

USE OF SITUATIONAL JUDGMENT TEST TO MEASURE INDIVIDUAL  
ADAPTABILITY IN APPLIED SETTINGS

by

Adam M. Grim  
A Thesis  
Submitted to the  
Graduate Faculty  
of  
George Mason University  
in Partial Fulfillment of  
The Requirements for the Degree  
of  
Master of Arts  
Psychology

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Date: \_\_\_\_\_ Spring Semester 2010  
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## DEDICATION

This is dedicated to my loving wife Christina, my son Eston, and my Mom, Dad and sister that helped me make it this far in life. I love you all, thanks.

## ACKNOWLEDGEMENTS

A project as large as a thesis cannot be completed without the assistance of many people. First I would like to thank my thesis committee members, Stephen Zaccaro, Louis Buffardi, and Eden King, for all their input and guidance throughout the process. This thesis would not have been possible without your help. I would especially like to thank my advisor, Dr. Zaccaro for encouraging me to do the thesis 'option'. My graduate school experience would have been incomplete without the opportunity to apply all the principles I learned at GMU to complete this rigorous assignment. I would also like to thank LTC James Gaylord, Aaron McCullough, and Jackie Allen for providing access to their outstanding organizations for participation in this study - without their assistance and willingness to support this project there would have been no data to collect or analyze.

Many thanks go out to my George Mason University colleagues who helped me in all phases of the project. Specifically, I would like to thank Lisa Gulick, Cory Adis, Johnathan Nelson, and Phillip Gilmore for their help in a variety of things including advice on statistics, help on writing styles, HSRB submission tips, reviewing and editing assistance, and being a source of encouragement throughout the process. I would like to thank Irwin Jose, Liz Conjar, Kate LaPort, Gia DiRosa, and Vias Nicolaidis for reading all the ASJT scenarios and response options and providing the adaptability ratings, it was a thankless, but extremely important job.

I would like to thank the men and women of the United States Army for their continued professionalism, service, and camaraderie. I would not have made it to graduate school had it not been for the help, advice, friendship, mentorship and loyalty of the many great Soldiers and officers I've had the privilege to serve with. You have collectively made me a better warrior and scholar and I am forever grateful for your influence on my life.

Finally I would like to thank my family for their love and support. I am the person I am today because of the lessons I've learned from you.

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## ABSTRACT

### USE OF SITUATIONAL JUDGMENT TEST TO MEASURE INDIVIDUAL ADAPTABILITY IN APPLIED SETTINGS

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The purpose of the current study was to develop a measure of individual adaptability for use in applied settings. Specifically, an Adaptability Situational Judgment Test (ASJT) was designed to provide a practical and valid selection and assessment instrument that had incremental validity beyond the Big Five personality traits and cognitive ability in predicting supervisor ratings of adaptability. A criterion-related concurrent validation study was conducted in both a military ( $n = 101$ ) and call center ( $n = 67$ ) sample.

Findings provide evidence for the criterion-related and nomological validity of the measure. In addition, minimal scoring differences existed on the basis of race support its fairness. The ASJT had similar relationships with all variables of interest in both samples, thus providing support for the generalizability of the measure to both military and business settings. Practical implications and recommendations for future refinements of the ASJT are discussed.



## Chapter 1. Introduction

Selecting adaptable workers for jobs that are increasingly complex and dynamic is important, but thus far measuring adaptability has been difficult and often unrealistic outside of a laboratory setting. The focus of the present research is to propose a practical way to measure adaptability using a situational judgment test (SJT) that will be both valid and useful for employee selection in applied settings. Currently most methods used to measure adaptability are resource intensive, lack face validity, and are impractical for use in routine selection decisions. This research will contribute to the selection and adaptive performance literature by validating an adaptive situational judgment test (ASJT) for organizations to directly and objectively measure an individual's level of adaptability.

### *Importance of an Adaptable Workforce*

The ability of employees to adapt to change has become increasingly important in recent years. Two types of change to the nature of work have led to this need for worker adaptability – environment-led change and person-led change (Griffin & Hesketh, 2003). Environment-led change includes technological advances, the shift to a service-based economy in the United States, globalization and workplace diversity. Technological change and innovation has brought computers, automation, and the Internet into a majority of mainstream jobs, even traditionally blue-collar jobs, which require employees

to interface with computers to get work done (Hesketh & Neal, 1999). The shift to a service-based economy in the United States has increased requirements for interpersonal skills and makes customer-employee interactions more frequent; the new standard of success has changed from product specification to customer satisfaction (Bowen & Waldman, 1999). Globalization and growing workplace diversity require increased use of cultural and interpersonal adaptability and put additional stress on employees to get along with dissimilar others, a stressor traditionally not found in homogeneous organizations (Lord & Smith, 1999). Person-led change consists of the changing psychological contract and need for career self-management that has resulted from periodic cycles of downsizing and ‘rightsizing.’ Employees now expect to make multiple job changes throughout a career and more employees participate in contract and contingent work, temporary work groups and project teams. These changes require the employee to continuously learn, self-manage their careers, and react to frequent job changes (Hulin & Glomb, 1999). The importance of expertise at work has similarly evolved from that of routine expertise to adaptive expertise (Smith, Ford, & Kozlowski, 1997). Individuals with higher levels of adaptability are valuable to many organizations because research has shown that “individuals who possess routine expertise have difficulty adapting their knowledge and skills when deep structural principles of their problem domain change” (Bell & Kozlowski, 2008, p. 296), but adaptive experts know when to use a new approach to a novel problem instead of continuing with an old strategy that will not be successful (Smith et al., 1997). This shift in the nature of expertise in the workplace caused researchers to further investigate the dimensions of job performance to

determine if any of the core components dealt with the ability to handle dynamic situations at work. Some of the results of these analyses are outlined in the following section.

*Adaptive Performance: Overview*

The concept of job performance has evolved over the past several years since Campbell's model of performance outlined a taxonomy of eight higher-order performance components (Campbell, McCloy, Oppler, & Sagger, 1993). This model demonstrated the multidimensional nature of performance and provided a "common blueprint for any investigator who wants to measure performance" (Campbell, 1999, p. 407). Although a majority of performance dimensions in the workplace fit neatly into these categories, performance dimensions dealing with an individual adapting to rapid changes in the workplace were not included. Campbell (1999) invited other researchers to investigate other potential performance dimensions and mentioned that adaptive performance could be "a genuine addition to the Campbell taxonomy" (p. 419).

In an effort to further explore the possibility of an additional facet of job performance, Pulakos, Arad, Donovan, and Plamondon (2000) conducted critical incident analyses of numerous jobs and developed a taxonomy of adaptive performance consisting of eight dimensions – (1) handling emergencies or crisis situations, (2) handling work stress, (3) solving problems creatively, (4) dealing with uncertain and unpredictable work situations, (5) learning work tasks, technologies, and procedures, (6) demonstrating interpersonal adaptability, (7) demonstrating cultural adaptability, and (8) demonstrating physically-oriented adaptability. Despite some challenges to the parsimony of this

taxonomy (Griffin & Hesketh, 2003), the Pulakos et al. (2000) conceptualization of adaptive performance has been replicated (Pulakos, Schmitt, Dorsey, Arad, Borman, & Hedge, 2002) and has received a general level of acceptance in the literature as being a unique facet of job performance in addition to task and contextual performance (Hackett, 2002).

Various definitions of adaptability appear in the literature, but generally adaptability has occurred when a person “modified their behavior to meet the demands of a new situation” (Pulakos et al., 2000, p. 615). Two important things must happen for adaptive behavior to be possible – the situation or environment must change and the person must deal with the change in an effective manner. Simply continuing the current course of action when the situation is altered, even if the strategy is successful, does not demonstrate adaptability because “behavior change is at the core of the definition” (White, Mueller-Hanson, Dorsey, Pulakos, Wisecarver, Deagle, Mendini, 2005, p. 2). The goal of a majority of adaptive performance research is to test and validate knowledge, skills, abilities, and individual differences that facilitate or enable adaptability.

#### *Cognitive and Non-cognitive Predictors of Adaptive Performance*

In the literature there is mixed support for using cognitive ability measures to predict adaptability. Cognitive ability as measured by SAT or ACT scores, was a strong predictor of adaptive transfer ( $r = .49, p < .01$ ) for students conducting a post-training radar simulation exercise (Bell & Kozlowski, 2008). LePine (2005) found that teams with the highest levels of cognitive ability were more adaptable than teams with lower

levels of cognitive ability at solving a problem after an unforeseen change in the task. Allworth and Hesketh (1999) found that three separate measures of cognitive ability predicted adaptive performance in hotel workers with moderate correlations ( $r = .17 - .33$ ). Despite strong support for the role of cognitive ability in predicting adaptive performance, several findings cast doubt on the utility of solely relying on cognitive ability to predict adaptive performance. Hernandez, Gregory, and Viswesvaran (2008) found that cognitive ability and adaptability were related in laboratory samples, but not in applied settings. Cognitive ability as measured by the Armed Forces Qualifying Test had lower predictive validity than a measure of achievement motivation in predicting adaptive performance ( $r = .13$  compared to  $r = .31$ ) in a military sample (Pulakos et al., 2002). Also, Lang and Bliese (2009) found that although those with higher levels of general mental ability outperform those with lower levels of  $g$ , the higher  $g$  individuals have a harder time adapting to an unforeseen change and as a result suffer greater performance losses compared to moderate and low  $g$  individuals. This led the authors to conclude that, “organizations needing highly adaptable individuals should consider other selection criteria in addition to GMA when hiring individuals” (p. 426). These disparate findings provide evidence that although cognitive ability plays a role in adaptability, there are non-cognitive components that facilitate adaptive behavior.

Similar to cognitive ability measures, various non-cognitive ability measures have received mixed levels of support for the prediction of adaptive performance.

Biographical data forms that addressed past work experience with seven of Pulakos et al. (2000) dimensions of adaptive performance had a moderate correlation with supervisor

rating of adaptive performance ( $r_c = .34, p < .01$ ) (Griffin & Hesketh, 2003). In two separate studies specific measures of self-efficacy for behaving in situations requiring adaptability had significant relationships with supervisor ratings of adaptive performance ( $r$ 's ranged from  $r = .22$  to  $r_c = .38$ ) (Pulakos et al., 2002; Griffin & Hesketh, 2003). Other studies found that other measures such as complexity of work, managerial support (Griffin & Hesketh, 2003), experience with learning new tasks, and interest in learning new tasks also predicted adaptive performance (Pulakos et al., 2002). Of the Big Five personality traits, facet-level measures of Openness to Experience (change receptiveness,  $r_c = .28$ ) (Griffin & Hesketh, 2003) and Conscientiousness (achievement motivation,  $r = .31$ ) (Pulakos et al., 2002) have been found to predict adaptive performance. When measured at the trait level however, none of the Big Five were found to predict adaptive performance (Allworth & Hesketh, 1999). Griffin and Hesketh (2005) added further controversy to the role of personality traits in predicting adaptability when they found that neither trait nor facet-level measures of conscientiousness were significantly correlated with adaptive performance. The mixed support for the predictive validity of personality traits demonstrates the complex nature of adaptability. This complexity poses challenges when researchers attempt to directly measure an individual's level of adaptability.

### *Measuring Adaptability*

Despite the obvious importance of adaptability in the modern workplace, it is difficult to train, predict, or measure (Pulakos et al., 2000) and much of the research on adaptability has been done in a laboratory setting utilizing a student population (e.g. Bell

& Kozlowski, 2008; Marks, Zaccaro, & Mathieu, 2000; Lang & Bliese, 2009; LePine, 2005). What is also evident from the review of previous research on adaptability is that although there are a number of ways to predict adaptability with varying degrees of validity and utility, there are few direct measures of adaptability. Many of the methods for directly measuring adaptability use elaborate and time-consuming methods such as radar games (Bell & Kozlowski, 2008), tank simulations (Marks, et al., 2000; Lang & Bliese, 2009) and helicopter simulations (Chen, Thomas, & Wallace, 2005). These simulations lack face validity for most jobs, are not practical to administer to a large group of job applicants, and are deficient in measuring the full range of adaptive performance dimensions as described in Pulakos et al. (2000) taxonomy. To be useful in an applied setting, practitioners need measures that are valid predictors of the construct in question, minimize subgroup differences, and practical to administer to a large applicant pool. The situational judgment test is a method of measurement that is capable of achieving these important goals.

#### *Situational Judgment Tests: Overview*

SJTs were developed by the United States Army in the 1920s to aid in the selection of soldiers with sound judgment and are generically defined as “any paper-and-pencil test designed to measure judgment in work settings” (McDaniel, Morgeson, Finnegan, Campion & Braverman, 2001, p. 730). Over time SJTs have evolved into multiple formats including video and computer-based administration (Lievens, Peeters, & Schollaert, 2008) and have been used in a wide variety of selection contexts from identifying managers with decision-making skills to measuring both task and contextual

performance (Chan & Schmitt, 2002). Although now differing in method of administration and actual format, SJTs generally have the same characteristics first outlined by Motowidlo, Dunnette, and Carter (1990) and further refined by Weekley, Ployhart, and Holtz (2006): an item stem, multiple response options, response instructions, and a response format. Each question presents a job-related situation known as the stem. Below each stem are numerous response options that have potential solutions to the problem presented. Depending on the response instructions, the participant will either identify or rate the most and least effective options (knowledge-based) or determine what they would be most and least likely to do in response to the situation (behavioral-based). The response format is either forced choice (choose the best and/or worst option) or Likert-style (rate each option). The participant selects their response to each question and the answers are scored against a key developed *a priori* to determine response effectiveness and the overall score (Lievens et al., 2008).

