9	.87	.18	0.92	.37	0.36	.02	0.88	−.01	1.00	.21	0.83	.03	0.86	.12	1.03	Concurrent	Transportation
M12	45	6, 7	.59	.10	0.70	.05	0.59	.07	1.12	−.01	0.90	.08	0.96	.00	1.04	.10	1.00	N/A	Retail
M13	44	1, 2, 5, 6, 7	.61	.07	0.95	.06	0.79	−.10	0.88	.12	1.16	.17	0.78	−.20	0.72	−.11	1.16	Concurrent	Energy and utilities
M14	41	1, 9	.80	.38	0.85	.24	0.81	−.19	0.76	.13	1.25	.09	0.87	−.15	1.00	.12	1.03	Concurrent	Construction
M15	36	1, 2, 4, 6, 7	.89	−.02	0.67	.34	0.58	.12	0.90	.20	0.77	−.05	0.81	.00	0.95	.05	1.24	Concurrent	Manufacturing
M16	33	6, 7	.67	−.20	0.83	.01	0.63	.22	0.85	−.18	0.55	−.42	0.66	.20	1.03	.13	1.03	N/A	Health care
M17	28	1, 2, 6	.83	−.22	0.79	.00	0.44	−.17	1.02	−.09	0.96	−.17	1.07	.29	0.87	.17	0.90	Concurrent	Finance
M18	25	1, 2, 3, 5, 7, 9	.60	.33	0.67	.16	0.44	.05	0.77	.36	0.90	.38	0.79	.24	0.68	−.14	1.00	Concurrent	Construction
E1	103	1, 2, 4, 6, 7	.83	.24	0.86	.12	0.87	.08	0.89	.26	1.22	.22	0.94	.03	0.89	.06	1.15	Concurrent	Energy and utilities
E2	92	2, 4, 6, 7, 9	.73	.14	1.00	.10	0.80	.10	0.90	.03	0.93	−.19	0.90	.12	0.82	.06	0.97	Concurrent	Agriculture
E3	94	1, 2, 4, 7, 9	.86	.09	0.97	−.07	1.05	−.08	1.01	−.09	1.15	.15	0.83	−.01	0.96	.17	0.87	Concurrent	Security
E4	84	1, 2, 3, 6, 7	.78	.05	0.81	.09	0.61	.06	1.00	.11	0.60	−.10	0.77	−.01	0.89	.02	0.93	Concurrent	Banking
E5	416	1, 2, 7	.75	.16	0.79	.01	0.75	−.10	0.99	.14	0.73	.16	0.92	−.06	1.06	−.03	0.94	Concurrent	Finance
E6	362	6, 7	.90	.00	0.89	.03	0.79	−.02	0.93	−.02	1.09	−.05	0.93	.00	0.78	−.10	1.09	Concurrent	Business services
E7	291	6, 7	.86	.08	0.88	.23	0.69	.15	1.02	.06	0.77	.06	0.87	.09	0.96	.08	1.06	N/A	Retail
E8	248	2, 7	.89	.22	1.04	.23	1.11	.09	1.03	.09	1.03	.12	0.88	.06	1.08	.14	1.05	N/A	Health care
E9	215	1, 2, 6	.88	.04	0.94	.06	0.96	−.05	1.01	.11	1.36	−.04	1.01	.01	0.75	−.04	0.98	Concurrent	Business services
E10	214	1, 2, 7	.78	.07	0.86	−.09	0.98	−.04	0.96	.04	0.93	.10	0.82	−.04	1.01	.04	1.01	Concurrent	Government
E11	203	1, 3, 6	.75	.19	0.91	.19	0.98	.04	0.95	.08	1.44	.10	0.89	.06	0.82	.05	0.79	Concurrent	Legal
E12	200	6, 7	.65	−.04	1.02	.02	1.06	.14	1.04	−.03	1.17	−.06	0.89	.15	0.97	.08	1.03	N/A	Retail
E13	197	1, 7	.95	.20	0.90	−.07	0.83	.03	0.91	.10	1.19	.14	0.95	−.11	0.99	−.08	1.12	Concurrent	Transportation
E14	169	1, 2	.78	.22	0.95	.06	0.96	−.07	1.07	.04	1.12	.18	1.04	−.06	1.10	.06	1.13	Concurrent	Energy and utilities
E15	164	1, 6	.77	−.02	0.74	.11	0.77	−.02	0.88	.12	0.89	−.02	0.91	−.01	1.01	.08	1.04	Concurrent	Health care

