

The Difference between Coping and Winning:  
The Relationships of Adaptive Performance, Engagement, and Conscientiousness

by

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## ABSTRACT

The workplace is changing, be it due to the requirements of business or the advancement of technology. Understanding which employees can adapt to changes, and linking that Adaptivity to desired organizational outcomes is a necessary step towards getting ahead of the changes. 331 participants responded to an online survey involving Adaptivity, engagement, and conscientiousness. Adaptivity was shown to be correlated with self-reported Adaptive Performance on the job. The fit between Adaptivity and the requirements of the job was shown to successfully predict engagement when taken as an overall fit as well as within the dimensions of openness to criticism and flexibility of opinion. The link between conscientiousness and engagement was shown to be partially mediated by Adaptivity. Employees who can adapt to situations will continue to be necessary as technology and the workplace change and evolve. These links may bring us one step closer to fully understanding, evaluating, and measuring adaptation.

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## CHAPTER I: INTRODUCTION AND LITERATURE REVIEW

“Adaptability is about the powerful difference between adapting to cope and adapting to win.” (McKeown, 2012).

### **Background**

Change is inevitable. Those who are unable to change may well be left by the way-side as progress continues to march forward. What does this mean for the workplace? There have been numerous changes to the working world over the past few decades, all of which have required employees to adapt in some manner in order to remain productive. The pace of change driven by changes in technology has continued to accelerate. The changes have affected every area of work from manufacturing or production type workplaces, to the service industry in areas like retail or tourism (Hesketh & Neal, 1999). The technological advancement is also at play with a move from manufacturing and production towards a work steeped in knowledges, skills, and abilities of not only one individual, but rather a team functioning as a unit of which the individual member may have fundamentally different expertise and specializations (Hesketh & Neal, 1999; Pearlman & Barney, 2000).

Additionally, the fluctuating economic environment has driven steeper competition between organizations. The organizational loyalty of the past has been altered by the downsizing or restructuring of organizations so that they themselves can remain competitive, and have a cutting-edge over their rivals. Employees have taken more control of their career paths and as a result “going away” parties have become much more commonplace than “Gold Watch” style retirement parties as employees do not

generally remain in any one organization until retirement. In an effort to remain competitive themselves, employees have been forced to constantly improve and develop, leading to near continuous skill acquisition and improvement (Cascio, 2003).

“Employees must frequently adjust to new ways of performing their jobs, as changing technologies and automation continue to alter the nature of work tasks” (Pulakos, Dorsey, & White, 2006, p.41).

All together this leads to a workforce that has to constantly adapt their thinking, planning, and actions to remain competitive in the labor market, as well as remain productive within the workforce itself. This could be an employee with more flexible approaches to problem situations, or needing to increase their work-pace in order to keep up with necessary constraints—be it due to constantly fluctuating situations or maintaining productivity in unknown circumstances. With the need to adapt comes the potential for individuals to be in positions that have changing conditions or needs when they themselves cannot adapt. Determining which employees have this ability to adapt will become even more important as work becomes more fluid and ambiguous in scope. Just as examining the fit between an employee’s ability to adapt and the requirements of their job—high fit indicating the employee can adapt and the job requires it or not being able to adapt and the job not requiring it; low fit indicating a mishmash between being able to adapt and whether the job changes and fluctuates—will become ever more necessary as the number of situations requiring adaptation become more and more frequent.

## **Adaptive Performance**

Individual Adaptivity can be thought of as the “capacity to deal with changing work requirements and novel or unusual situations” (Hesketh & Neal, 1999). Individual Adaptivity would then be considered traits inherent to a person, whereas their actual use of those traits would be their adaptive performance. Adaptive performance, as a behavioral measure, has changed throughout its “lifetime”, from the origins within task/contextual performance (Griffin & Hesketh, 2003) to the more direct methods to attempt to measure the construct. While measuring the construct is the obvious goal, there is no agreed upon definition. Han and Williams (2008) point out a large number of different definitions for adaptive performance. These definitions vary in size and scope some suggest that Adaptive Performance is an individual’s ability to make decisions as a factor of general cognitive ability (LePine, Colquitt, and Erez, 2000)—which argues for it being trait based. Or Adaptive Performance is the actions associated with dealing with change, and applying learned knowledge or skills from one situation to another as the requirements of a set of tasks vary (Allworth & Hesketh, 1999, p. 98)—which takes it back to being behavioral performance. This definition itself is important as it suggests that proof of Adaptivity is able to be seen when someone successfully navigates an adaptable moment (Han & Williams, 2008), but it could be argued that “performance is not the consequence(s) or result(s) of action; it is the action itself” (Campbell, 1990, p.704). While some argue that Adaptive Performance is its own brand of performance there are still others who would argue that Adaptive Performance is just another part of contextual performance (Johnson, 2001). However, when all three constructs (i.e., task, contextual, and adaptive performance) were assessed it was shown that although the three

constructs are correlated, they emerge statistically as distinct (Allworth & Hesketh, 1999). In an effort to be concise, Adaptive Performance should be the actions, behaviors, or methods by which an individual can showcase their individual adaptability—the traits inherent to the person themselves. The research tends to use Adaptive Performance as a catch-all term referring to both behavior and trait. For this study, Individual Adaptivity will refer to the traits inherent to a person whereas Adaptive Performance will refer to how a person adapts—their behavior, actions, or job performance.

### **Dimensionality of Individual Adaptivity**

Pulakos, Arad, Donovan, and Plamondon (2000) argued that there needs to be greater understanding and consensus regarding the Adaptive Performance construct and toward that end conducted a series of studies aimed at identifying the potential dimensions of Adaptive Performance as requirements of an individual's job and the behaviors associated therein. Pulakos et al. (2000) reviewed the literature at the time and developed six dimensions with definitions to begin their study. These dimensions were: Solving Problems Creatively – Finding solutions to new, atypical, poorly defined, complex problems. Dealing with Uncertain and Unpredictable Work Situations – Shifting focus effectively when needed within ambiguous situations. Learning Work Tasks, Technologies, and Procedures – Seeking out new skills for current work or new careers. Demonstrating Interpersonal Adaptability – Being flexible when working with others. Demonstrating Cultural Adaptability – Effectively work with cultures other than one's own. Demonstrating Physically Oriented Adaptability – Adapting to the environment; literally, heat, noise, uncomfortable climates, and difficult environments—such as natural disasters, inclement weather, etc. Using the six dimensions as a starting point, Pulakos et

al. (2000) collected critical incidents from 21 different jobs which were either military, federal/state government, or other private sector organization. Consensus was achieved when the six dimensions were expanded to include handling work stress and handling emergencies or crisis situations as the seventh and eighth dimension, respectively. The resulting eight-dimension model was then analyzed via exploratory and confirmatory factor analysis—these dimensions showed reliability ranging from .73 to .98 (Pulakos et al., 2000). See Table 1 for Pulakos et al. (2000) dimension definitions. While their intent was to understand the Adaptive Performance of individual's at work—their behaviors and how well they adapt to fluid conditions—their study also took a step towards explaining an individual's ability to adapt—their Adaptivity or traits inherent to an individual.