SJTs are well suited for use in personnel selection for many reasons including predictive ability over and above traditional measures of job performance, relatively low subgroup differences, favorable applicant reactions, and the ability to measure multiple constructs. SJTs have relatively high levels of validity and “are good predictors of job performance” (McDaniel et al., 2001, p. 736). In a meta-analysis investigating the validity of SJTs, McDaniel and colleagues determined the estimated population validity of SJTs was  $\rho = .34$ , and SJTs based on job analyses had a higher validity of  $\rho = .38$ . Other researchers have also found similar levels of validity for SJTs including Chan and Schmitt (2002) who used a SJT to predict task performance ( $r = .30$ ) and two facets of



contextual performance: job dedication ( $r = .38$ ) and interpersonal facilitation ( $r = .27$ ). SJTs alone or in combination with other predictors are valuable in accounting for unique variance in the prediction of job performance. McDaniel et al. (2001) found that the estimated validity of a composite of SJT and cognitive ability scores was  $r = .31$ , which is similar in magnitude to other predictor composites with cognitive ability including assessment centers, employment interviews, and biodata measures (Schmidt & Hunter, 1998). Chan and Schmitt (2002) found that an SJT had incremental validity beyond that of cognitive ability, individual measures of the Big Five, and job experience when predicting task performance ( $\Delta R^2 = .05$ ), job dedication ( $\Delta R^2 = .08$ ), interpersonal contextual performance ( $\Delta R^2 = .03$ ), and overall job performance ( $\Delta R^2 = .04$ ).

In addition to being valid measures of job performance and having incremental validity beyond that of traditional predictors, SJTs have lower subgroup differences based on race compared to measures of cognitive ability. In a meta-analysis Whetzel, McDaniel, and Nguyen (2008) found that subgroup differences on SJTs for Whites compared to Blacks was significantly smaller than that of cognitive ability tests ( $d = .38$  for SJTs compared to  $d = 1.0$  for cognitive ability tests), and that differences among gender were small and slightly favored female participants ( $d = -.11$ ). Smaller subgroup differences in selection tools are important because it decreases the likelihood of unfair perceptions of the selection process and reduces the likelihood of litigation because of test bias.

Another advantage to using SJTs for selection is increased face validity and more favorable applicant reactions compared to other common selection methods. SJTs ask

respondents to determine their course of action in a typical job situation instead of completing a more abstract assessment like a cognitive ability test or personality inventory. As a result, applicants rate SJTs significantly higher in terms of job-relatedness and fairness compared to intelligence or personality tests and these favorable ratings increase applicant acceptance to the selection process (Bauer & Truxillo, 2006). This is important because "in making any decisions regarding the components of a selection system, a consideration of applicant reactions should be balanced with validity, practicality, utility, and legal issues" (p. 245).

The final advantage of using SJTs in selection is that "SJTs are not a unidimensional construct measure, but a measurement method capable of measuring a wide variety of constructs" (McDaniel & Whetzel, 2005, p. 521). There are numerous examples in the literature of how SJTs can be specifically designed to measure or predict various outcomes including college performance (Oswald, Schmitt, Kim, Ramsay, & Gillespie, 2004), call center applicant success (Konradt, Hertel, & Joder, 2003), team performance (McClough & Rogelberg, 2003), and even integrity in a diverse sample of employees (Becker, 2005).

Despite all the positive features of using SJTs in selection, the "absence of a compelling theory in SJT is perhaps its greatest limitation" (Weekley & Ployhart, 2006, p. 6). Much debate has occurred as to why SJTs measure unique variance in job performance, job knowledge, or other constructs. One opinion is that "an SJT predicts performance because it captures variance in cognitive ability, personality, experience, and who knows what other constructs that are related to performance" (Ployhart, 2006, p.

86). This rationale is supported by the fact that the SJT is potentially both a method of measurement and “an indicator of an identifiable and meaningful new construct” (Schmitt & Chan, 2006, p. 148). The exact nature of this “new construct” is debated in the SJT-theory literature. Brooks and Highhouse (2006) suggest this construct is good judgment which is the “balance of analysis and intuition” (p. 43). Stemler and Sternberg (2006) argue that the construct measured by SJTs is practical intelligence, which is “the ability to adapt to, shape, and select real-world environment” (p. 109). Schmitt and Chan (2006) support this view and state that the “primary dominant constructs assessed by SJTs are adaptability constructs that are likely a function of both individual difference traits and the result of acquisition through previous experiences and a contextual knowledge construct that may be gained through experience” (p. 149).

Despite some theoretical challenges in understanding how the SJT can measure some constructs such as job knowledge and performance, the SJT is a method well-suited to measure adaptability. Adaptability requires an “effective response to an altered situation” (White et al., 2005, p. 2) and this process clearly entails a balance of both analysis and intuition as well as practical intelligence to identify the change in situation, weigh alternative solutions, determine consequences, and select the best option. Chan and Schmitt (2002) created an SJT to “measure the examinee’s overall ability to adapt and respond effectively to practical work-related situations” (p. 240). Their SJT was designed to reflect practical situations at work including those that involved interpersonal conflict, multitasking, handling emergencies, and decision-making. The authors found that their SJT had significant zero-order correlations with task and contextual

performance and incremental validity over measures of cognitive ability and the Big Five. Predicting both task and contextual performance with a SJT based on the workplace situations described above is conceptually similar to using a SJT that requires the participant to respond effectively to a change in situation to predict adaptive performance. Griffin and Hesketh (2003) used a similar approach by using the Pulakos et al. (2000) eight-dimension taxonomy to create an experience-based biodata measure that was a valid predictor of adaptive performance. Given the evidence above it is expected that:

*Hypothesis 1:* The adaptability SJT (ASJT) will be positively related to adaptive performance (criterion-related validity).

A cognitive ability test measures analytical intelligence and personality inventories measure personality traits, but SJTs measure a broader array of constructs including the three forms of intelligence (analytical, creative, and practical) (Stemler & Sternberg, 2006), personality traits, experience, job specific knowledge, judgment, decision-making, and other constructs (Ployhart, 2006). Adaptability, or behaving in a functional manner in response to an altered situation, requires a combination of cognitive and non-cognitive knowledge, skills, abilities (KSAs), and individual differences including meta-cognitive skills, problem solving ability, decision making skills, awareness, resiliency, tolerance for ambiguity, openness to experience, achievement motivation, experience, and domain specific knowledge (Mueller-Hanson, White, Dorsey, & Pulakos, 2005). Using a cognitive ability test or a personality inventory alone or in combination will only capture a portion of the skills and individual differences

required to behave adaptively. A SJT on the other hand has the capability to measure many of KSAs and individual differences such as practical intelligence, judgment and decision making ability that facilitate adaptive behavior. These KSAs are not measured with traditional cognitive ability tests or personality inventories, but can be assessed with SJTs. As such it is expected that:

*Hypothesis 2:* The ASJT will provide incremental prediction of adaptive performance beyond that predicted by cognitive ability (incremental validity).

*Hypothesis 3:* The ASJT will provide incremental prediction of adaptive performance beyond that predicted by the Big Five personality traits (incremental validity).

In investigating the validity of a newly developed test, it is important to demonstrate evidence of construct validity. Cronbach and Meehl (1955) discussed a specific form of construct validity – nomological validity – that is particularly applicable when comparing a new measure to another validated measure. Evidence of nomological validity comes from demonstrating similar patterns of relationships between the new measure, the validated measure, and the construct(s) of interest as well as their interrelationships. In the case of the present research, the ASJT is the new measure, the I-ADAPT-M is the validated measure of individual adaptability, and the constructs of interest are adaptability, Big Five personality traits, and cognitive ability. The I-ADAPT-M is a 55-item, self-report measure based on the Pulakos et al. (2000) eight-dimension taxonomy designed to measure individual adaptability, which is defined as “an individual’s ability, skill, disposition, willingness, and/or motivation to change or fit

different task, social, and environmental features” (Ployhart & Bliese, 2006, p.13). Based on the close conceptual and theoretical linkages of the ASJT and I-ADAPT-M, it is expected:

*Hypothesis 4:* Scores on the ASJT and the I-ADAPT-M will possess a similar pattern of correlations with adaptability ratings, cognitive ability, and the personality traits of Conscientiousness, Openness to Experience, and Neuroticism (nomological validity).

Similarly, although adaptability can be conceptually and empirically linked to a majority of the Big Five personality traits or their facets (Mueller-Hanson et al., 2005; Ployhart & Bliese, 2006) research has shown differential relationships exist between individual adaptability and the Big Five personality traits (LePine, Colquitt, & Erez, 2000; Griffin & Hesketh, 2003; Griffin & Hesketh, 2005; Allworth & Hesketh, 1999). Since the ASJT is designed to measure adaptability, it is therefore expected that:

*Hypothesis 5:* The ASJT will have a differential relationship with the Big Five personality traits.

Openness to Experience is theoretically related to adaptability and encompasses characteristics such as creativity, imagination, intellect, ability to quickly to learn, cleverness, and insightfulness (Caspi, Roberts & Shiner, 2005). LePine and colleagues (2000) empirically demonstrated a significant, positive relationship between Openness and adaptability in individuals making decisions after fundamental changes in the situation occurred. This same relationship is expected to hold such that individuals higher in the trait Openness to Experience will score higher on the ASJT.

*Hypothesis 5a:* The ASJT will be positively related to Openness to Experience.

Although Conscientiousness is a strong predictor of job performance across a variety of jobs (Barrick & Mount, 1991), it has been found to be negatively related to adaptability (LePine et al., 2000). This conclusion seems counterintuitive because people who are Conscientiousness are thorough, hardworking, and achievement-oriented (Barrick & Mount) and these characteristics would appear to be important for adaptive individuals. However, those high in Conscientiousness are also known to be responsible, careful, planful (Caspi, et al., 2005), orderly, dutiful and self-disciplined (Goldberg, 2000). It is these characteristics that may hinder an individual from taking a risk and changing their behavior in response to a fundamental change in the situation. LePine and colleagues felt the negative relationship might exist because “individuals scoring high on the dependability facets might focus their attention on maintaining order...before the new situation was completely understood” (p. 583). As such, it is expected that:

*Hypothesis 5b:* The ASJT will be negatively related to Conscientiousness.

Individuals high in Neuroticism are anxious, vulnerable to stress, lacking in confidence, angry and easily frustrated (Caspi, et al., 2005). These characteristics clearly do not fit the description of an adaptive individual, who must remain confident, resilient, and calm to quickly develop and execute an alternate course of action when facing a dynamic situation with ambiguous information. Pulakos et al. (2002) tested this relationship and found a positive relationship between Emotional Stability (the inverse of Neuroticism) and interest and self-efficacy in behaving adaptively. Individuals who are

calm and level-headed are better prepared to make decisions in the face of uncertainty and therefore it is expected:

*Hypothesis 5c:* The ASJT will be negatively related to Neuroticism.

Extroverted people have a tendency to be vigorously and actively involved with the environment around them and are known to be outgoing, expressive, energetic, and dominant (Caspi, et al., 2005). None of these characteristics appear closely tied to the attributes of an adaptable person. In one of the few empirical studies investigating the relationship between Extroversion and adaptive performance, Allworth and Hesketh (1999) did not find a significant relationship. Since there is little empirical evidence on the relationship between adaptability and Extroversion and no clear theoretical linkages, the relationship between Extroversion and the ASJT will be investigated on an exploratory basis.

*Exploratory Hypothesis 1: What is the relationship between the ASJT and Extroversion?*

People high in Agreeableness are generally cooperative, considerate, empathic, and polite (Caspi et al., 2005) and some of the facets associated with this personality trait are modesty, sympathy, and morality (Goldberg, 2000). There is no empirical evidence in the literature on the relationship between Agreeableness and adaptability and the theoretical relationship between the two constructs is unclear. As a result, no hypothesis is presented *a priori* and the investigation will be for exploratory purposes.

*Exploratory Hypothesis 2: What is the relationship between the ASJT and Agreeableness?*



In their original investigation of the taxonomy of adaptive performance, Pulakos et al. (2000) noted that “certain jobs may require greater amounts of adaptive behavior than others” (p. 618). In a later study Pulakos et al. (2002) conducted *post hoc* analyses to determine whether job type moderated the validity of their measures of adaptability. Their sample consisted only of Army personnel who arguably have similar adaptability requirements and as a result they found no moderating effect, but stated that, “these data did not enable a conclusive test regarding the validity of the adaptability predictors for jobs with different adaptability requirements” (p. 319). Further Chan and Schmitt (2002) stated that “job type is likely to constitute an important boundary condition for the validity (zero-order and incremental) of the SJT in the prediction of core technical proficiency,” but they did not test this hypothesis. In line with the rationale presented, it is expected that:

*Hypothesis 6:* The ASJT will be more predictive of job performance in jobs with higher adaptability requirements as compared to jobs with lower adaptability requirements.

As previously discussed, SJTs have been shown to reduce subgroup differences based on race as compared to measures of cognitive ability. Conceptually, this effect is likely due the need to use a balance of creative, practical and analytical intelligence (Stemler & Sternberg, 2006) to solve a realistic problem that may have multiple correct solutions. By comparison, an academic problem presented on a cognitive ability test only has one correct solution arrived by using the correct method (Schmitt & Chan, 2006) and this rests almost solely on analytic intelligence (Stemler & Sternberg, 2006). In addition,

SJTs have both cognitive and non-cognitive loading and therefore should have lower subgroup differences based on race and gender than a measure of pure cognitive ability (Whetzel, McDaniel, & Nguyen, 2008). Based on the multiple intelligence components (creative, practical, and analytical) required to answer SJTs, especially one designed to measure adaptability which involves many non-cognitive KSAs, it is expected that the ASJT will have a lower cognitive load than a measure of cognitive ability. Therefore it is anticipated that the lower cognitive load of the ASJT will result in the following:

*Hypothesis 7:* The ASJT will have lower subgroup differences than traditional measures of cognitive ability ( $d = 1.0$  as a comparison).