(*Appendices continue*)

Appendix B (*continued*)

Study ID	*N*	Adaptive performance		Adjustment		Ambition		Sociability		Interpersonal sensitivity		Prudence		Inquisitive		Learning		Validation design	Industry
		Competencies	α	*r*	*u*	*r*	*u*	*r*	*u*	*r*	*u*	*r*	*u*	*r*	*u*	*r*	*u*		
E16	149	1, 2, 6	.90	.28	0.34	.20	0.65	−.17	0.90	.13	0.86	.22	0.77	.00	0.79	.22	0.82	Predictive	Transportation
E17	143	1, 2, 6	.86	.21	0.84	.20	0.82	−.19	1.05	.14	0.70	.27	0.88	−.04	0.98	−.01	1.06	Concurrent	Retail
E18	124	1, 2, 6, 7	.78	.11	0.93	.02	0.94	.04	1.01	.19	0.94	.18	0.96	−.05	1.00	.01	0.98	Concurrent	Technology
E19	123	1, 2, 4, 7	.83	.10	0.87	−.04	1.01	−.17	0.95	.14	1.57	.06	0.90	−.01	0.85	.02	0.97	Concurrent	Mining
E20	113	1, 2	.80	.10	0.88	.32	0.98	.29	1.09	−.12	0.79	−.14	0.80	.24	1.05	.21	1.00	Concurrent	Transportation
E21	110	3, 6, 7	.58	−.05	0.85	−.06	0.58	.07	0.90	.15	1.13	.19	0.89	−.13	0.93	.04	0.98	Concurrent	Pharmaceutical
E22	108	2, 6	.73	.07	0.89	.19	0.85	.25	1.03	.13	1.15	−.05	0.91	.10	0.95	.03	1.07	Concurrent	Agriculture
E23	105	1, 2, 6	.88	.23	0.82	.13	0.92	−.07	0.98	.04	1.11	.08	0.86	.02	0.94	.11	1.05	Concurrent	Business services
E24	101	1, 2, 6, 7	.71	.18	0.97	.08	0.97	−.22	0.94	.00	1.47	.24	0.94	.05	0.93	.10	1.09	Concurrent	Manufacturing
E25	96	1, 6, 7	.50	−.01	0.78	.16	0.73	−.02	0.96	−.13	1.23	−.04	0.90	.15	0.82	.12	1.01	Concurrent	Construction
E26	92	1, 2, 6	.82	.23	0.72	.12	0.96	−.15	1.00	−.08	0.87	.12	0.93	.11	0.89	.08	0.98	Concurrent	Retail
E27	90	1, 2	.78	.05	1.06	.19	1.15	.04	0.92	−.12	1.61	−.11	1.44	.12	1.33	N/A	N/A	Concurrent	Transportation
E28	86	1, 2, 3, 6	.87	.02	0.95	−.01	1.10	−.13	0.95	.02	1.03	.01	1.02	.11	1.04	.07	1.05	Concurrent	Communications
E29	65	1, 2, 6	.67	.08	0.92	.01	0.78	−.12	0.95	−.03	0.82	.16	0.80	−.11	1.05	.01	0.91	Concurrent	Finance
E30	65	1, 2, 6, 7	.57	.02	0.99	.30	0.71	.38	0.97	.19	0.97	.02	0.93	−.03	1.00	.29	0.94	Concurrent	Technology
E31	64	1, 2, 6, 7	.59	.00	0.94	.18	0.69	.05	0.94	.20	0.97	.10	0.96	−.01	1.04	.06	1.28	Concurrent	Extermination
E32	63	1, 2, 6, 7	.71	.05	0.94	.15	0.77	−.02	0.96	−.04	0.99	−.05	0.92	.11	0.89	.15	0.87	Concurrent	Technology
E33	63	1, 9	.55	.13	0.67	.04	0.58	−.19	0.90	.20	0.83	.26	0.79	.08	0.97	.08	1.01	Concurrent	Government
E34	61	1, 2, 6	.76	.13	0.89	.01	0.94	−.02	1.00	.32	0.99	.25	1.02	−.12	1.09	−.07	1.06	Concurrent	Health care
E35	60	1, 2, 6	.91	.16	0.72	.19	0.85	.11	0.82	−.01	0.84	.23	0.71	.17	0.94	.02	1.06	Concurrent	Manufacturing