Table 1.  
*Adaptive Performance Dimension Definitions (Reprinted from Pulakos et al., 2000)*

Handling emergencies or crisis situations ( $\alpha = .97$ )	Reacting with appropriate and proper urgency in life threatening, dangerous, or emergency situations; quickly analyzing options for dealing with danger or crises and their implications; making split-second decisions based on clear and focused thinking; maintaining emotional control and objectivity while keeping focused on the situation at hand; stepping up to take action and handle danger or emergencies as necessary and appropriate.
Handling work stress ( $\alpha = .92$ )	Remaining composed and cool when faced with difficult circumstances or a highly demanding workload or schedule; not overreacting to unexpected news or situations; managing frustration well by directing effort to constructive solutions rather than blaming others; demonstrating resilience and the highest levels of professionalism in stressful circumstances; acting as a calming and settling influence to whom others look for guidance.

Table 1. (cont.)

Solving problems creatively ( $\alpha = .93$ )	Employing unique types of analyses and generating new, innovative ideas in complex areas; turning problems upside-down and inside-out to find fresh, new approaches; integrating seemingly unrelated information and developing creative solutions; entertaining wide-ranging possibilities others may miss, thinking outside the given parameters to see if there is a more effective approach; developing innovative methods of obtaining or using resources when insufficient resources are available to do the job.
Dealing with uncertain and unpredictable work situations ( $\alpha = .92$ )	Taking effective action when necessary without having to know the total picture or have all the facts at hand; readily and easily changing gears in response to unpredictable or unexpected events and circumstances; effectively adjusting plans, goals, actions, or priorities to deal with changing situations; imposing structure for self and others that provide as much focus as possible in dynamic situations; not needing things to be black and white; refusing to be paralyzed by uncertainty or ambiguity.
Learning work tasks, technologies, and procedures ( $\alpha = .92$ )	Demonstrating enthusiasm for learning new approaches and technologies for conducting work; doing what is necessary to keep knowledge and skills current; quickly and proficiently learning new methods or how to perform previously unlearned tasks; adjusting to new work processes and procedures; anticipating changes in the work demands and searching for and participating in assignments or training that will prepare self for these changes; taking action to improve work performance deficiencies.
Demonstrating interpersonal adaptability ( $\alpha = .92$ )	Being flexible and open-minded when dealing with others; listening to and considering others' viewpoints and opinions and altering own opinion when it is appropriate to do so; being open and accepting of negative or developmental feedback regarding work; working well and developing effective relationships with highly diverse personalities; demonstrating keen insight of others' behavior and tailoring own behavior to persuade, influence, or work more effectively with them.
Demonstrating cultural adaptability ( $\alpha = .94$ )	Taking action to learn about and understand the climate, orientation, needs, and values of other groups, organizations, or cultures; integrating well into and being comfortable with different values, customs, and cultures; willingly adjusting behavior or appearance as necessary to comply with or show respect for others' values and customs; understanding the implications of one's actions and adjusting approach to maintain positive relationships with other groups, organizations, or cultures.
Demonstrating physically oriented adaptability ( $\alpha = .96$ )	Adjusting to challenging environmental states such as extreme heat, humidity, cold, or dirtiness; frequently pushing self physically to complete strenuous or demanding tasks; adjusting weight and muscular strength or becoming proficient in performing physical tasks as necessary for the job.

Based on the final (8-dimension) model presented by Pulakos et al. (2000), a model of Adaptive Performance was developed by Ployhart and Bliese (2006). This program of study gave a model to be tested and a theory as to where Adaptive Performance may fit within the overall scope of performance (Ployhart & Bliese, 2006). This theory of individual adaptability (I-ADAPT) sought to explain the individual differences in adaptability and through that explain the precursors and consequences related to the individual's adaptability (Ployhart & Bliese, 2006). Ployhart and Bliese suggest that the relationship between an individual's knowledge, skills, abilities, and other characteristics' (KSAOs) and their performance is mediated in full or in part by the individual's adaptability in situations that require adaptation (See Figure 1; Ployhart & Bliese, 2006). This theory was coupled with a 55-item I-ADAPT measure to be utilized in assessing an individual's adaptability (See Appendix C). The model consisted of these eight dimensions: Crisis, Work Stress, Creativity, Uncertainty, Learning, Interpersonal, Cultural, and Physical—which mirror those found in Pulakos et al. (2000).