## Chapter 2. Method

### *Phase I: Development of ASJT*

#### *Participants.*

A total of 27 subject matter experts from a range of occupational groups assisted in the development of the ASJT. The SMEs were divided into 3 separate groups and each group aided in the development of a different part of the ASJT. There was no redundancy in group membership in order to avoid potential biases. Specific tasks for each of the groups are discussed in the sections below that provide the details of the ASJT development.

#### *Measure Development.*

The ASJT was designed to measure workplace adaptability. I followed a similar method used by Weekley et al. (2006) to develop the SJT with some modifications supported by the literature on SJT development. I first developed the item stems (the situations), next developed the response options (the potential answers), then established the response instructions and format, and finally, I determined the response effectiveness and scoring methodology.

*Item Stems.* There are two methods generally used to develop the scenarios or item stems – critical incident or theory-based. Gathering critical incidents that typify

good and bad performance from subject matter experts is the most common method of item development (Weekley et al., 2006). This approach is advantageous because it allows the test developer to quickly amass a large number of critical incidents that are job related, but it can be difficult to hone in on specific constructs of interest. Oswald et al. (2004) used this approach to develop an SJT to measure twelve facets of college performance. The other less common approach is for the test developer to write item stems based on a theoretical model without the aid of SMEs. This approach enables the test developer to create scenarios consistent with a model to investigate specific constructs, but there is an increased risk of creating situations that are not job related or too vague or complex for most employees to answer correctly. Mumford, van Iddekinge, Morgeson, and Campion (2008) used this approach to write scenarios based on the definitions of each of the team member roles in the Team Role Typology (Mumford, Campion, & Morgeson, 2006).

For the present research, I used a combination of both methods of item development in which I used five of the eight dimensions of the Pulakos et al. (2000) adaptive performance taxonomy as a guide and then asked subject matter experts to provide critical incidents involving situations consistent with the adaptive performance dimensions investigated in this study (1. Handling work stress; 2. Solving problems creatively; 3. Dealing with uncertain and unpredictable work situations; 4. Learning work tasks, technologies, and procedures; 5. Demonstrating interpersonal adaptability). This hybrid approach, used by Motowidlo and colleagues (1990) to develop an SJT to measure managerial performance in problem-solving and interpersonal skills, capitalizes

on the strengths of each scenario development method and is “the most comprehensive means of developing SJT stems” (Weekley et al., 2006, p. 161).

The first group of SMEs consisted of 8 individuals with at least five years of work experience in a wide array of occupations both in the public and private sector including high technology/computer programming, non-profit organization, federal government agency, oil refining and distribution, food service, technology sales, and two branches of the military. The SMEs individually provided information on situations that occurred at work that fit into one of the five adaptability dimensions investigated in this research project. Based on the input of the SMEs, I took the critical incidents, sorted them into the appropriate adaptability dimension (i.e. Demonstrating interpersonal adaptability), and then wrote the item stems to reflect the key points of the situation described. Initially fourteen item stems were written, but in order to keep the ASJT at a reasonable length and to reduce redundancy only nine item stems were retained. To ensure face validity and to match the organizational context in which the participants were familiar, the general setting but not the core situation in each item stem was modified to either a military context or a general business environment. In the following example the setting is changed to match the organizational setting, but the core situation remains constant – “*Your squad leader asks you to fix a broken machine gun...*” versus “*Your supervisor asks you to fix a broken printer...*”. Mumford et al. (2008) used this same approach to change the setting of a team role SJT developed and used in one study from various organizational contexts like an insurance sales team, an airline maintenance team, and a

nonprofit management team to a manufacturing and production context in a follow on study.

*Stem Complexity.* SJTs vary in the complexity of the item stems (Weekley et al., 2006). Some SJTs present simple situations and other present longer and more detailed situations with the have initial and subsequent situations. An SJT that measures adaptability must include a fundamental change in the situation that requires a functional change in behavior (White et al., 2005); therefore a complex stem using a base situation and a subsequent situation is needed. A simple item stem is not likely to be capable of showing a change in behavior in response to the altered situation. The ASJT measures adaptability by presenting an initial situation that demonstrates a functional behavioral response to a problem. In a subsequent situation a change occurs that fundamentally alters the base situation and a new strategy is required to solve the problem. Multiple response options are presented, some with non-functional strategies, others with the same strategies used to address the problem in the base situation, and other options that present a novel and functional solution to the altered situation. The response options that demonstrate functional and novel behavior in response to the altered situation were rated as demonstrating adaptability. Horn (2008) measured adaptive solution quality with a similar method with open-ended responses to scenarios that presented an initial problem and a subsequent change.

*Response Options.* Similar to item development, the two main ways to create the response options for each stem are SME-based responses or theory-based responses derived by the test designer. The method involving SMEs is more popular, but there is

no empirical evidence to determine which method is superior (Weekley et al., 2006). In Motowidlo and colleagues (1990) SJT on general managerial effectiveness they met with SMEs and had them describe the best way to handle each situation. On the other hand, Mumford and colleagues (2008) generated 6 – 12 response options per scenario based on the typical behaviors associated with each role in a typology.

For this study, a second group of SMEs provided written responses to how they would respond to each of the open-ended item stems previously developed. The 14 SMEs in this group consisted of middle and upper level managers from a diverse array of occupations and industries including a medium-sized high technology company, real estate sales company, engineering firm, automotive repair and company grade officers (i.e. O-3: Captain) and senior enlisted personnel (i.e. E-7: sergeant first class) in the US Army and Coast Guard. The Army personnel represented both combat arms (i.e. infantry) and combat support (i.e. intelligence) branches. The mix of military and civilian SMEs from a variety of occupations ensured realistic and feasible response options that would be appropriate across a range of job contexts. The input from the SMEs was used to develop 5 – 7 response options for each item stem for both the military and civilian version of the ASJT.

*Response Instructions.* The two common instruction types in SJTs are for participants to either say what they “would do” or what they “should do” in response to each situation. The “should do” instructions, also known as knowledge-based instructions, are “straightforward measures of applicants’ knowledge” (Motowidlo, Hooper, & Jackson, 2006, p. 59). These instructions tend to have higher correlations

with cognitive ability than “would do” instructions because they ask the applicant to determine the best answer (McDaniel et al., 2001). The “would do” instructions are behavioral tendency instructions that ask the applicant how they personally would behave in response to each situation. Behavioral tendency instructions have less cognitive loading because respondents do not have to figure out which is the best way to respond, but these instructions do tend to have a higher correlation with personality scores (McDaniel, Whetzel, Hartman, Nguyen, & Grubb, 2006).

Since adaptability requires a person to react to a novel situation and not to simply know the best answer, participants were asked how likely they would perform each of the behaviors in response to the situation. McDaniel, Hartman, Whetzel, and Grubb (2007) found that SJTs using similar behavioral instructions were measures of typical performance and that the type of instructions, whether knowledge or behavioral, did not moderate the validity of the SJT. Whetzel et al. (2008) found additional support for using behavioral instructions in SJTs because it reduced the cognitive loading of the SJT and therefore slightly lowered Black-White subgroup differences from  $d = .39$  (knowledge instructions) to  $d = .34$  (behavioral instructions).

*Response Format.* Two common response formats have emerged which ask respondents to either chose the best, worst, or best and worst option (or most, least, or most and least likely or effective option), also known as the forced-choice format or to rate the likelihood or effectiveness of each response option on a Likert-style scale (Weekley et al., 2006). Although the forced-choice format was popular in early SJTs (e.g. Motowidlo et al, 1990), the trend recently has shifted towards using Likert-style



responses (e.g. Stemler & Sternberg, 2006; Chan & Schmitt, 2002; Mumford et al, 2008). The Likert format has several advantages over the forced-choice format including more rated items and therefore more information for reliability and validity analysis, reduction of cognitive-load, and independent rating of each response option which results in no ipsativity in the scores (Weekley et al., 2006). In the present research, participants are asked to rate each response option on a Likert scale ranging from 1 – 5 (1 = very unlikely, 2 = unlikely, 3 = neutral, 4 = likely, 5 = very likely) on how likely it is that they would behave in the way described by each response option.

*Determining Response Effectiveness.* SJTs differ from other tests such as job knowledge and cognitive ability tests because determining the correct and incorrect responses to each situation is more difficult (McDaniel, Psotka, & Legree, 2009). The response effectiveness of each answer was determined using a method similar to the expert-based scoring technique as described by Bergman, Drasgow, Donovan, Henning, and Juraska (2006). In a meta-analysis comparing twelve different SJT response scoring strategies, Bergman et al. found that empirical, SME (expert-based), and hybrid scoring systems all had incremental validity, reduced subgroup differences between sexes (although slightly favored women), and had generally the same levels of validity (SME  $r = .32$  compared to empirical  $r = .25$ ). The empirical scoring system compares the participant's pattern of responses to the pattern of responses of other test takers to determine how well the participant's answers match the most popular answers. In the expert-based strategy, SMEs review the response options and rate the effectiveness of each response either by selecting the best and worst options or scoring each option on

Likert-type scale. The expert-based scoring strategy was used in this study because it possesses higher validity and is more amenable to targeting specific constructs instead of general performance or job knowledge.

The third group of SMEs consisted of 5 doctoral industrial-organizational psychology students who have expertise in adaptability research. This group met on two occasions and provided adaptability ratings for each of the response options in order to determine the response effectiveness. The SMEs judged each response option on a 5-point scale ranging from **1 = highly non-adaptive response** (no behavior change, not a functional response, and actions will probably make the situation worse), **2 = non-adaptive response** (no behavior change, not functional because response fails to address the problem or acknowledge the change in situation), **3 = neutral** (either no behavior change or a functional response that addresses or influences the situation positively, but not both), **4 = adaptable response** (behavior change occurs and provides a response that might successfully resolve the problem) , **5 = highly adaptable response** (behavior change occurs and provides a response that will successfully resolve the problem). This method is similar to the approach used by Chan and Schmitt (2002) in which they determined effectiveness ratings of response options by using SMEs to rate each item using a Likert scale. Initially 72 response options were reviewed by the panel of SMEs, but after eliminating redundant options or options for which consensus of ratings could not be reached a total of 49 response options were retained for use in the ASJT.

*Scoring.* Determining an overall scale score on an SJT that uses a Likert response format is not as simple as counting the number of correct answers and dividing it by the

overall number of questions. SJTs of this type are typically scored using consensual scoring which involves matching the participant's response profile with the item mean response profile of the SMEs. A respondent's score on the SJT is a function of the degree of match between the respondent's answers and the SME group means (McDaniel et al., 2009). The raw consensus scoring technique is used in a majority of SJT research and involves directly comparing the participant's rating to the SME mean rating on each item. The participant's score is determined by summing the inverses of the squared deviation from the group mean for each item. McDaniel and colleagues (2009) conducted a study and found that the raw consensus scoring technique for SJTs had lower mean item validity ( $r = .03$ ), higher subgroup differences based on race ( $d = .42$ ), and scores were significantly increased by means of faking ( $d = 2.20$ ) than a standardized consensus scoring technique ( $r = .11$ ,  $d = .30$ , and  $d = -.59$ , respectively). The standardized consensus scoring technique involves taking a within-participant  $z$ -transform of Likert ratings so the participant's mean and standard deviation across items are 0 and 1, respectively. This method removes individual response tendencies such as habitual use of extreme ratings (e.g. ratings of 1 and 7 on a 7-point scale) that can create "criterion-irrelevant noise in the ratings which damage the SJT item validity" (McDaniel et al., 2009, p. 3). In the present research, the ASJT utilized standardize scoring as recommended by McDaniel and colleagues.

#### *Summary of ASJT development*

Both a military and business version of the ASJT were developed for this study based on the input and ratings from SMEs. Each version of the ASJT contained the same

9 scenarios that had the same core situational characteristics, but different organizational settings to ensure face validity. Each two-part scenario was followed by 5 – 7 response options with each option rated on a 5-point Likert scale with behavioral tendency response instructions. This produced a total of 49 scorable items on the ASJT. Experts provided adaptability ratings for each response option and ASJT scale scores were determined by standardized consensus scoring.

### *Phase II: Validation of ASJT in Applied Settings*

#### *Participants*

This study included two samples, one from the private sector and one from the military. All participants were volunteers and were not directly compensated for their participation.

Sample 1 consisted of 101 active duty US Army soldiers from a reconnaissance squadron based in the eastern United States. The all male sample had an average age of 25.7 years ( $SD = 5.0$ ) and both lower enlisted soldiers (57.4%) and noncommissioned officers (NCOs) (39.6%) accounted for a majority of the participants, with a small amount of officer participation (3.0%). The racial composition of the sample was mostly White (72%) and Hispanic (13%), African-American (8%), and Other races (7%) accounted for the remaining participants. Participants had an average of 4.4 years of service in the Army ( $SD = 3.85$ ) and a majority (54%) had deployed to either Iraq or Afghanistan for combat operations at least once, with an average of 10.3 months of deployment experience ( $SD = 11.3$ ). Most participants completed high school (47%) or

some college (41%) and a small percentage had received either an Associate's Degree (5%) or a 4-year college degree (7%). A total of 103 soldiers were recruited for the study and 101 participants chose to complete the battery of measures for a response rate of 98%.

Sample 2 consisted of 67 call agents from a large national call center based in the midwestern United States. Women accounted for a majority of the sample (88%) and the average age was 35.2 years ( $SD = 12.0$ ). The racial composition of the sample was mostly African-American (56.7%), with White participants (37.3%) and Other races (6%) accounting for the remainder of the participants. Participants had an average of 1.9 years of tenure with the organization ( $SD = 1.3$ ) and most had either completed high school (30%) or some college (49%) and a small percentage had either received an Associate's Degree (12%) or a 4-year college degree (9%). A total of 97 call agents were recruited for the study and 67 participants chose to complete the battery of measures for a response rate of 69%.