E36	60	2, 6, 7	.80	.17	0.88	.04	0.91	−.02	0.87	.03	0.93	−.11	0.86	−.02	0.99	.03	0.96	Concurrent	Energy and utilities
E37	57	1, 2, 3	.76	.04	0.82	.07	0.87	.16	0.92	−.07	0.94	−.02	0.85	.01	1.00	.12	0.95	Concurrent	Business services
E38	56	2, 4, 6	.84	.08	1.02	.13	0.67	.26	0.88	−.04	0.99	.05	1.00	−.16	1.01	−.08	1.03	Concurrent	Financial services
E39	54	1, 2, 6, 7	.51	−.03	0.76	.05	0.63	.02	1.07	.16	1.02	.05	0.72	.05	0.98	.02	1.01	Concurrent	Government
E40	53	1, 4, 7	.85	.14	0.94	−.03	0.66	−.23	0.96	.04	0.98	.25	0.93	−.06	1.08	.03	0.95	Concurrent	Finance
E41	50	1, 2, 7	.71	.09	0.96	.26	1.13	.13	1.03	.06	1.61	−.08	1.17	−.01	1.35	N/A	N/A	Concurrent	Insurance
E42	45	1, 6, 7	.92	.07	1.05	−.15	0.80	−.10	0.93	.07	1.33	−.08	0.82	.08	0.82	−.20	1.01	Concurrent	Government
E43	43	1, 2, 3, 6, 7	.95	.31	0.84	.21	1.03	.10	1.00	−.07	0.98	−.01	0.84	.12	1.06	.08	0.94	Concurrent	Government
E44	43	1, 2, 6	.92	.30	0.93	.03	0.95	−.35	0.88	−.04	1.31	.31	1.02	.03	0.86	.08	1.41	Concurrent	Transportation
E45	43	1, 2, 6	.80	.33	0.81	.16	0.72	.14	0.87	.47	0.85	.29	0.95	.02	0.60	.17	0.75	Concurrent	Construction
E46	43	1, 2, 6, 7	.88	.02	1.01	.16	0.95	.22	1.02	.04	0.71	.16	0.71	.01	1.04	.25	1.12	Concurrent	Energy and utilities
E47	39	1, 6, 7	.92	.12	1.01	−.26	0.98	−.14	0.85	−.05	1.21	−.04	0.88	.00	0.93	−.07	1.00	Concurrent	Government
E48	34	1, 4, 7	.64	.33	0.99	.05	0.49	.10	0.82	.02	0.71	.33	0.79	.04	0.98	−.22	1.08	Concurrent	Communications
E49	28	1, 2, 6, 7	.85	.00	0.86	.35	0.67	.02	0.85	.19	1.19	.07	0.94	.42	0.93	−.06	1.09	Concurrent	Construction
E50	28	2, 4, 6, 7, 9	.92	.17	0.56	.05	0.55	−.11	0.89	.08	0.45	−.28	0.87	.09	1.01	.04	0.96	Concurrent	Leisure and hospitality
E51	21	1, 6	.69	.12	0.93	.15	0.82	−.19	0.83	.44	0.96	.22	1.03	.11	0.86	.26	1.20	Concurrent	Transportation
E52	21	2, 3, 7	.81	.49	0.72	.48	0.57	.22	0.85	.39	0.46	.36	1.00	.24	0.88	.04	0.91	Concurrent	Government
E53	20	1, 2, 3	.76	.07	1.07	.27	0.89	.38	1.06	.14	1.10	.05	1.08	.30	0.97	.04	1.20	Concurrent	Business services

Note. M1–M18 = managerial samples; E1–E53 = employee samples. For competencies, refer to Table 1. *N* = sample size for correlation between personality and adaptive performance; α = Cronbach's alpha for adaptive performance; *r* = correlation coefficient between personality and adaptive performance; *u* = range restriction factor, calculated as (observed predictor *SD*)/(predictor *SD* reported in manual); N/A = not available.

Received November 1, 2011
Revision received July 17, 2013
Accepted August 2, 2013 ■