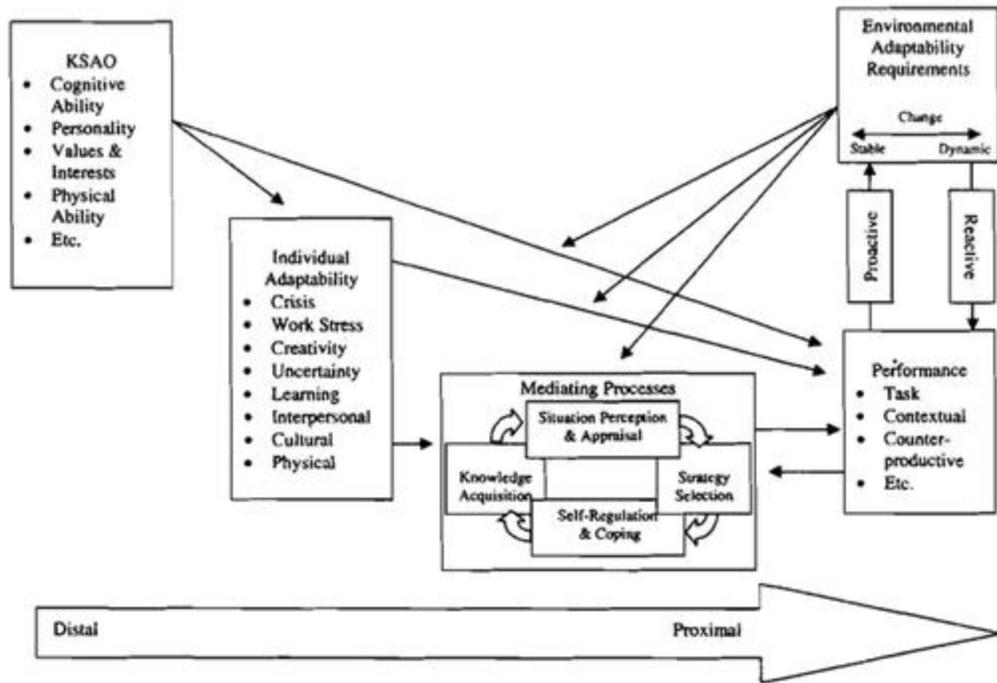


Figure 1. Individual Adaptability (I-ADAPT) Theory. Reprinted from *Understanding Adaptability: A Prerequisite for Effective Performance Within Complex Environments* (p. 16), by C. S Burke, L. G. Pierce, & E. Salas, 2006, Kidlington, Oxford: Elsevier Ltd. Copyright 2008 by Elsevier Ltd.

Another model of Adaptive Performance based on the Pulakos et al. (2000) model is the Measure of Adaptive Performance (MAP; Watts, Frame, Rigdon, & Orsak-Robinson, 2011). Items for this measure were created by analyzing the factor definitions from the Pulakos et al. model, creating conceptual dimensions based on theory, and then further exploring the factor definitions found in additional measurements (Lillard et al., 2012). The MAP factor structure was most recently analyzed and condensed into a nine-factor model of Adaptive Performance through both exploratory and confirmatory factor analyses (Marlow, Calarco, Frame, & Hein, 2015). The nine dimensions of the model are: adaptive creativity, adaptability in crisis situations, cultural adaptability, emotional control, emotional perceptiveness, flexibility of opinion, openness to criticism, proactive learning, and dealing with ambiguous situations. When combined with the I-ADAPT measure, four dimensions that were named similarly were highly correlated—Applied Creativity and Creativity ( $r = .81$ ), Crisis and Crisis ( $r = .68$ ), Cultural and Cultural ( $r = .80$ ), and Proactive Learning and Learning ( $r = .76$ )—which left thirteen distinct dimensions for the two measures. See Table 2 for Marlow et al (2015) combined dimension definitions for the measures. With these dimensions also comes the idea of an individual's Overall Adaptivity. This would be the non-dimensional ability for an individual to cope, which is essentially the mean of the dimensions. This should be able to encompass any additional adaptation that is not specifically being explained within the dimensions themselves.

Table 2.

*Adaptive Performance Dimension Definitions (Marlow et al., 2015)*

Applied Creativity ( $\alpha = .89$ )	Uniquely analyzing information and generating new, innovative approaches to problems
Adaptability in Crisis Situations ( $\alpha = .83$ )	Reacting with appropriate and proper urgency in unexpected, unstable, dangerous, or emergency situations; quickly analyzing options for dealing with threats to important goals, values, income, or health
Cultural Adaptability ( $\alpha = .92$ )	Learning about, integrating with, and respecting the cultures, customs, and values of others
Emotional Control ( $\alpha = .72$ )	Maintaining control over one's feelings and responses in challenging or stressful situations
Emotional Perceptiveness ( $\alpha = .82$ )	Quickly being able to understand the feelings, motivations, and behaviors of others
Flexibility of Opinion ( $\alpha = .77$ )	Willingly changing one's own behavior, appearance, judgments, and beliefs based on the opinions of others when it is appropriate to do so
Openness to Criticism ( $\alpha = .74$ )	Being open and accepting of feedback from various sources; seeking out such feedback when appropriate
Proactive Learning ( $\alpha = .88$ )	Demonstrating enthusiasm for learning new approaches and technologies; taking responsibility for keeping knowledge and skills current
Dealing with Ambiguous Situations ( $\alpha = .57$ )	Effectively adjusting plans, goals, actions, or priorities to deal with changing situations even in unclear circumstances.
Interpersonal Adaptability ( $\alpha = .72$ )	Working well and developing effective relationships with highly diverse personalities
Dealing with Work Stress ( $\alpha = .83$ )	Being resilient, remaining composed, and demonstrating the highest levels of professionalism in stressful circumstances
Physical Adaptability ( $\alpha = .66$ )	Performing well despite physical discomfort and taxing or challenging environmental conditions
Dealing with Uncertainty ( $\alpha = .68$ )	Appropriately responding to changing situations with or without all applicable information

## **Employee Engagement**

Much like adaptive performance, employee engagement has been evolving as the research progresses. As a trait, however, it has a larger body of study resulting in a better understanding of the concept. Even with this understanding, the topic employee engagement has some confusion which mirrors that of the adaptive performance—namely: is employee engagement a trait inherent to the individual, a state of being, or a behavior that an individual enacts (Macey & Schneider, 2008)? Employee engagement has been defined as a positive and fulfilling attitude at work that is characterized by high motivation, high levels of energy, and high levels of involvement in an individual's work (Bakker & Leiter, 2010; Bakker, Albrecht, & Leiter, 2011). It is also shown as the amount of vigor one has for their work, how dedicated they are, and how absorbed they get in their work (Schaufeli & Bakker, 2004). Shuck and Wollard (2010) suggest an early conceptualization of employee engagement is that of Kahn (1990) by way of Goffman (1961)—Goffman indicated that a person's role attachments and detachment varies due to their interactions with others throughout the day, which Kahn altered to indicate that people at work momentarily react to attachments and detachments as called for by their current role, suggesting the idea that an individual's engagement can fluctuate based on different conditions. The best overall encompassing definition of employee engagement is that of: satisfaction with one's job or career or basic loyalty to their employer based around a passion for and commitment to an organization which drives an individual to invest themselves and give extra effort in order to ensure that the organization succeeds (Macey & Schneider, 2008).