### *Procedures*

Participants in the military sample completed paper and pencil versions of all measures except cognitive ability which was obtained from unit records. Call agents completed all measures on-line using a popular survey collection website. All measures were completed individually and no time limit was imposed. In order to maintain anonymity, participants only provided the last four digits of their employee identification number and this information was used to link supervisor ratings of adaptability and job performance to participant responses. Participants in both samples completed the

measures in the following order: personality inventory, ASJT, I-ADAPT-M, JAR, and demographic questionnaire.

### *Measures*

*Individual adaptability.* Two separate measures of individual adaptability were used in this study, the ASJT and the I-ADAPT-M. The paper and pencil military version of the ASJT was administered in a classroom setting and the business version was given on-line to the call agent sample. The internal consistency reliability estimates for each version were fairly low ( $\alpha = .43$ , military and  $\alpha = .51$ , business), but SJTs with Likert scoring typically have low internal consistencies (Chan & Schmitt, 2002). Both versions of the ASJT appear in the Appendix. The other measure of individual adaptability was the I-ADAPT-M (Ployhart & Bliese, 2006), a 55-item self-report measure developed based on the 8 dimension adaptive performance taxonomy (Pulakos et al., 2000). In order to make valid comparisons with the ASJT, only the 35 items from the I-ADAPT-M that measure the 5 adaptability dimensions under investigation in this study were used. The internal consistency reliability estimates for the I-ADAPT-M in the present study were high ( $\alpha = .93$ , military &  $\alpha = .92$ , business).

*Cognitive ability.* Cognitive ability was measured using the general technical (GT) score from the Armed Services Vocational Aptitude Battery (ASVAB). The ASVAB GT score is a composite of arithmetic reasoning, word knowledge, and paragraph comprehension test scores. The ASVAB is the primary screening and placement test administered to over 1 million potential recruits each year by all branches of the US military (Roberts, Goff, Anjou, Kyllonen, Pallier & Stankov, 2000). Pulakos

and colleagues (2002) used AFQT scores, which is a normed composite of ASVAB test scores, as a measure of cognitive ability in their adaptive performance research of soldiers. Cognitive ability will not be measured or analyzed for the call center sample.

*Personality.* Participants completed the 50-item International Personality Item Pool (IPIP; Goldberg, 2000) measure for Openness to Experience, Conscientiousness, Extroversion, Agreeableness and Neuroticism. Each of the traits was measured with 10 items. The IPIP is a public domain personality inventory developed to mirror several popular five-factor measures such as the NEO PI-R (Costa & McCrae, 1992). The psychometric properties of the IPIP are similar to that of the NEO PI-R. In the present study, the internal consistencies for the personality scales ranged from  $\alpha = .64$  for Agreeableness in the call center sample to  $\alpha = .87$  for Conscientiousness in the military sample, with an average coefficient alpha for all personality traits in both samples of  $\alpha = .77$ .

*Job adaptability requirements (JAR).* This measure was developed for this study and was used to determine the adaptability requirements of the participants' job. The 10-item measure asked respondents to rate the adaptability requirements of their current job within the framework of the five adaptive performance dimensions examined in this study. Participants rated the importance and time spent on each of 10 statements, which were written to reflect behaviors associated with adaptive performance requirements as defined by Pulakos and colleagues (2000). Pulakos developed a similar measure, the Job Adaptability Inventory (JAI), to determine the adaptability requirements of a broad range of jobs as part of the development of the original eight-dimension taxonomy of adaptive

performance. The mean internal consistency of the JAR for both samples was  $\alpha = .85$ . The JAR appears in the Appendix.

*Supervisor Ratings of Adaptive Performance* – Using a measure designed for this study, supervisors rated their subordinates' performance on a 7-point Likert scale on 15 statements of behavior associated with adaptive performance. Three items were written for each of the 5 adaptive performance dimensions examined in this study and descriptions of each behavior were adapted from the adaptive performance dimension definitions written by Pulakos and colleagues (2000). A similar method was used by Pulakos et al. (2002) to obtain supervisor ratings of adaptive performance of soldiers. In the present research, the internal consistency reliabilities for supervisor ratings in both samples was  $\alpha = .98$ . The format for the supervisor ratings of adaptive performance appears in the Appendix.

*Supervisor Ratings of Job Performance* – In the military sample, the participant's immediate supervisor provided job performance ratings on 7 dimensions of military job performance (competence, physical fitness and military bearing, leadership, training, responsibility and accountability, potential for promotion, and overall performance) using a 7-point Likert scale. The measure was developed for this study and was based the performance dimensions outlined on the US Army's enlisted evaluation report. The coefficient alpha for this 9-item measure was  $\alpha = .97$ . The job performance rating form used by military supervisors appears in the Appendix.

In the call agent sample, the organization provided the past three months of objective performance ratings for each call agent. Every month each call agent receives a



performance scorecard that provides ratings for their job performance in 6 areas: time to call completion, phone monitoring quality, attendance, performance quality, disciplinary action, and protocol compliance. Supervisors rated the call agents' performance in each of the dimensions on a scale from 1 (Unacceptable) to 4 (Exceeds Expectations) and a weighted mean is used to determine the call agent's monthly scorecard score. In the present research, the mean of the last 3 months of performance ratings was used for the job performance ratings.

#### *Missing Data Treatment*

In both samples any participant who had more than 5% missing data for the entire battery of measures was dropped from the study in order to eliminate any potential bias caused by missing data. After participants with excessive missing data were dropped from analysis, missing data points accounted for 0.2% of the military and 0.4% of call agent responses. Due to the small amount of missing data, within-participant mean imputations were used to treat missing data. In the military sample, 2 participants completed all measures except the JAR and as such the sample size for the JAR was reduced to  $n = 99$ .

### Chapter 3. Results

Means, standard deviations, and zero-order correlations for the variables of interest are shown in Table 1.

Hypothesis 1 stated that scores on the ASJT would be positively related to supervisor ratings of adaptability. This hypothesis was tested in both samples by correlating ASJT scores and supervisor ratings of adaptability. Research has demonstrated the value of experience in developing individual adaptability (Griffin & Hesketh, 2003) and therefore deployment experience was included as a potential covariate. The number of months a soldier was deployed to either Iraq or Afghanistan was positively related to supervisor ratings of adaptability ( $r = .30, p < .01$ ). After controlling for deployment experience, the partial correlation between ASJT scores and supervisor ratings of adaptability reached significance ( $pr = .19, p < .05$ ) in the military sample. A similar relationship between ASJT scores and supervisor ratings existed in the call center sample ( $r = .22, p < .05$ ), thus providing support for Hypothesis 1.

Hypothesis 2 posited that scores on the ASJT would account for variance in ratings of adaptability over and above cognitive ability scores. This hypothesis was tested in the military sample by using hierarchical regression analysis and controlling for deployment experience. Deployment experience was entered in Step 1 of the regression,

ASVAB test scores were entered in Step 2, and ASJT scores were entered in Step 3. As can be seen in Table 2, ASJT scores accounted for incremental variance above cognitive ability as measured by ASVAB scores ( $\Delta R^2 = .03, p = .07$ ) but at a relaxed significance level, thus Hypothesis 2 was marginally supported.

Hypothesis 3 stated that scores on the ASJT would predict ratings of adaptability over and above the Big Five personality traits. This hypothesis was tested in both samples by using hierarchical regression analysis. In the military sample, deployment experience was entered in Step 1 of the regression, followed by scores on the Big Five personality traits in Step 2, and finally ASJT scores in Step 3. In the call center sample scores on the Big Five personality traits were entered in Step 1 and ASJT scores were entered in Step 2. As can be seen in Tables 3 and 4, the ASJT did not add to the prediction of adaptability ratings over and above the Big Five in either the military or call center samples ( $\Delta R^2 = .00$  and  $\Delta R^2 = .01$ , respectively,  $p > .05$ ), therefore Hypothesis 3 was not supported.

The ASJT was posited to have nomological validity with the I-ADAPT-M. This hypothesis was tested by comparing the pattern of magnitude and direction of correlations between both the ASJT and I-ADAPT-M with key variables of interest in both samples. As can be seen in Figure 1, a similar pattern of relationships for both magnitude and direction of the effect between the ASJT, the I-ADAPT-M, and the constructs of interest (adaptability, cognitive ability, and personality traits) emerged in both samples. Additionally, the ASJT was positively related to the I-ADAPT-M ( $r = .34$  &  $r = .29, p < .01$  for the military and call agent samples, respectively), therefore

supporting the inclusion of the ASJT in the same nomological network (Cronbach & Meehl, 1955) as the I-ADAPT-M and supervisor ratings of adaptability. Therefore Hypothesis 4 was supported.

The ASJT was expected to have differential relationships with the Big Five personality traits. These relationships were tested by first calculating the zero-order correlations between the ASJT and the Big Five personality traits (Table 1) and then conducting tests of significance of the differences between two dependent correlations (Chen & Popovich, 2002) to determine if these differences were statistically significant. The ASJT was positively related to Openness to Experience ( $r = .23$ , military;  $r = .34$ , call center,  $p < .01$ ) and negatively related to Neuroticism ( $r = -.29$ , military;  $r = -.27$ , call center,  $p < .01$ ) in both samples, therefore providing support for Hypotheses 5a and 5c. Contrary to expectations, the ASJT was positively related to Conscientiousness in both the military ( $r = .33$ ,  $p < .01$ ) and call center ( $r = .25$ ,  $p < .05$ ) sample, thus Hypothesis 5b was not supported. The correlations between Openness, Neuroticism, and Conscientiousness and ASJT scores were then tested to determine if the correlations were significantly different from each other. In Table 5 it can be seen that for both the military and call center samples the correlations between Neuroticism and ASJT scores were significantly different from the correlations between Openness ( $t = 3.62$ ,  $p < .01$  and  $t = 3.63$ ,  $p < .01$ , respectively) and Conscientiousness ( $t = 3.62$ ,  $p < .01$  and  $t = 2.39$ ,  $p < .01$ ) and ASJT scores. However, the correlations between Openness and Conscientiousness and ASJT scores were not significantly different in either the military ( $t = .80$ ,  $p = .21$ ) or

call center samples ( $t = .70, p = .24$ ). As a result of these findings, Hypothesis 5 was partially supported.

Since the magnitude and direction of the relationship between ASJT scores and either Extroversion or Agreeableness was not stated *a priori*, the relationship was examined for exploratory purposes. As shown in Table 1, ASJT scores were positively related to Extroversion scores in the call center sample ( $r = .25, p < .05$ ), but failed to reach significance in the military sample ( $r = .09, p = .175$ ). Agreeableness scores followed a similar pattern and were positively related to ASJT scores in the military sample ( $r = .29, p < .01$ ), but did not reach significance in the call center sample ( $r = .12, p = .16$ ). These mixed findings show that both Extroversion and Agreeableness appear to be positively related to performance on the ASJT.

Hypothesis 6 posited that the relationship between ASJT scores and supervisor ratings of job performance would be stronger in jobs with higher adaptability requirements. This hypothesis was tested in both samples using moderated regression analysis. Prior to moderated regression analyses, all independent variables were mean-centered and then interaction terms were formed with centered variables in order to remove any non-essential ill-conditioning among variables (Cohen, Cohen, West, & Aiken, 2003). In Step 1 the centered ASJT and JAR scores were entered into the regression equation followed by the centered ASJT x JAR interaction term in Step 2. The results in Tables 6 and 7 show that the interaction between ASJT scores and job performance ratings was non-significant for both samples ( $\beta = -.154$  and  $-.219, p > .05$ ,

for the military and call center samples, respectively). As a result of these findings, Hypothesis 6 was not supported in either sample.

The final hypothesis was that the ASJT would have lower subgroup scoring differences than a measure of cognitive ability. In the military sample Cohen's  $d$  was calculated to determine score differences between racial subgroups on the ASJT and the ASVAB. In the call center sample, no cognitive ability measure was used, so effect size differences in ASJT scores was compared to typical White-Black scoring differences of  $d = 1.01$  (Roth, Bevier, Bobko, Switzer, & Tyler, 2001). As shown in Table 8, the ASJT did have smaller scoring differences based on race in the military sample as compared to scores on the ASVAB. The White-Black difference in ASJT scores was negligible ( $d = -0.03$ ) and Hispanic participants outscored White participants on the ASJT by more than 1/3 of a standard deviation ( $d = -0.34$ ). These differences are contrasted with the subgroup scoring differences on the ASVAB which both favored White participants compared to both African-American and Hispanic participants ( $d = 0.26$  and  $d = 0.72$ , respectively). In the call center sample White participants had ASJT scores that were nearly 1/3 of a standard deviation ( $d = .30$ ) higher than Black participants, but this is significantly lower than the typical one standard deviation difference observed in cognitive ability tests (Roth et al., 2001).

To further bolster the finding that the ASJT had minimal scoring differences based on race, supplementary analyses were conducted to determine if the participant's ethnicity moderated the validity of the ASJT. In the military sample three racial groups were dummy-coded and analyzed – White ( $n = 65$ ), Black ( $n = 7$ ), and Hispanic ( $n = 12$ )

and in the call center sample only two racial groups were dummy-coded and analyzed – White ( $n = 25$ ) and Black ( $n = 31$ ). Since a majority of the selection and assessment literature compares minority scores with the scores of White participants (Roth et al., 2001), the White participant group was the uncoded group, thus all results reflect comparisons between White and minority groups. Moderated regression analysis was used to determine if differential prediction of ASJT scores existed on the basis of ethnicity. In Step 1 of the regression the mean-centered ASJT scores and dummy-coded ethnic groupings were entered into the equation and their product term were entered in Step 2. The results from Table 9 and Table 10 show that for both the military ( $b = -13.40, p = .24$ , Black and  $b = -10.52, p = .34$ , Hispanic) and call center ( $b = -.18, p = .983$ ) samples the ethnicity of the participant did not moderate the validity of the ASJT or introduce bias on the basis of race. The individual regression lines for each racial group were not significantly different from the group regression line, therefore no differential prediction existed. The ASJT had minimal scoring differences based on race and ethnicity did not moderate the validity of the measure, as a result Hypothesis 7 was supported.