## **Conditions for Employee Engagement**

***Characteristics of the Job.*** The characteristics of the job itself play a large part in an employee's engagement. Kahn (1990) posited that a job's meaningfulness—the degree to which a job utilizes a variety of skills, for a task the employee can see from start to finish, and which has significance to people (Hackman & Oldham, 1980; May, Gilson, & Harter, 2004)—is important to developing engagement. Another key organizational necessity when it comes to driving engagement is how the organization handles feedback and recognition. An organization where employees know what is expected of them and receive attention when things go well tends to have higher levels of engagement than those that are ambiguous and anonymous (Buckingham & Coffman, 1999). Lack of feedback and recognition is more than just a hindrance to engagement; it is a barrier that keeps engagement from developing altogether (Bedarkar & Pandita, 2014).

***Characteristics of the Person.*** Whether a person will or will not be engaged at work depends on characteristics of the person as well. It is widely accepted that individual differences between people - such as their effort, flow, mindfulness, and intrinsic motivation - can drive or hinder engagement (Kahn, 1990). In this context effort can be seen as the degree to which a person will exert themselves physically or mentally. It is the limit of how much a person is willing to devote to a task or job (Hackman & Oldham, 1980). Flow on the other hand is a person's ability to reach peak effort through focused energy (Csikszentmihalyi, 1992). Mindfulness within a person is how much thought they put into their tasks rather than working with minimal conscious attention to the task at hand (Langer, 1989). Intrinsic Motivation is how much the person wants to put forth the effort, based on their internal, subconscious drives and desires (Deci & Ryan, 1975; Ryan

& Deci, 2000). Working on a preferred activity will increase their positive behaviors while at work and drive their individual engagement within their job role with the upper limit being that of their individual effort, flow, mindfulness, and intrinsic motivation maximums (Kahn, 1990).

### **Consequences of Employee Engagement**

Harter, Schmidt, and Hayes (2002) gathered research from 7,939 organizations to link employee engagement to differing items of which businesses may have a particular interest—items such as customer satisfaction, profitability, productivity, turnover, and safety. This led to Saks (2006) linking job characteristics and organizational support as antecedents of employee engagement and a decrease in an employee's intention to quit as consequences of improving employee engagement. Employee engagement increases and decreases due to personal reasons as well as external sources (Inceolglu & Warr, 2011). Work demands and job stress may decrease employee engagement if the employee is unable to cope (Sonnetag, Mojza, Demerouti, & Bakker, 2012). The results of increasing employee engagement are good for an organization in both the short- and long-term (Harter et al., 2002).

### **Conscientiousness**

Unlike the fluctuating nature of employee engagement, conscientiousness is more of a trait inherent to the individual itself. The personality trait tends to remain stable within the person. Conscientiousness relates to a person's tendency to follow social-norms in regards to impulse control, be focused on task and goal, organization and planning (Roberts, Jackson, Fayard, Edmonds, & Meints, 2009). In essence, it is an individual's industriousness, orderliness, impulse control, reliability, and conventionality

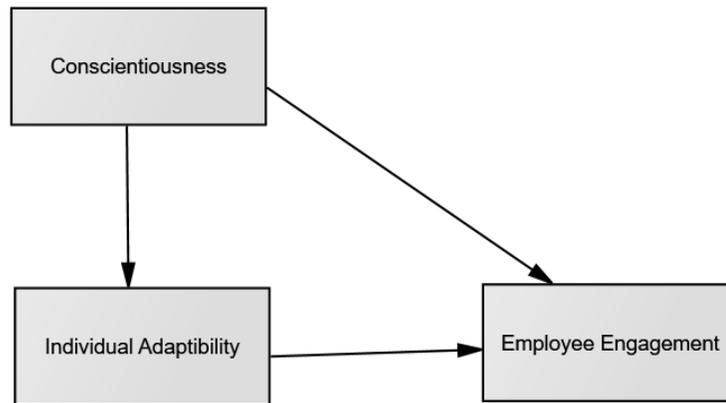
(Jackson et al., 2010). Jackson et al. (2010) link those with high conscientiousness to coping mechanisms—especially under stress—delaying gratification, and generally following rules and routines, but “personality traits are not just summaries of behaviors” (p. 501) so it is better to not look at specific actions rather the overall trend. The general theme of those high in conscientiousness is hard work and being resourceful. The other theme is that of achievement, generally through persistence (Costa, McCrae, & Dye, 1991)

What the research seems to suggest on the topic of conscientiousness is that highly conscientious people tend to perform better than those of less conscientiousness (Hogan & Holland, 2003; Barrick & Mount, 1991). They are less likely to engage in counterproductive work behaviors (Jackson et al., 2010; Hogan & Ones, 1997), tend to persevere and commit to goals when things become difficult (LePine et al., 2000), and are more likely to develop and improve themselves when compared to those with lower conscientiousness (Barrick & Mount, 1991).

With regards to conscientiousness’s link to adaptive performance, Griffin, Parker, and Mason (2010) have shown positive correlations between the two constructs in a longitudinal study ( $r = .23$  at time 1 and  $.36$  at time 2). Additionally, LePine et al. (2000) showed that conscientiousness is a significant predictor of performance when adaptation is required. In the case of employee engagement, Inceolglu and Warr (2011) show that through all of their studies, conscientiousness holds constant as a shining beacon of engagement prediction ( $r = .41$  for study 1,  $r = .43$  for study 2,  $r = .38$  for study 3). This

mirrors the results found by Kim, Shin, and Swanger (2009), conscientiousness has a moderate positive relationship with employee engagement ( $r = .37$ ).

Through conscientiousness, a clearer model of both Adaptive Performance and employee engagement may be found. Conscientiousness has been shown to be correlated with performance itself (Hogan & Holland, 2003) and the link to adaptive performance—which could be through their “will to achieve, self-motivation, and efficaciousness” (LePine et al., 2000, p.568). This added to the link found to employee engagement puts it in a unique place to be able to interact with both constructs. Placing all three together may help to un-muddy these waters, and paint a clearer picture. As engagement can fluctuate based on the demands of the job (Bakker & Demerouti, 2007), an employee with the ability to adapt may be able to cope better when the need for adaptation is required. In that same vein, if an employee’s ability to adapt is not compatible with the requirements of their job their ability to cope with the situation may lead to the employee being detached or uninterested in their work. As conscientiousness tends not to fluctuate much and employee engagement does fluctuate based on the situation, it is possible that the observed relationship between conscientiousness and engagement is mediated by the individual’s ability to adapt to those demands of the job. Thus, conscientiousness may have both a direct effect on employee engagement and an indirect effect that is mediated by individual adaptability. See Figure 2.