## Chapter 4. Discussion

Individual adaptability is an important skill in the workplace due to the rapid pace of technological change and evolving knowledge requirements. Individuals must be able to change their behavior to effectively handle a variety of situations in the workplace. Despite the importance of adaptability, it has been difficult to measure in a way conducive for use in applied settings. The present research contributes to the selection and adaptive performance literatures by demonstrating that it is possible to use a situational judgment test to measure individual adaptability in both military and non-military applied settings. Further, the ASJT did not have differential validity or significant scoring differences based on race and therefore provides a selection instrument that would not cause adverse impact or be subject to legal challenge because of predictive bias.

### *Validity evidence of the ASJT predicting individual adaptability*

The focus of the present research was to develop a situational judgment test to measure individual adaptability at work. Prior research has used SJTs to predict task and contextual performance and numerous methods of measuring adaptability in laboratory settings appear in the literature, but no previous research is available that uses an SJT to predict adaptive performance. As a result it is difficult to establish an empirical



benchmark to determine the strength of relationship between the ASJT and adaptability ratings that would provide evidence for the success or failure of the ASJT other than achieving statistically significant results and classifying the magnitude of the effect size. Using these metrics, the ASJT succeeded in explaining a significant amount of variance in adaptability ratings in both a military and business setting for job incumbents and the observed effect size could be classified as being a small to medium effect (Cohen, 1988). Although this reliance on statistical significance and relative effect size to determine success or failure of a measure may be flawed, finding a significant relationship between predictor and criterion is a critical first step in the process of validating a new measure.

Additional support for the validity of the ASJT is provided by the evidence of nomological validity of the ASJT compared to the I-ADAPT-M. Based on the moderate correlation between the ASJT and I-ADAPT-M ( $r = .29 - r = .34$ ) and the similar pattern of intercorrelations that both measures share with supervisor ratings of adaptability, cognitive ability, and the traits of Conscientiousness, Openness to Experience, and Neuroticism, it is clear that these measures tap into the same construct, yet not to the point of redundancy. Overall, these findings show that it is possible for a SJT to measure adaptability in a way that is practical for use in a wide range of applied settings. SJTs are simple to administer to job applicants and are predictive of supervisor ratings of adaptability. Although the SJT was not able to predict supervisor ratings of adaptability to a high degree of fidelity (explaining only between 4% and 5% of total variance in adaptability ratings for military and call center sample, respectively), the low to moderate

correlations observed suggest that with proper refinement, the ASJT has the potential to be a tool for use by the I/O practitioner for selection and placement decisions.

### *Cognitive ability and the ASJT*

In the literature, the role of cognitive ability in determining individual adaptability is mixed. Although some findings strongly support the role of cognitive ability (LePine, 2005), other studies determined higher intelligence is actually deleterious to performance in dynamic situations (Lang & Bliese, 2009). The present research found no relationship between either ASJT scores or supervisor ratings of adaptability and cognitive ability as measured by ASVAB GT scores. Although initially troubling, this finding is consistent with prior research. In a meta-analysis on the relationship between cognitive ability and adaptability, it was determined that adaptability and intelligence were strongly related when objectively measuring adaptability and using a student population in laboratory conditions, but when using actual employee samples and subjective assessments of adaptability, the credibility intervals for the correlation between adaptability and cognitive ability all contained zero (Hernandez et al., 2008) meaning there may not be a relationship between cognitive ability and subjective ratings of adaptability.

Additionally, both an SJT designed to measure college performance and a biodata item reflecting individual adaptability were unrelated to cognitive ability as measured by SAT/ACT scores (Oswald et al., 2004). Taken together it is not surprising that both ASJT scores from job incumbents and subjective ratings of adaptability by their supervisors were unrelated to cognitive ability scores. This finding supports Stemler and Sternberg's (2006) view that SJTs measure practical intelligence and not crystallized

intelligence. Cognitive ability measures such as the ASVAB measure crystallized intelligence (Roberts et al., 2000) and therefore might not be significantly related to the ASJT which primarily measures practical intelligence, judgment, and decision-making in situations involving adaptability. In the context of employee selection, the practical implication is that the ASJT represents a measure that is uncorrelated with the applicant's cognitive ability that explains a small amount of unique variance in supervisor ratings of adaptability. The ASJT, if refined to increase criterion-related validity, could be a valuable selection instrument as part of a battery of measures to predict job applicant's level of adaptability independent of their cognitive ability.

#### *The Big Five and the ASJT*

Individuals with higher levels of Openness to Experience scored higher on the ASJT, thus demonstrating a higher level of individual adaptability. This finding has received empirical support (LePine et al., 2000) and is conceptually straightforward – individuals who have a greater imagination, tolerance for new things, and are creative are more likely to have the flexible mindset to try new and innovative strategies in unfamiliar situations. Similarly, those with higher levels of Neuroticism had lower ASJT scores, likely because individuals that are higher in neuroticism are anxious, oversensitive, and timid (Goldberg, 1990). Highly neurotic individuals are likely less adaptable because they dislike the ambiguity that comes from the novel situation and the decisions they must make in the face of uncertainty. These findings provide further support for the positive contribution of Openness and deleterious effect of Neuroticism in promoting individual adaptability.

Contrary to expectations in both samples, individuals high in Conscientiousness scored higher on the ASJT and received higher adaptability ratings. It was expected that individuals who were characterized as being dutiful, self-disciplined, and cautious would seek order and consistency and maintain their current strategy once a fundamental change in the situation occurred. In this study it is likely that the volitional aspect of Conscientiousness which makes people hard-working, perseverant, and achievement-oriented was more influential in the decision process than the dependability facet which makes individuals planful and sometimes rigid in their mindset (Barrick & Mount, 1991). Achievement-oriented individuals are tenacious in completing tasks despite obstacles and this may facilitate the individual's drive to adapt their strategies to meet the situational demands in order to successfully complete the task. Prior research has been mixed on the role of Conscientiousness in promoting individual adaptability. LePine and colleagues (2000) posited that highly conscientious individuals would have higher post-change performance on an altered task because of the volitional component, but found the opposite effect and reasoned that dutiful, self-disciplined, and cautious individuals were too perseverant and continued on their original course of action too long despite the need for a different strategy. It may be that in objective, highly cognitive tasks used to measure adaptive performance such as the radar game used by LePine, highly conscientious individuals do continue using the same strategy and become cognitively overloaded trying to process all the changing task demands, while also attempting to maintain order and complete task requirements at the same level of proficiency as before the change. Such a phenomenon is similar to the Cognitive Resources Theory (Fiedler,

1995) which states that individuals with higher intelligence will do worse on a stressful task because their cognitive resources are overloaded and attention is diverted away from the task and instead focused on the anxiety of failure and the crisis of self-efficacy. A similar finding by Lang and Bliese (2009) demonstrated that those with higher levels of intelligence had a more difficult time adapting to an unforeseen change in the task. The ASJT was not cognitively-loaded, and therefore highly conscientious individuals were able to focus their attention more on providing a functional response to the situation and less cognitive resources were used trying to find a way to maintain order despite changing task demands. Individuals on the ASJT were able to use the full range of intelligence components, analytical, creative, and practical, to provide successful closure to the situation. In such circumstances it is theoretically sound to say that those with higher levels of conscientiousness will work harder to ensure a functional response to the problem, even if it is a novel or complex problem.

The finding that Agreeableness and Extroversion were both positively related to ASJT scores in both samples provides further support for the role of personality traits in facilitating individual adaptability. Although an initial review of the literature did not produce enough evidence to hypothesize relationships between these two traits and the ASJT, further assessment of the literature provides support for *post hoc* interpretation of the exploratory findings. Research has demonstrated that Agreeableness and Extroversion can lead to higher job performance because these traits facilitate interpersonal communication in the workplace (Mount, Barrick, & Stewart, 1998). Effective communication processes are critical to predicting team performance especially

in novel situations (Marks et al., 2001) and communication is one of the 13 critical leader behaviors identified in Fleishman and colleagues (1991) taxonomy of leader behaviors. Therefore it follows that those with better interpersonal skills should be more adaptive in the workplace because they are able to effectively communicate and collaborate with others to find effective solutions to novel problems. Research has also shown that Extroversion positively influences self-efficacy (Judge, Jackson, Shaw, Scott, & Rich, 2007) which is an important component of individual adaptability (Pulakos et al., 2002; Griffin & Hesketh, 2003). In summary there is initial support for the positive influence of Agreeableness and Extroversion on individual adaptability which is likely due to the higher interpersonal skills possessed by more agreeable and extroverted individuals and the increase in self-efficacy that is associated with more extroverted individuals.

The ASJT did not provide incremental prediction of adaptability beyond the Big Five personality traits. It is likely that the same personality characteristics that either facilitated or inhibited the participant in selecting the adaptable responses on the ASJT were the same distal characteristics that influenced their behavior in work situations requiring adaptability. To the degree that personality influenced the decisions that participants made on the ASJT, the unique variance in adaptability ratings explained by ASJT scores decreased and approached zero. Although the ASJT was unable to explain incremental variance beyond the Big Five, practitioners should not simply use personality inventories to measure adaptability because of concerns of less favorable applicant reactions as compared to the ASJT.

Applicant reactions are an important consideration in choosing a selection system because “they may influence examinees’ attitudes, intentions, and behaviors relevant to the organization” (Chan & Schmitt, 1998, p. 255). Applicant reactions to personality inventories used in the selection process have been shown to be relatively low and of the ten selection methods examined, personality inventories ranked 7<sup>th</sup> in process favorability (Anderson & Witvliet, 2008). Gilliland (1993) outlined procedural justice rules applied to selection and job-relatedness and opportunity to perform were two critical components of a selection system that were tied to the applicant’s perception of procedural justice. The ASJT requires participants to make decisions on job-related situations and gives the test-taker the opportunity to demonstrate KSAOs, such as practical intelligence, judgment, and decision-making, which are valuable to success on the job. A personality inventory does not allow a participant to demonstrate proficiency on any job-related KSAOs, other than their standing on somewhat abstract personality statements. The job-related nature of the ASJT as well as the opportunity to demonstrate performance should give the ASJT an advantage over a personality inventory in terms of applicant reactions and perception of procedural justice. This is obviously an empirical question that should be tested in order to provide support for using the ASJT in lieu of a personality inventory to measure individual adaptability.

#### *Subgroup scoring differences on the ASJT*

One of the most researched and controversial issues in personnel selection since the Civil Rights Act of 1964 is the extent to which test-criterion relationships vary across demographic groups (Schmitt & Chan, 1998). Tests that have differential validity based

on the race, gender, or other protected status of the test-taker are considered biased and may be subject to legal scrutiny (AERA, APA, & NCME, 1998). For the ASJT, the regression coefficients for both the main effects for racial group and the interaction between race and ASJT scores were non-significant (see Tables 9 and 10), therefore neither intercept bias nor slope bias existed on the basis of race, thus passing the standard of test fairness as defined by Cleary (1968). In practical terms this means that the ASJT predicts supervisor ratings of adaptability equally well regardless of the race of the test-taker and therefore the fairness of the ASJT could not be legally challenged on the basis of predictive bias (SIOP, 2003).

Additional support for the fairness of the ASJT came from the negligible subgroup scoring differences on the basis of race. As expected, the ASJT had lower Black-White scoring differences in both samples as compared to traditional measures of cognitive ability. A surprising, but important finding of this study was that Hispanic participants outperformed their White colleagues on the ASJT by roughly one-third of a standard deviation. A prior meta-analysis estimated the White-Hispanic SJT scoring difference to favor White participants by nearly one-quarter of a standard deviation (Whetzel, et al., 2008). Hispanic individuals make up approximately 12% of the active duty Army (Defense Manpower Data Center, 2006) and nearly 14% of the civilian work force (Bureau of Labor Statistics, 2010) and therefore finding a measure that reduces scoring differences against Hispanic test-takers is promising for future selection and assessment research and application. In addition to being a valid measure of performance, selection instruments must also balance validity, utility, and legal



defensibility (Bauer & Truxillo, 2006). The ASJT achieved this standard by predicting supervisor ratings of adaptability while minimizing racial subgroup scoring differences and having no differential prediction on the basis of race.

### *Strengths and Limitations*

Overall, the ASJT was successful in predicting supervisor ratings of adaptability in two distinct occupations with drastically different job demands and KSAO requirements. The cross-validation of results in two distinct samples represents a key strength of this study and the generalizability of the findings. The ability of the ASJT, which measures practical intelligence and judgment and decision making in situations requiring adaptability, to predict a behavioral outcome, supervisor ratings of adaptability, is another key strength. The fact that there was a small to moderate effect for the relationship between a measure of judgment and decision making and a behavioral outcome is impressive and promising for using the ASJT in future research on adaptability. Also, unlike many cross-sectional designs which suffer from common method variance, the predictors and criteria in this study came from separate sources and different response formats which reduces measurement error and biases inherent in studies that uses a single source for all data (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). Additionally the ASJT was administered in both paper and pencil and web-based formats with similar results for each sample, thus reducing the possibility of an artifact based on the method of data collection. The ASJT was moderately correlated with key personality traits, but not correlated with cognitive ability and therefore had lower subgroup differences in scoring based on race than traditional measures of cognitive

ability and no differential prediction. The nomological validity of the ASJT was supported by use of the I-ADAPT-M as a point of comparison. All of these findings support the use of a situational judgment test to measure adaptability in a range of applied settings.

Unfortunately, some revisions of the ASJT are required in order to increase the predictive validity and practical utility of the ASJT before it is ready for use in future research. A majority of the revision recommendations represent the major limitations of this study. First, future versions of the ASJT need to include multiple choice response options for both the initial situation and after the subsequent change in situation. The current ASJT only had response options after the subsequent change and therefore made an assumption about the behavioral response of the individual in the initial situation. To the degree that this assumption was inaccurate, the item validity suffered as the participant was unable to demonstrate their true response to each situation. Future versions of the ASJT incorporating response options for both the initial and subsequent scenario will be able to more accurately measure the participant's change in behavior and strategy to effectively deal with the altered situation. Another limitation of the current study was the reliance on several unvalidated measures including supervisor ratings of job performance and adaptability, the job adaptability requirements (JAR) measure, and the ASJT itself. Despite careful construction in accordance with the literature and high internal consistencies for all but the ASJT, all of the measures created for this study need to be validated to ensure suitability for future use. The current study was also limited in the ability to determine the relationship between the facets of the Big Five personality

traits and the ASJT. Prior research has shown the value in examining traits such as Conscientiousness and Openness to Experience at the facet level (LePine et al., 2000; Pulakos et al., 2002). Future research should examine these relationships by analyzing ASJT scores and the facets of Conscientiousness to see if the volitional and dependability facets have differential relationships with ASJT scores. Finally, future studies should use a cleaner measure of cognitive ability such as the Wonderlic. The ASVAB GT scores are limited to measuring verbal expression and arithmetic reasoning skills and only assess crystallized intelligence (Roberts et al., 2000). Snow and Lohman (1984) posited that fluid intelligence is the key to being able to use crystallized intelligence to adapt to novel situations. If the ASVAB only measures crystallized intelligence, then it may not be a robust enough cognitive ability measure to capture the cognitive skills needed for adaptive behavior. Also, US Army soldiers are selected on the basis of their ASVAB scores and therefore restriction of range likely suppresses the true correlation with other measures in the study. Future studies using a different cognitive ability measure will be able to better measure the true relationship with the ASJT and supervisor ratings of adaptability.

### *Conclusion*

This study represents an important first step in using situational judgment tests in applied settings to measure adaptability. Much of the literature on adaptive performance is focused on using complex simulations to measure adaptability in experimental conditions utilizing undergraduate participants. The ASJT represents a measure of adaptability that is practical for use in a wide-range of applied settings for selection and

assessment decisions that possesses evidence of validity, utility, and legal defensibility. Future refinement is needed to improve the psychometric properties of the ASJT, but this study provided the initial validity evidence to support the use of a situational judgment test to measure individual adaptability.

Table 1. Descriptive Statistics and Correlation Matrix

Variable	n	M	SD	1	2	3	4	5	6	7	8	9	10	11	12
<b>Military Sample</b>															
1. Openness to Experience	101	33.59	5.70	--											
2. Conscientiousness	101	40.85	5.88	.194*	--										
3. Extroversion	101	34.08	6.31	.141	.503**	--									
4. Agreeableness	101	35.00	6.88	.330**	.431**	.134	--								
5. Neuroticism	101	22.22	6.48	-.189*	-.659**	-.415**	-.345**	--							
6. ASIT	101	1.995	.5045	.234**	.330**	.094	.288**	-.295**	--						
7. I-ADAPT-M	101	136.45	16.23	.240**	.695**	.539**	.255**	-.635**	.338**	--					
8. JAR	99	35.16	6.38	.244**	.278**	.261**	.289**	-.214*	.324**	.472**	--				
9. Adaptability Rating	101	72.65	16.52	.090	.343**	.155	.163	-.295**	.155	.347**	.050	--			
10. Job Performance Rating	101	43.85	11.14	.069	.302**	.110	.169*	-.247**	.131	.356**	.051	.923**	--		
11. GT ASVAB Score	100	107.95	10.426	.084	-.182*	-.174*	-.119	.023	.019	-.007	-.144	.045	.044	--	
12. Months deployed	98	10.34	11.325	.017	-.041	-.062	-.145	-.011	-.078	.001	-.026	.302**	.314**	.019	--
<b>Call Center Sample</b>															
1. Openness to Experience	67	37.51	5.53	--											
2. Conscientiousness	67	43.12	4.17	.321**	--										
3. Extroversion	67	36.11	6.26	.389**	.525**	--									
4. Agreeableness	67	42.60	4.09	.218*	.550**	.274*	--								
5. Neuroticism	67	20.11	6.11	-.080	-.592**	-.369**	-.429**	--							
6. ASIT	67	1.924	.5135	.342**	.246*	.249*	.122	-.265*	--						
7. I-ADAPT-M	67	140.29	15.29	.469**	.623**	.540**	.439**	-.487**	.289**	--					
8. JAR	67	33.56	8.42	.198	.172	.185	.096	-.302**	.158	.292**	--				
9. Adaptability Rating	60	67.65	17.33	.067	.177	.144	-.030	-.350**	.221*	.168	.065	--			
10. Job Performance Rating (subjective)	60	4.72	1.324	.018	.204	.141	-.023	-.383**	.305**	.134	.015	.937**	--		
11. Job perf rating (objective)	50	3.43	0.260	-.106	.008	.088	.185	-.125	.186	.119	-.126	.212	.250*	--	

Note: p < .01 = \*\*, p < .05 = \*, one-tailed test

Table 2. Hierarchical regression results for the ASJT predicting adaptability ratings over and above cognitive ability (military sample)

	<b>b</b>	<b>S.E.</b>	<b><math>\beta</math></b>	<b>t</b>	<b>p</b>	<b>R<sup>2</sup></b>	<b><math>\Delta R^2</math></b>	<b>F</b>
<b>DV = Adaptability Ratings</b>								
<i>Model 1:</i>						.091	.09**	9.65**
Months deployed	.441	.142	.302	3.106	.002			
<i>Model 2:</i>						.093	.002	4.82*
Months deployed	.440	.143	.301	3.084	.003			
ASVAB Score	.062	.155	.039	.401	.689			
<i>Model 3:</i>						.125	.032	4.47**
Months deployed	.460	.141	.316	3.259	.002			
ASVAB Score	.056	.153	.036	.368	.714			
ASJT Score	5.868	3.170	.179	1.851	.067			

\*  $p < .05$ , \*\*  $p < .01$ ; one-tailed test

Table 3. Hierarchical regression results for the ASJT predicting adaptability ratings over and above the Big Five personality traits (military sample)

	<b>b</b>	<b>S.E.</b>	<b><math>\beta</math></b>	<b>t</b>	<b>p</b>	<b>R<sup>2</sup></b>	<b><math>\Delta R^2</math></b>	<b>F</b>
<b>DV = Adaptability Ratings</b>								
<i>Model 1:</i>						.091	.09**	9.65**
Months deployed	.441	.142	.302	3.106	.002			
<i>Model 2:</i>						.227	.135*	4.44**
Months deployed	.468	.137	.321	3.418	.001			
Openness to Experience	-.015	.285	-.005	-.054	.957			
Conscientiousness	.763	.384	.271	1.985	.050			
Extroversion	-.024	.285	-.009	-.083	.934			
Agreeableness	.148	.262	.062	.567	.572			
Neuroticism	-.245	.318	-.096	-.772	.442			
<i>Model 3:</i>						.229	.003	3.82**
Months deployed	.473	.138	.324	3.435	.001			
Openness to Experience	-.040	.290	-.014	-.136	.892			
Conscientiousness	.727	.391	.259	1.860	.066			
Extroversion	-.007	.288	-.003	-.025	.980			
Agreeableness	.135	.264	.056	.510	.612			
Neuroticism	-.227	.321	-.089	-.706	.482			
ASJT Score	1.840	3.329	.056	.553	.582			

\*  $p < .05$ , \*\*  $p < .01$ ; one-tailed test

Table 4. Hierarchical regression results for the ASJT predicting adaptability ratings over and above the Big Five personality traits (call center sample)

	<b>b</b>	<b>S.E.</b>	<b><math>\beta</math></b>	<b>t</b>	<b>p</b>	<b>R<sup>2</sup></b>	<b><math>\Delta R^2</math></b>	<b>F</b>
<b>DV = Adaptability Ratings</b>								
<i>Model 1:</i>						.169	.169	2.197
Openness to Experience	.231	.435	.074	.532	.597			
Conscientiousness	.131	.772	.032	.170	.866			
Extroversion	.024	.424	.009	.057	.955			
Agreeableness	-1.06	.640	-.249	-1.65	.105			
Neuroticism	-1.22	.451	-.429	-2.69	.009			
<i>Model 2:</i>						.182	.013	1.964
Openness to Experience	.108	.456	.035	.237	.814			
Conscientiousness	.124	.773	.030	.160	.873			
Extroversion	.007	.425	.003	.016	.987			
Agreeableness	-1.02	.642	-.240	-1.59	.119			
Neuroticism	-1.13	.462	-.398	-2.44	.018			
ASJT Score	4.225	4.629	.125	.913	.365			

\*  $p < .05$ , \*\*  $p < .01$ ; one-tailed test

Table 5. Results for tests of significance between dependent correlations for relationships of select personality traits and ASJT scores

Relationship	Military sample			Call center sample		
	<b>r</b>	<b>t</b>	<b>p</b>	<b>r</b>	<b>t</b>	<b>p</b>
$r_{O,ASJT}$	.234			.342		
$r_{N,ASJT}$	-.295			-.265		
$r_{O,N}$	-.189			-.080		
$r_{O,ASJT} - r_{N,ASJT}$		3.62	.0002		3.633	.0003
$r_{C,ASJT}$	.330			.246		
$r_{O,ASJT}$	.234			.342		
$r_{C,O}$	.194			.321		
$r_{C,ASJT} - r_{O,ASJT}$		.80	.214		-.704	.242
$r_{N,ASJT}$	-.295			-.265		
$r_{C,ASJT}$	.330			.246		
$r_{N,C}$	-.659			-.592		
$r_{N,ASJT} - r_{C,ASJT}$		-3.62	.0002		-2.40	.0099

Note: O = Openness to Experience, C = Conscientiousness, and N = Neuroticism

Note 2: A significant  $p$  value means the two correlations have significantly different relationships with ASJT scores

Table 6. Hierarchical regression results for the moderating effect of job adaptability requirements (JAR) on the relationship between ASJT scores and job performance ratings (military sample)

	<b>b</b>	<b>S.E.</b>	<b><math>\beta</math></b>	<b>t</b>	<b>p</b>	<b>R<sup>2</sup></b>	<b><math>\Delta R^2</math></b>	<b>F</b>
<b>DV = Job Performance Ratings</b>								
<i>Model 1:</i>						.017	.017	.848
ASJT	2.677	2.391	.120	1.120	.266			
JAR	.021	.188	.012	.113	.910			
<i>Model 2:</i>						.038	.020	1.236
ASJT	4.379	2.591	.198	1.690	.094			
JAR	-.052	.192	-.030	-.270	.788			
ASJT x JAR	-.649	.459	-.158	-1.41	.161			

\*  $p < .05$ , \*\*  $p < .01$ ; one-tailed test

Table 7. Hierarchical regression results for the moderating effect of job adaptability requirements (JAR) on the relationship between ASJT scores and job performance ratings (call center sample)

	<b>b</b>	<b>S.E.</b>	<b><math>\beta</math></b>	<b>t</b>	<b>p</b>	<b>R<sup>2</sup></b>	<b><math>\Delta R^2</math></b>	<b>F</b>
<b>DV = Job Performance Ratings</b>								
<i>Model 1:</i>						.059	.059	1.479
ASJT	.107	.072	.211	1.47	.148			
JAR	-.005	.004	-.159	-1.11	.272			
<i>Model 2:</i>						.111	.052	1.910
ASJT	.113	.071	.223	1.580	.121			
JAR	-.004	.004	-.126	-.883	.382			
ASJT x JAR	-.010	.006	-.230	-1.63	.109			

\*  $p < .05$ , \*\*  $p < .01$ ; one-tailed test



Table 8. Racial subgroup comparison of ASJT and cognitive ability scores

Sample		Racial Comparison	Mean score difference	<i>d</i>
Military	ASJT	White-Black	-0.019	-.03
	ASVAB		3.084	.26
	ASJT	White-Hispanic	-0.017	-.34
	ASVAB		6.573	.72
	ASJT	Black-Hispanic	-0.151	-.26
	ASVAB		3.488	.30
Call Center	ASJT	White-Black	0.159	.298
	Cognitive ability*		--	1.0*

Note: In the call center sample cognitive ability was not measured, therefore the comparison is based on  $d = 1.0$  for the White-Black difference in cognitive ability scores

Table 9. Hierarchical regression results for the moderating effect of ethnicity on the relationship between ASJT scores and adaptability ratings (military sample)

	<b>b</b>	<b>S.E.</b>	<b><math>\beta</math></b>	<b>t</b>	<b><i>p</i></b>	<b>R<sup>2</sup></b>	<b><math>\Delta R^2</math></b>	<b>F</b>
<b>DV = Adaptability Ratings</b>								
<i>Model 1:</i>						.038	.038	1.05
Intercept	71.77	2.084		34.45	.000			
Black (Dummycode1)	-.312	6.676	-.005	-.047	.963			
Hispanic (Dummycode2)	6.201	5.308	.130	1.168	.246			
ASJT Score	4.240	3.584	.131	1.183	.240			
<i>Model 2:</i>						.063	.025	1.04
Intercept	71.85	2.083		34.48	.000			
Black (Dummycode1)	-.462	6.674	-.008	-.069	.945			
Hispanic (Dummycode2)	7.230	5.467	.152	1.322	.190			
ASJT Score	7.115	4.114	.219	1.729	.088			
Black x ASJT	-13.40	11.35	-.139	-1.18	.241			
Hispanic x ASJT	-10.52	10.85	-.119	-.970	.335			