*Figure 2.* Proposed relationship between conscientiousness and employee engagement being partially or fully mediated by individual adaptability.

## CHAPTER II: RESEARCH QUESTIONS

Based on the above descriptions, this study is designed to find a relationship between individual adaptability and employee engagement based on the “fit” between adaptive job requirements and individual adaptability. A good fit can be represented by situations where a person’s job requires high levels of adaptive performance, and the person is high in adaptability, and conversely in situations where a person’s job has low Adaptive Performance requirements, and the person is low in adaptability.

**RQ1:** Will a persons’ individual adaptability be related to their self-reported Adaptive Performance on the job?

**RQ1a:** Will a persons’ *applied creativity* be related to their *applied creativity* performance on the job?

**RQ1b:** Will a persons’ *adaptability in crisis situations* be related to their *adaptability in crisis situations* performance on the job?

**RQ1c:** Will a persons’ *cultural adaptability* be related to their *cultural adaptability* performance on the job?

**RQ1d:** Will a persons’ *emotional control* be related to their *emotional control* performance on the job?

**RQ1e:** Will a persons’ *emotional perceptiveness* be related to their *emotional perceptiveness* performance on the job?

**RQ1f:** Will a persons’ *flexibility of opinion* be related to their *flexibility of opinion* performance on the job?

- RQ1g:** Will a persons' *openness to criticism* be related to their *openness to criticism* performance on the job?
- RQ1h:** Will a persons' *proactive learning* be related to their *proactive learning* performance on the job?
- RQ1i:** Will a persons' *ability to deal with ambiguous situations* be related to their *dealing with ambiguous situations* performance on the job?
- RQ1j:** Will a persons' *interpersonal adaptability* be related to their *interpersonal adaptability* performance on the job?
- RQ1k:** Will a persons' *ability to deal with work stress* be related to their *dealing with work stress* performance on the job?
- RQ1l:** Will a persons' *physical adaptability* be related to their *physical adaptability* performance on the job?
- RQ1m:** Will a persons' *ability to deal with uncertainty* be related to their *dealing with uncertainty* performance on the job?
- RQ2:** Will the “fit” between a person’s individual adaptability and the Adaptive Performance requirements of their job be related to their employee engagement?
- RQ2a:** Will participants in a job that is in “fit” with their *applied creativity* report higher levels of employee engagement than participants in jobs that are not in “fit” with their *applied creativity*?
- RQ2b:** Will participants in a job that is in “fit” with their *adaptability in crisis situations* report higher levels of employee engagement than participants in jobs that are not in “fit” with their *adaptability in crisis situations*?

**RQ2c:** Will participants in a job that is in “fit” with their *cultural adaptability* report higher levels of employee engagement than participants in jobs that are not in “fit” with their *cultural adaptability*?

**RQ2d:** Will participants in a job that is in “fit” with their *emotional control* report higher levels of employee engagement than participants in jobs that are not in “fit” with their *emotional control*?

**RQ2e:** Will participants in a job that is in “fit” with their *emotional perceptiveness* report higher levels of employee engagement than participants in jobs that are not in “fit” with their *emotional perceptiveness*?

**RQ2f:** Will participants in a job that is in “fit” with their *flexibility of opinion* report higher levels of employee engagement than participants in jobs that are not in “fit” with their *flexibility of opinion*?

**RQ2g:** Will participants in a job that is in “fit” with their *openness to criticism* report higher levels of employee engagement than participants in jobs that are not in “fit” with their *openness to criticism*?

**RQ2h:** Will participants in a job that is in “fit” with their *proactive learning* report higher levels of employee engagement than participants in jobs that are not in “fit” with their *proactive learning*?

**RQ2i:** Will participants in a job that is in “fit” with their ability to *deal with ambiguous situations* report higher levels of employee engagement than participants in jobs that are not in “fit” with their ability to *deal with ambiguous situations*?

- RQ2j:** Will participants in a job that is in “fit” with their *interpersonal adaptability* report higher levels of employee engagement than participants in jobs that are not in “fit” with their *interpersonal adaptability*?
- RQ2k:** Will participants in a job that is in “fit” with their ability to *deal with work stress* report higher levels of employee engagement than participants in jobs that are not in “fit” with their ability to *deal with work stress*?
- RQ2l:** Will participants in a job that is in “fit” with their *physical adaptability* report higher levels of employee engagement than participants in jobs that are not in “fit” with their *physical adaptability*?
- RQ2m:** Will participants in a job that is in “fit” with their ability to *deal with uncertainty* report higher levels of employee engagement than participants in jobs that are not in “fit” with their ability to *deal with uncertainty*?
- RQ3:** Will a persons’ individual adaptability mediate the relationship between conscientiousness and employee engagement?

## CHAPTER III: METHODS

### **Participants**

For this study, 370 participants responded to an online survey. During the process, participants were asked twenty quality assurance questions which asked the participant to respond with a specific answer. Any participant who did not correctly answer half of the quality assurance questions was removed, which left a total of 331 participants. Of the final group, 37.1% were male with 61.9% female. Their ages ranged from 18 to 67 ( $M = 22$ ). Racially the majority (64.4%) of participants were Caucasian. The remaining racial demographics included: African-American/Black (21.8%), Hispanic/Latino (4.9%), Asian/Pacific Islander (4.0%), Bi-Racial/Mixed (2.5%), and Other (2.5%; self-reported categories included Middle Eastern, Native American, or Slavic). 252 participants identified as being currently employed (76.1%), which was reported to be between 18 and 60 hours per week ( $M = 28.29$ ). The majority of participants reported having a high school diploma or higher (97.6%), of these 0.9% had just a high school equivalent (GED), 23.2% had a high school diploma, 57.1% had some college credit, 1.8% had trade/technical/vocational training, 4.2% had an associate's degree, 7.9% had a bachelor's degree, 2.4% had a master's degree, and 0.6% had either a professional degree or a doctorate. 97.1% of participants indicated that they were currently enrolled in school, with 91.2% of those being enrolled full-time as opposed to half-time.