Note: White participants designated as the uncoded group – all partial coefficients involve comparisons of the minority participant group to the White participant group  
 \*  $p < .05$ , \*\*  $p < .01$ ; one-tailed test

Table 10. Hierarchical regression results for the moderating effect of ethnicity on the relationship between ASJT scores and adaptability ratings (call center sample)

	<b>b</b>	<b>S.E.</b>	<b>β</b>	<b>t</b>	<b>p</b>	<b>R<sup>2</sup></b>	<b>ΔR<sup>2</sup></b>	<b>F</b>
<b>DV = Adaptability Ratings</b>								
<i>Model 1:</i>						.048	.048	1.35
Intercept	69.61	3.460		20.12	.000			
Black (Dummycode1)	-2.674	4.667	-.077	-.573	.569			
ASJT Score	6.195	4.258	.197	1.455	.152			
<i>Model 2:</i>						.048	.000	.883
Intercept	69.60	3.512		19.82	.000			
Black (Dummycode1)	-2.672	4.714	-.077	-.567	.573			
ASJT Score	6.295	6.409	.200	.982	.331			
Black x ASJT	-.183	8.641	-.004	-.021	.983			

Note: White participants designated as the uncoded group – all partial coefficients involve comparisons of the Black participant group to the White participant group  
 \*  $p < .05$ , \*\*  $p < .01$ ; one-tailed test

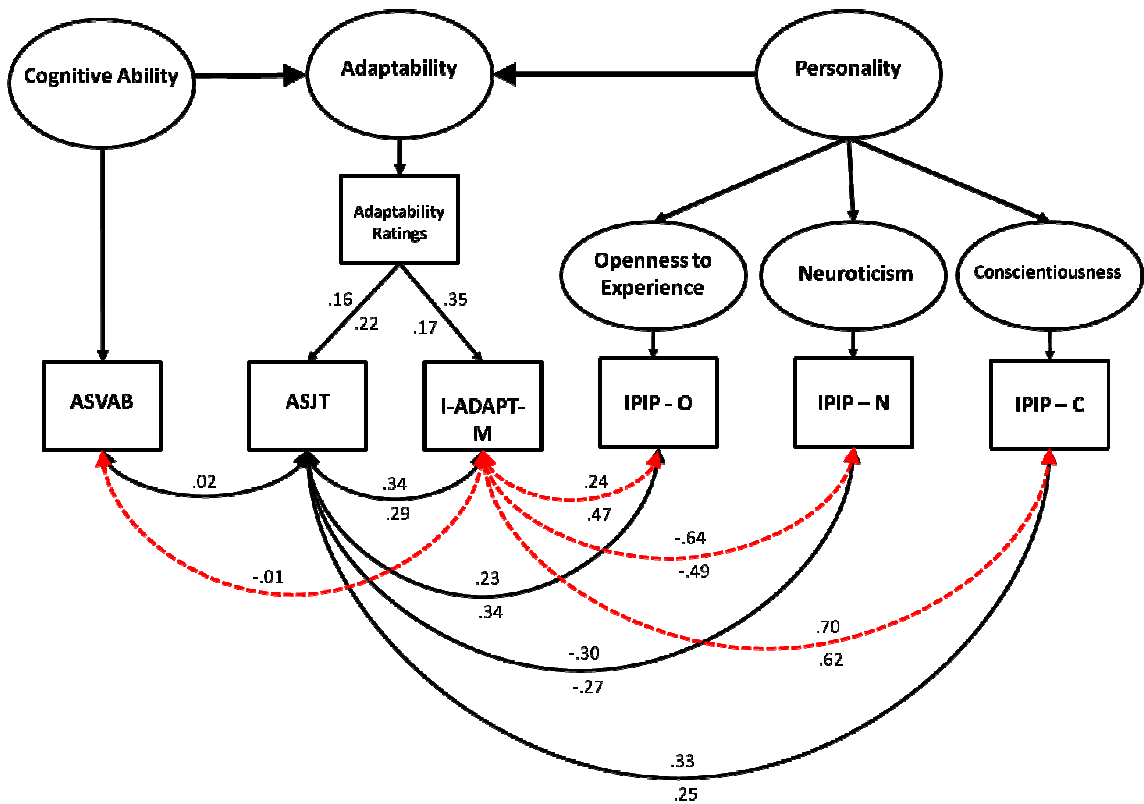


Figure 1. Nomological validity results. Zero-order correlations are reported. Values above the line are from the military sample and values below the line are from the call center sample. Solid double-headed arrows represent relationships between ASJT and variables of interest. Dashed double-headed arrows represent relationships between I-ADAPT-M and variables of interest.

## APPENDIX: Measures

### **Situational Judgment Test of Adaptability – Business setting**

Read each scenario below and the options below them. Rate each response on a scale of 1 to 5 indicating how likely you are to do each of the listed behaviors in response to the situation. There are no right or wrong answers, so please answer honestly what you would do.

1 = very unlikely; 2 = unlikely; 3 = neutral; 4 = likely; 5 = very likely

#### **Scenario # 1:**

You are a member of a work team and are not in charge of any other employees. You are responsible for completing your own work on time and do not have to worry about how much work other people are getting done. Although you frequently have a high work load and tight deadlines, you are able to focus all your attention on completing your assigned tasks and as a result you always get all your work done on time. Whenever you face a tight deadline or a challenging task, you concentrate all your effort on the task, skip work breaks, and stay late at work if necessary to get the task done on time.

Based on your outstanding work, your supervisor informs you that you have been selected for promotion. You will have all the same work tasks as before, but you will also be in charge for a small group of employees. Now that you have subordinate employees you must continue to complete your tasks on time as well as manage your subordinates' work schedules, workload, and provide regular performance feedback. When you arrive at work, your supervisor gives you a challenging task with a short deadline.

#### ***How likely are you to do each of the following?***

- a) Meet with my new subordinates and delegate tasks so the work can get done as a team.
- b) Talk with my supervisor and ask for additional time to complete the tasks.
- c) Discuss the situation with your subordinates and tell them to manage their own workloads for a short while so you can focus all your attention on doing the tasks alone.
- d) Tell your supervisor that you would rather have someone else in charge so you can continue to work by yourself.
- e) Find the most experienced worker on your team and have them help you finish the work.

#### **Scenario #2:**

Every year your organization has an office party for the employees and their families. This event has always been funded by several local businesses and sponsors outside the organization in exchange for advertising on signs and other products at the event. In the past you would call the businesses and sponsors that provided funding during the previous year to see if they would be willing to provide funds again for the upcoming event. This method always raised enough money in order to fully pay for the office party and make it free to all families to attend.

This year you are once again in charge of organizing the office party. You look over the list of past sponsors and donors and realize that several of the companies have either gone out of business or moved their businesses out of the area due to the tough economic conditions. You call all the businesses and sponsors on your list and raise only half of the money you need to pay for even the most basic office party.

***How likely are you to do each of the following?***

- a) Search for other businesses that have not contributed in the past and ask for donations.
- b) Cut costs by having employees bring food and drinks to the party to share with others.
- c) Set up fundraisers like car washes and bake sales to raise enough money for the party.
- d) Postpone the party until more businesses are willing to contribute.
- e) Ask senior managers to pay additional money to make up for the money you are short.
- f) Call back the same businesses again and ask if they will donate extra money to cover the cost of the party.

**Scenario #3:**

Pat is one of your co-workers and is sometimes rude to you and some of the other employees in your department. Pat often tells off-color jokes, makes inappropriate remarks, and likes to spread rumors about other employees. You choose to ignore Pat and your supervisor is always quick to step in to fix the situation.

Your supervisor is out of town for the next two weeks for a meeting. You hear Pat making inappropriate remarks about another employee in your department.

***How likely are you to do each of the following?***

- a) Speak up when other workers are around so that Pat knows such comments are not appreciated.
- b) Write down what Pat says so you can report it to your supervisor when they return.
- c) Send Pat an email and tell them to stop the inappropriate comments and unprofessional behavior.
- d) Ignore Pat so you don't give them the attention they are probably seeking.
- e) Say something insulting to Pat, so they know how it feels to be picked on, maybe it will be the wakeup call needed to fix things in the office.
- f) Gather several co-workers to directly confront Pat using physical force if necessary to get the point across that people won't tolerate the inappropriate behavior any more.
- g) Find a supervisor and report the incident so they can handle the situation.

**Scenario #4:**

Bill is one of your friends who works in your department. You often hang out with him on the weekends or after work. He is not a very good employee and often comes in to work late, leaves early, and fails to do a good job with his work. Since you are friends with Bill you ignore his faults at work and let your supervisor worry about it.

Your supervisor has been promoted and is going to move to another department. Before leaving your supervisor tells you that you have been selected for promotion and will be in charge of the department you currently work in. On your first day as supervisor of the department you see Bill come to work late.

***How likely are you to do each of the following?***

- a) Assume that Bill had an excuse for being late and don't worry about it this time.
- b) Yell at Bill in front of other workers about his poor work performance so that others don't think you are giving him a break because he is your friend.
- c) Wait until the weekend when you are hanging out with Bill and ask him to help you out by coming to work on time and being a better worker.
- d) Give Bill a verbal warning on the spot and let him know that future incidents could lead to him being fired.
- e) Report the problem to your supervisor and let them handle the situation so it doesn't interfere with your friendship with Bill.

**Scenario # 5:**

Your supervisor is a person with whom you have had past personal differences with and you don't seem to see eye to eye on anything. Even though you have been a hard worker, your supervisor has given you less than favorable comments on past performance ratings. As a result you do not feel comfortable in openly discussing any issues that come up at work and you avoid being around your supervisor whenever possible. One of your friends at work has a good working relationship with your supervisor. As a result, if an important matter ever comes up that you have to tell your supervisor about, you always tell your friend about the issue, and they talk to your supervisor to resolve the situation.

Your friend has an unexpected health problem and takes a leave of absence that is expected to last several months. You find out there is a problem at work that if left uncorrected could negatively affect the organization and possibly cause some people to be fired.

***How likely are you to do each of the following?***

- a) Find another supervisor that you know and tell them about the situation.
- b) Tell a co-worker about the situation and ask them to tell your supervisor.
- c) Call your friend and ask their advice for how to best approach your supervisor and then try their recommendation.
- d) Send your supervisor an email and fully explain the situation.
- e) Wait until your supervisor is in a group of people you know and then bring up the issue.

**Scenario #6:**

Your company has used the same printers for several years. Although it was not her job, Sue has always been the person to fix any problems with the printers. If you ever had a problem or question about the printers you would ask Sue to help you out.

Sue is on vacation for the next two weeks and two of the office printers break. To solve the problem, your company purchases several new, higher quality printers. The new printers are delivered to the office and are sitting in unopened boxes next to the old printers.

***How likely are you to do each of the following?***

- a) Leave them in the boxes until Sue returns from vacation to set them up.
- b) Find a co-worker who knows about printers and ask them to hook them up.
- c) Open the box, find the instructions, and try to set the printers up yourself.
- d) Call the printer company and ask for a representative to come to the office and set up the new printers.
- e) Try to call Sue and see if she can explain how to set up printers.

**Scenario #7:**

You are in charge of ordering supplies for your company. You always place orders every two weeks so that supplies will not run out and your company can continue normal operations. You never place partial orders because of the extra shipping costs and the burden of making additional pick-ups at the warehouse located almost an hour away. It usually takes a week for the order to be processed and delivered to your company.

You placed an order three days ago and now realize that you might not have ordered enough printer paper to cover the next two weeks of operations.

***How likely are you to do each of the following?***

- a) Wait and see if the printer paper will last until the next order.
- b) Tell your supervisor about the situation and ask them what to do.
- c) Call the supply company and see if they can add more printer paper to your current order before it ships.
- d) Place another order for the items you are short on and pay for the shipping costs out of your own money.
- e) Go to another department and ask to borrow printer paper until you can get more on your next order.

**Scenario #8:**

You routinely give group presentations at work to employees from several departments. Everyone is usually polite and stays quiet during the presentation, but if people speak out of turn or become disruptive you continue to give your presentation and your supervisor eventually tells everyone to quiet down and pay attention.

You are about to give another presentation at work and your supervisor tells you that they will not be able to attend. You start the presentation and about half way through, several people in the back of the room begin whispering loudly to each other and others are ignoring your presentation and texting on their cell phones.

***How likely are you to do each of the following?***

- a) Stop talking and stare at those who are being rude until they pay attention to you.
- b) Ignore the distractions and continue with your presentation, if it gets too disruptive someone else will probably speak up.
- c) Start asking questions of the audience about the presentation in order to get everyone involved.
- d) Continue with your presentation, but let your supervisor know who was being disruptive so they can handle the problem later on.
- e) Walk around the room while giving your presentation and stand next to those who are not paying attention.

***Scenario #9:***

You have worked for the same company for several years. Your organization has had some ups and downs, but overall it is a great place to work. You have a great relationship with your supervisor and whenever you face a tough problem or challenge at work, you always ask your supervisor for help. Your supervisor has many more years of experience than you and their advice always seems to solve your problems.

Due to the tough economic times and lower sales, your company laid off 30% of the workers. Fortunately you still have a job, but you find out that your supervisor was laid off. You are promoted to supervisor of your department and given the task of figuring out how to improve your department's work performance with less money and fewer employees.

***How likely are you to do each of the following?***

- a) Call your old supervisor and ask for their advice on how to deal with this situation.
- b) Talk with the members of your team and brainstorm as a group for ideas on how to make the changes.
- c) Talk with your new supervisor and see if they had any helpful advice.
- d) Develop a strategy and then have a meeting with your group to discuss the plan of action.
- e) Ask an experience co-worker for advice on what to do.



### **Situational Judgment Test of Adaptability – Military setting**

Read each scenario below and the options below them. Rate each response on a scale of 1 to 5 indicating how likely you are to do each of the listed behaviors in response to the situation. There are no right or wrong answers, so please answer honestly what you would do.