### **Measures**

The current study used an online survey format. The survey was comprised of five measures, four of which are used in the current study, with the remaining one to be

addressed in a separate study. The four measures of interest include two measures of adaptive performance, a personality inventory, and a measure of employee engagement. The survey data used for this study will include responses to 12 demographic items, 155 Adaptive Performance items, 17 employee engagement items, 10 conscientiousness items, and 16 quality assurance questions.

***Measure of Adaptive Performance (MAP).*** The current study used the most recently updated version of the MAP (Marlow et al., 2015). The MAP measures individual adaptability based on nine dimensions: Applied Creativity, Adaptability in Crisis Situations, Cultural Adaptability, Emotional Control, Emotional Perceptiveness, Flexibility of Opinion, Openness to Criticism, Proactive Learning, and Dealing with Ambiguous Situations. Marlow et al. (2015) presented evidence for this 9-factor model and found a mean coefficient alpha reliability estimate of .81 for the nine dimensions. Dimension level reliabilities were shown as: Applied Creativity (.88), Adaptability in Crisis Situations (.79), Cultural Adaptability (.90), Emotional Control (.81), Emotional Perceptiveness (.86), Flexibility of Opinion (.80), Openness to Criticism (.80), Proactive Learning (.84), and Dealing with Ambiguous Situations (.60).

The MAP consists of 63 items that assess individual adaptability. Each of these items are made up of a statement related to adaptability. For example, one item is “I think outside the given parameters to see if there is a more effective approach”. Participants were asked to report how well each statement matches their opinion using a 5-point Likert scale (Strongly Disagree-Strongly Agree). See Appendix B.

***Individual Adaptability Measure (I-ADAPT).*** Ployhart and Bliese developed the I-ADAPT in 2006. The 55-item measure was created using definitions of each of the eight

dimensions of individual adaptability developed by Pulakos et al. (2000), seeing as the items used in Pulakos et al. (2000) are not publically available. Marlow et al. (2015) tested the factor structure of the I-ADAPT and found support for the eight-factor model of AP, however two items were removed due to low reliability and/or fit, resulting in the 53-item measure used in the current study. Marlow et al. (2015) found a mean coefficient alpha reliability estimate of .79 for the 53-item I-ADAPT measure with individual dimension reliabilities of Creativity (.73), Crisis (.89), Cultural (.83), Interpersonal (.79), Learning (.87), Physical (.64), Work Stress(.86), and Uncertainty (.74).

I-ADAPT items resemble those of the MAP. An example item from the I-ADAPT measure is, “I am able to look at problems from a multitude of angles”. Participants were required to provide the same ratings as the MAP items, using the same directions and Likert scale. See Appendix C.

***Adaptive Performance Dimension Level Items.*** The remaining 39 Adaptive Performance items inquire about the frequency, importance, and individual performance level regarding Adaptive Performance requirements on the job. These 39 items focus on the dimension level of adaptive performance, and participants are presented with the dimension definitions from both the MAP and the I-ADAPT measures one at a time. For each dimension, participants were asked to report (1) how frequently they are required to perform the various dimension on the job (Never-Always), (2) how important the various dimension is on the job (Not Important at All-Absolutely Essential), and (3) how well they are at performing the various dimension on the job (Very Poor-Excellent). Participants that answered “Never” to the first question (frequency) were not asked about

importance or their performance, and were taken directly to the next dimension. It should be noted that there are only 13, rather than 17, different dimension definitions provided, consistent with Marlow et al.'s (2015) finding that four dimensions from the MAP and I-ADAPT models (applied creativity/creativity, adaptability in crisis situations, cultural adaptability, and proactive learning/learning) were so highly correlated (above .80) that they were treated as equivalent. See Appendix D.

**Utrecht Work Engagement Scale (UWES).** The UWES measure, developed and validated by Schaufeli and Bakker (2001), measures engagement via a 17-item questionnaire. It breaks the concept into three subscales that show the undertones of engagement. Vigor ( $\alpha = .83$ ) comes from six items within the survey refers to higher levels of energy and perseverance. An individual high in vigor usually have boundless energy and can devote time to work despite any problems, complications, or pitfalls. Dedication ( $\alpha = .92$ ) comes from five items and refer to feeling significance derived from the individual's job as well as feelings of happiness, pride, enthusiasm, inspiration, and being challenged. An individual high in dedication are inspired by their work, they find it meaningful, and like being challenged by it. Those who score low on dedication, however, do not feel a connection to their work, and it may offer them no feelings of pride, or possibly feel shameful. The last scale is Absorption ( $\alpha = .82$ ) comes from six items and refers to feelings of involvement and immersion, essentially, getting lost within one's work and letting time and the outside world pass unnoticed. An individual high in absorption are generally fully engrossed in their job, and may get carried away by the work easily. This can be negative at times when it leads to complete withdrawal from the individual's life—workaholism. The measure has a mean coefficient alpha reliability

estimate of .93 for the three individual scales that make up the measure (Schaufeli & Bakker, 2003).

All items within the UWES are made up of statements aimed at measuring one of the three factors of employee engagement. An example question for Vigor would be: “When I get up in the morning, I feel like going to work”. An example question for dedication would be: “I am enthusiastic about my job”. An example question for absorption would be: “When I am working, I forget everything else around me”. Participants were asked to report how often each statement is felt at work using a 7-point Likert scale (Never-Always/Every day). See Appendix E.

***HEXACO Personality Inventory.*** The HEXACO Personality Inventory was developed by Lee and Ashton (2004) as a method of assessing the personality of an individual based on the factors of Honesty/Humility ( $\alpha = .79$ ), Emotionality ( $\alpha = .78$ ), Extraversion ( $\alpha = .80$ )—stylized eXtraversion—Agreeableness ( $\alpha = .77$ ), Conscientiousness ( $\alpha = .78$ ), and Openness to Experience ( $\alpha = .77$ ). The original 100-item measure has a mean coefficient alpha of .90. The measure has undergone revisions in order to shorten the measure for easier use. The new 60-item measure has a lower mean coefficient alpha, .78, but it is still suitable for research purposes and easier to administer. This study is specifically interested in conscientiousness which has a coefficient alpha of .78.