1 = very unlikely; 2 = unlikely; 3 = neutral; 4 = likely; 5 = very likely

#### **Scenario # 1:**

You are a member of a unit, but not in a leadership position, so you do not have any subordinates. You are responsible for completing your own work on time and do not have to worry about how much work other people are getting done. Although you frequently have a lot of work to do, you are able to focus all your attention on completing your assigned tasks and you always get all your work done on time. Whenever you have a lot of work to do or a difficult task, you concentrate all your effort on the task, skip work breaks, and stay late at work if necessary to get the task done on time.

Based on your outstanding work, your supervisor informs you that you have been selected for promotion to a leadership position. You will have all the same work tasks as before, but you will also be in charge of other soldiers. Now that you have subordinates you must continue to complete your tasks as well as train your subordinates, manage their workload, and conduct regular counseling. When you arrive at work, your supervisor gives you a difficult task and only a short time to get it done.

#### ***How likely are you to do each of the following?***

- a) Meet with my new subordinates and delegate tasks so the work can get done as a team.
- b) Talk with my supervisor and ask for additional time to complete the tasks.
- c) Discuss the situation with your subordinates and tell them to manage their own workloads for a short while so you can focus all your attention on doing the tasks alone.
- d) Tell your supervisor that you would rather have someone else in charge so you can continue to work by yourself.
- e) Find the most experienced worker on your team and have them help you finish the work.

#### **Scenario #2:**

Every year your unit has a party for soldiers and their families. This event has always been funded by several local businesses and sponsors in exchange for advertising on signs and other products at the event. In the past you would call the businesses and sponsors that provided funding during the previous year to see if they would be willing to provide funds again for the upcoming event. This method always raised enough money in order to fully pay for the party and make it free to all families to attend.

This year you are once again in charge of organizing the unit party. You look over the list of past sponsors and donors and realize that several of the companies have either gone out of business or moved their businesses out of the area because of the bad economy. You call all the

businesses and sponsors on your list and raise only half of the money you need to pay for even the most basic unit party.

***How likely are you to do each of the following?***

- a) Search for other businesses that have not contributed in the past and ask for donations.
- b) Cut costs by having soldiers and their families bring food and drinks to the party to share with others.
- c) Set up fundraisers like car washes and bake sales to raise enough money for the party.
- d) Postpone the party until more businesses are willing to contribute.
- e) Ask senior leaders to pay additional money to make up for the money you are short.
- f) Call back the same businesses again and ask if they will donate extra money to cover the cost of the party.

**Scenario #3:**

Rick is in your unit and is sometimes rude to some of the other soldiers in your unit. Rick often tells dirty jokes, makes inappropriate remarks, and likes to spread rumors about other soldiers. You and others in your unit ignore Rick and your supervisor is always quick to step in and fix the situation.

Your supervisor is on leave for two weeks. You hear Rick cracking dirty jokes and picking on a soldier in your unit.

***How likely are you to do each of the following?***

- a) Speak up when other soldiers are around so that Rick knows such comments are not appreciated.
- b) Write down what Rick says so you can report it to your supervisor when they return.
- c) Send Rick an email and tell them to stop the inappropriate comments and unprofessional behavior.
- d) Ignore Rick so you don't give him the attention he is probably seeking.
- e) Say something insulting to Rick, so they know how it feels to be picked on, maybe it will be the wakeup call needed to fix things.
- f) Gather several other soldiers to directly confront Rick using physical force if necessary to get the point across that people won't tolerate the inappropriate behavior any more.
- g) Find a supervisor and report the incident so they can handle the situation.

**Scenario #4:**

Dan is one of your friends in your unit. You often hang out with him on the weekends or after work. He is not a very good soldier and often comes in to work late, leaves early, and fails

to do a good job with his work. Since you are friends with Dan you ignore his faults at work and let your supervisor worry about it.

Your supervisor has been promoted and is going to move to another unit. Before leaving your supervisor tells you have been selected for promotion and will be in charge. On your first day in charge you see Dan come to work late.

***How likely are you to do each of the following?***

- a) Assume that Dan had an excuse for being late and don't worry about it this time.
- b) Yell at Dan in front of other workers about his poor work performance so that others don't think you are giving him a break because he is your friend.
- c) Wait until the weekend when you are hanging out with Dan and ask him to help you out by coming to work on time and being a better soldier.
- d) Give Dan a verbal warning on the spot and let him know that future incidents could lead to him getting extra duty.
- e) Report the problem to your supervisor and let them handle the situation so it doesn't interfere with your friendship with Dan.

**Scenario # 5:**

Your supervisor is a person with whom you have had past personal differences with and you don't seem to see eye to eye on anything. Even though you have been a hard worker, your supervisor has written you up and given you negative counseling statements several times. As a result you do not feel comfortable in openly discussing any issues that come up and you avoid being around your supervisor whenever possible. One of your buddies in your unit is friends with your supervisor. As a result, if an important matter ever comes up that you have to tell your supervisor about, you always tell your buddy about the issue, and they talk to your supervisor to resolve the situation.

Your friend comes down on orders and is on PCS leave on his way to another duty station. You find out there is a problem going on in the unit that if left uncorrected could negatively affect the organization and possibly cause some people to get in serious trouble.

***How likely are you to do each of the following?***

- a) Find another supervisor that you know and tell them about the situation.
- b) Tell another soldier about the situation and ask them to tell your supervisor.
- c) Call your friend and ask their advice for how to best approach your supervisor and then try their recommendation.
- d) Send your supervisor an email or leave a note and fully explain the situation.
- e) Wait until your supervisor is in a group of people you know and then bring up the issue.

**Scenario #6:**

Your unit has used the same GPS units since you've been in the unit. Although it was not his job, John has always been the person to fix any problems with the GPS units. If you ever had a problem or question about how to use the GPS you would ask John to help you out.

John is on leave for the next two weeks and several of the GPS units break and cannot be repaired. Your unit ordered several new, high-speed GPS units to replace the broken units so your unit will be prepared for the field training exercise next week. The new GPS units are delivered to the unit and put on the desk next to you.

*How likely are you to do each of the following?*

- a) Leave them in the boxes until John returns from vacation to set them up.
- b) Find another soldier who knows about electronics and ask them to hook them up.
- c) Open the box, find the instructions, and try to figure them out yourself.
- d) Call someone from the communication shop and ask for a representative to come to your unit and set up the new GPS systems.
- e) Try to call John and see if he can explain how to work the GPS systems.

**Scenario #7:**

You are in charge of requesting supplies for your unit. You always place request supplies every two weeks so that supplies will not run out and your unit can continue normal operations. Your unit supply sergeant has to get approval and purchase the supplies you request and then issues them out. It usually takes a week for the order to be processed and delivered to your unit.

Tomorrow morning your unit will be leaving for a field training exercise for the next two weeks. You sent a request to the supply sergeant three days ago and now realize that you might not have ordered enough supplies to cover the next two weeks in the field.

*How likely are you to do each of the following?*

- a) Wait and see if the supplies will last until the end of the field problem.
- b) Tell your supervisor about the situation and ask them what to do.
- c) Talk to the supply sergeant and see if they can add more supplies to your current order before he goes to pick them up.
- d) Place another order for the items you are short and volunteer to go with the supply sergeant to pick up the extra supplies later in the field problem when they arrive.
- e) Go to another unit and ask to borrow supplies until you can get more on your next order.

**Scenario #8:**

You routinely give training to your unit. Everyone is usually polite and stays quiet during the training, but if people speak out of turn or become disruptive you continue to give training and your supervisor eventually tells everyone to quiet down and pay attention.

You are about to give training and your supervisor tells you that they will not be there. You start the training and about half way through, several people in the back of the room begin whispering loudly to each other and others are ignoring your presentation and texting on their cell phones.

*How likely are you to do each of the following?*

- a) Stop talking and stare at those who are being rude until they pay attention to you.
- b) Ignore the distractions and continue with the training, if it gets too disruptive someone else will probably speak up.
- c) Start asking questions of the audience about the training in order to get everyone involved.
- d) Continue with the training, but let your supervisor know who was being disruptive so they can handle the problem later on.
- e) Walk around the room while giving training and stand next to those who are not paying attention.

***Scenario #9:***

You have been in the same unit for a while. Your unit has had some ups and downs, but overall it is a great place to work. You have a great relationship with your supervisor and whenever you face a tough problem or challenge, you always ask your supervisor for help. Your supervisor has many more years of experience than you and their advice always seems to help you out.

Currently your unit is in the field and part of your unit has been tasked for providing OPFOR support. Your supervisor was picked to be part of the OPFOR tasking and when he left, he put you in charge of the rest of your unit. You are given a tough mission that you haven't done before and aren't quite sure how to do it.

***How likely are you to do each of the following?***

- a) Call your old supervisor on an administrative frequency and ask for their advice on how to deal with this situation.
- b) Talk with the members of your unit and brainstorm as a group for ideas on how to do the mission.
- c) Talk with another supervisor in your chain of command and see if they had any helpful advice.
- d) Develop a strategy and then have a meeting with your unit to discuss the plan of action.
- e) Ask an experienced soldier in your unit for advice on what to do.

## Supervisor Ratings of Adaptability and Soldier Performance (military version)

**Source note:** Items 10 – 24 based on Pulakos et al. (2000, p. 617) definitions of adaptive performance dimensions.

For each item below, rate each of your **subordinates' level of performance effectiveness** on a scale of 1 to 7. All ratings will be completely confidential and not shared with anyone. You do not have to include your name and therefore will remain completely anonymous.

Worst of any soldier of equal rank	Bottom 10% of soldiers of equal rank	Slightly below average	Average: the same as other soldiers of the same rank	Slightly above average	Top 10% of soldiers of equal rank	Best of any soldier of equal rank
1	2	3	4	5	6	7

1. Duty proficiency and MOS competency
2. Accomplishes tasks to the fullest capacity
3. Mental and physical toughness
4. Displays confidence and enthusiasm
5. Puts the mission first
6. Sets the example for others
7. Does what is right, even when no one is looking
8. Care and maintenance of equipment and unit property
9. Potential for promotion and service at the next rank
10. Remains composed and cool when faced with difficult circumstances
11. Does not overreact to unexpected situations
12. Manages frustration well by working towards a solution, rather than blaming others
13. Develops innovative methods of obtaining resources to get the job done
14. Generates new, innovative ideas to solve complex problems
15. Turns problems upside-down and inside-out to find fresh, new approaches
16. Readily and easily changes gears in response to unexpected changes
17. Refuses to be frozen or paralyzed by uncertainty
18. Takes effective action, even when the situation is not clear
19. Demonstrates enthusiasm for learning new skills and technology
20. Quickly and proficiently learns new ways to perform previously unlearned tasks
21. Volunteers to attend training that will prepare self for new skills needed at work
22. Flexible and open-minded when dealing with others
23. Works well and develops effective relationships with people with different personalities
24. Demonstrates keen insight of others' behavior and adjusts own behavior to be able to work more effectively with them

### Supervisor Ratings of Adaptability (business version)

**Source note:** Items 1 - 15 based on Pulakos et al. (2000, p. 617) definitions of adaptive performance dimensions.

For each item below, rate each of your **subordinates' level of performance effectiveness** on a scale of 1 to 7. All ratings will be completely confidential and not shared with anyone. You do not have to include your name and therefore will remain completely anonymous.

Worst of any call agent	Bottom 10% of call agents	Slightly below average	Average: the same as other call agents	Slightly above average	Top 10% of call agents	Best of any call agent
1	2	3	4	5	6	7

1. Remains composed and cool when faced with difficult circumstances
2. Does not overact to unexpected situations
3. Manages frustration well by working towards a solution, rather than blaming others
4. Develops innovative methods of obtaining resources to get the job done
5. Generates new, innovative ideas to solve complex problems
6. Turns problems upside-down and inside-out to find fresh, new approaches
7. Readily and easily changes gears in response to unexpected changes
8. Refuses to be frozen or paralyzed by uncertainty
9. Takes effective action, even when the situation is not clear
10. Demonstrates enthusiasm for learning new skills and technology
11. Quickly and proficiently learns new ways to perform previously unlearned tasks
12. Volunteers to attend training that will prepare self for new skills needed at work
13. Flexible and open-minded when dealing with others
14. Works well and develops effective relationships with people with different personalities
15. Demonstrates keen insight of others' behavior and adjusts own behavior to be able to work more effectively with them

**Job Adaptability Requirements:**

Think of your current job and indicate the importance of and time spent on each of the following actions compared with other things you do at your job.

Rate the action's importance on a 5-point scale ranging from 1 (*this is of minor importance compared to other things I do on my job*) to 5 (*this is extremely important compared to other things I do on my job*). If the action is not part of your job, then select 0 (*not part of job*) and proceed to the next item.

Rate how much time you spend on each action on a 5-point scale ranging from 1 (*spend much less time on this than other things I do on my job*) to 5 (*spend much more time on this than other things I do on my job*).

1. React to unexpected news or situations.
2. Face difficult circumstances or a highly demanding workload.
3. Create innovative ideas to solve new and highly complex problems.
4. Think 'outside the box' to solve a problem you've never faced before.
5. Take action without having all the facts at hand.
6. Change gears in response to unexpected events or new situations.
7. Learn new skills to use at work.
8. Participate in training to prepare you for changes in work demands, new equipment, or technology.
9. Work closely with people with different personalities and work styles.
10. Change your behavior when dealing with others in order to persuade or influence them.



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## CURRICULUM VITAE

Adam M. Grim graduated from the United States Military Academy at West Point in 2000 and received a Bachelor of Science degree in Engineering Management. He was commissioned as an Armor officer in the United States Army and has served in various leadership positions including platoon leader, executive officer, and troop commander. He twice deployed to Iraq for a total of 27 months of combat operations in support of Operation Iraqi Freedom.