All items within the HEXACO are made up of statements aimed at measuring one of the six factors within the personality inventory. A sample question aimed at conscientiousness would be: “I plan ahead and organize things, to avoid scrambling at the last minute.” Participants were asked to report how well each statement describes them using a 5-point Likert scale (Strongly Disagree-Strongly Agree). See Appendix F.

## **Survey Administration**

The survey began with an informed consent page that confirmed that the participants were over the age of 18 and wished to continue with the study. Then the HEXACO Personality Assessment. Then the Adaptive Performance items were completed, with the I-ADAPT presented first, followed by the MAP, and then Dimension Level items. The participants then completed the Utrecht Work Engagement Scale items. All of these measures' questions were presented in random order within their section. This set of measures was followed by items measuring job satisfaction, which will be addressed in a separate study. The survey ended with questions regarding demographic information such as whether they are employed, their job title, how many hours they work in a typical week, and other general demographic information (e.g. race, gender, etc.).

## CHAPTER IV: RESULTS

This study examined Individual Adaptivity, Adaptive Performance, Adaptive Fit with their current employment, employee engagement, and their level of conscientiousness. See Table 3 for descriptive statistics of all variables utilized. Reliability scores were calculated for all the scales used. Conscientiousness had a Cronbach's  $\alpha$  of .74, engagement had a mean Cronbach's  $\alpha$  of .81 (Absorption .80, Vigor .76, and Dedication .87), and Individual Adaptivity had a mean Cronbach's  $\alpha$  of .76 (Applied Creativity .89, Adaptability in Crisis Situations .74, Cultural Adaptability .92, Emotional Control .72, Emotional Perceptiveness .82, Flexibility of Opinion .77, Openness to Criticism .74, Proactive Learning .88, Dealing with Ambiguous Situations .56, Interpersonal Adaptability .72, Dealing with Work Stress .83, Physical Adaptability .66, and Dealing with Uncertainty .68).

For research question one, bivariate correlations were utilized to determine potential relationships between an Individual's Adaptivity and their Performance. This was both done as a whole as well as a part of each individual dimension of Adaptivity. For research question two, multiple regression was undertaken to determine whether Adaptivity was a good predictor of employee engagement. For research question three, path analysis was utilized to see if Individual Adaptivity would mediate the relationship between an individual's conscientiousness and their level of employee engagement.

### **Relationship between Individual Adaptivity and Adaptive Performance**

Bivariate correlations ( $\alpha = .05$ ) were analyzed to understand the relationship between an Individual's Adaptivity—trait—and their performance dimensions: Applied Creativity, Adaptability in Crisis Situations, Cultural Adaptability, Emotional Control,

Emotional Perceptiveness, Flexibility of Opinion, Openness to Criticism, Proactive Learning, Dealing with Ambiguous Situations, Interpersonal Adaptability, Dealing with Work Stress, Physical Adaptability, and Dealing with Uncertainty. Additionally, Overall Adaptivity—as a mean of all Individual Adaptivity dimensions—was included with overall performance—as a mean of all self-rated performance scores. See Table 4 for Pearson’s correlations.

### **Regression Model**

A standard multiple regression ( $\alpha = .05$ ) was conducted to predict an individual’s level of employee engagement. To begin, composite scores were calculated to represent the degree of “fit” between the person’s individual adaptability and their Adaptive Performance requirements on the job—as measured by their self-reported frequency and importance of each dimension. Each of these dimensional composite scores, as well as an overall adaptive fit score, were used as predictors of employee engagement. The regression model itself was significant,  $F(13, 223) = 2.58$ ,  $MSE = 0.66$ ,  $p = .002$ ,  $R^2 = .13$ , but none of the predictors significantly predicted employee engagement on their own. See Table 5 for regression coefficients.

A stepwise multiple regression was conducted to evaluate whether any combination of fit variables would be useful in predicting employee engagement. At step one of the analysis overall fit entered into the regression equation and was significantly related to employee engagement,  $F(1, 235) = 13.26$ ,  $MSE = .087$ ,  $p < .001$ ,  $R^2 = .05$ . At step two the fit between an individual’s openness to criticism and the requirements of their job was included into the model yielding a significant  $F_{Change}$  over the previous model,  $F_{Change}(1, 234) = 8.42$ ,  $p = .002$ ,  $R^2 = .09$ . Finally, the model ended with the

inclusion of the fit between an individual's flexibility of opinion and the requirements of their job into the model yielding a significant  $F_{Change}$  over the previous model,  $F_{Change}(1, 233) = 5.33, p = .022, R^2 = .11$ . See Table 6 for change statistics and regression coefficients.

### Mediation Model

Path analysis was utilized to determine if an individual's Overall Adaptivity mediates the relationship between conscientiousness and employee engagement. Linear regression ( $\alpha = .05$ ) determined that conscientiousness was a significant predictor of employee engagement,  $F(1, 325) = 9.66, MSE = 0.70, p < .001$ , and conscientiousness predicted Individual Adaptivity,  $F(1, 329) = 6.70, MSE = 0.13, p = .010$ . Additionally, the combination of Individual Adaptivity and conscientiousness as predictors indicated a significant link to employee engagement,  $F(2, 324) = 27.40, MSE = 0.62, p < .001$ . See Table 7 for regression coefficients for each step of the path analysis.

Table 3  
*Descriptive Statistics*

	<i>N</i>	<i>M</i>	<i>SD</i>
Employee Engagement	327	4.12	0.96
Conscientiousness	331	2.96	0.34
Trait Level Individual Adaptivity			
Applied Creativity	331	3.74	0.53
Adaptivity in Crisis Situations	331	3.78	0.55
Cultural Adaptivity	331	4.09	0.54
Emotional Control	330	3.63	0.55
Emotional Perceptiveness	330	3.89	0.61
Flexibility of Opinion	330	3.60	0.65
Openness to Criticism	330	3.70	0.65
Proactive Learning	331	3.93	0.47

Table 3. (cont.)

Dealing with Ambiguous Situations	329	3.74	0.56
Interpersonal Adaptability	331	4.09	0.46
Dealing with Work Stress	331	2.85	0.87
Physical Adaptability	331	3.47	0.57
Dealing with Uncertainty	331	3.72	0.53
Overall Adaptivity	331	3.71	0.36

## Adaptive Performance

Applied Creativity Performance	317	3.61	0.75
Adaptivity in Crisis Situations Performance	308	3.72	0.75
Cultural Adaptivity Performance	318	3.93	0.82
Emotional Control Performance	327	3.92	0.85
Emotional Perceptiveness Performance	319	3.84	0.86
Flexibility of Opinion Performance	294	3.33	0.86
Openness to Criticism Performance	321	3.81	0.88
Proactive Learning Performance	322	3.74	0.82
Dealing with Ambiguous Situations Performance	322	3.71	0.84
Interpersonal Adaptability Performance	326	3.93	0.83
Dealing with Work Stress Performance	323	3.89	0.88
Physical Adaptability Performance	295	3.67	0.87
Dealing with Uncertainty Performance	316	3.61	0.80
Overall Adaptivity Performance	331	3.75	0.50

## Fit Between Adaptivity and Job Requirements

Applied Creativity Fit	318	0.82	0.49
Adaptivity in Crisis Situations Fit	308	0.91	0.53
Cultural Adaptivity Fit	318	0.83	0.54
Emotional Control Fit	326	0.98	0.46
Emotional Perceptiveness Fit	319	0.76	0.53
Flexibility of Opinion Fit	293	0.98	0.54
Openness to Criticism Fit	320	0.83	0.47
Proactive Learning Fit	322	0.77	0.46
Dealing with Ambiguous Situations Fit	320	0.77	0.47
Interpersonal Adaptability Fit	326	0.75	0.49
Dealing with Work Stress Fit	323	1.58	0.87
Physical Adaptability Fit	296	1.08	0.49
Dealing with Uncertainty Fit	317	0.89	0.51
Overall Adaptivity Fit	331	3.87	0.91

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Table 4

*Bivariate Correlations between Adaptivity and Adaptive Performance by Dimension*

		Adaptive Performance													
		1	2	3	4	5	6	7	8	9	10	11	12	13	14
Individual Adaptivity	1.Applied Creativity	<b>.45***</b>	.30***	.23***	.22***	.29***	.11	.28***	.43***	.35***	.29***	.29***	.28***	.39***	.50***
	2.Adaptivity in Crisis	.25***	<b>.40**</b>	.13*	.33***	.22***	.14*	.19**	.34***	.29***	.25***	.31***	.35***	.33***	.45***
	3.Cultural Adaptivity	.18**	.15*	<b>.48***</b>	.21***	.20***	.17**	.28***	.29***	.13*	.45***	.20***	.12*	.17**	.39***
	4.Emotional Control	.23***	.31***	.26***	<b>.45***</b>	.19**	.17**	.27***	.40***	.29***	.34***	.41***	.27***	.29***	.50***
	5.Emotional Perceptiveness	.24***	.11	.25***	.15**	<b>.54***</b>	.11	.19**	.27***	.24***	.24***	.20***	.17**	.23***	.38***
	6.Flexibility of Opinion	.12*	.09	.29***	.14*	.20***	<b>.38***</b>	.17**	.14*	.17**	.18**	.02	.12*	.22***	.27***
	7.Openness to Criticism	.14*	.09	.22***	.22***	.14*	.18**	<b>.54***</b>	.25***	.11	.22***	.11*	.18**	.15**	.34***
	8.Proactive Learning	.29***	.29***	.20***	.17**	.18**	.15*	.28***	<b>.50***</b>	.26***	.28***	.22***	.22***	.24***	.41***
	9.Dealing with Ambiguity	.28***	.34***	.20***	.31***	.26***	.16**	.26***	.33***	<b>.29***</b>	.32***	.33***	.24***	.34***	.47***
	10.Interpersonal Adaptability	.20***	.15**	.37***	.27***	.35***	.29***	.29***	.28***	.15**	<b>.34***</b>	.26***	.21***	.22***	.44***
	11.Dealing with Work Stress	.04	.12*	.09	.27***	-.01	.04	.03	.10	.20***	.15**	<b>.30***</b>	.19**	.22***	.22***
	12.Physical Adaptability	.11	.21***	.14*	.30***	.09	.08	.17**	.23***	.21***	.24***	.32***	<b>.42***</b>	.21***	.35***
	13.Dealing with Uncertainty	.20***	.31***	.16**	.31***	.15**	.19**	.19**	.28***	.31***	.27***	.29***	.22***	<b>.30***</b>	.40***
	14.Overall Adaptivity	.32***	.34***	.36***	.42***	.33***	.26***	.38***	.46***	.37***	.43***	.40***	.37***	.41***	<b>.62***</b>

Note: \* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$

Table 5

*Linear Regression Model for Predicting Employee Engagement*

	<i>B</i>	<i>SE(B)</i>	<i>t</i>	<i>p</i>	95% CI	
					Lower	Upper
(Constant)	4.24	0.21	20.15	.000	3.82	4.65
Applied Creativity Fit	-0.21	0.14	-1.47	.143	-0.50	0.07
Adaptivity in Crisis Situations Fit	0.03	0.13	0.23	.820	-0.22	0.28
Cultural Adaptivity Fit	0.04	0.14	0.28	.782	-0.23	0.31
Emotional Control Fit	-0.15	0.15	-1.02	.309	-0.44	0.14
Emotional Perceptiveness Fit	0.01	0.15	0.09	.929	-0.27	0.30
Flexibility of Opinion Fit	0.25	0.13	1.94	.054	0.00	0.51
Openness to Criticism Fit	-0.26	0.15	-1.75	.082	-0.55	0.03
Proactive Learning Fit	-0.23	0.16	-1.44	.152	-0.54	0.09
Dealing with Ambiguous Situations Fit	-0.16	0.15	-1.07	.284	-0.45	0.13
Interpersonal Adaptability Fit	-0.11	0.15	-0.72	.474	-0.41	0.19
Dealing with Work Stress Fit	0.12	0.09	1.33	.184	-0.06	0.31
Physical Adaptability Fit	0.03	0.14	0.25	.806	-0.24	0.31
Dealing with Uncertainty Fit	0.18	0.15	1.20	.231	-0.12	0.48
Overall Adaptivity Fit	-0.11	0.92	-0.13	.900	-1.92	1.69

Table 6

*Stepwise Change Statistics and Regression Coefficients for Predicting Engagement*

	<i>B</i>	<i>SE(B)</i>	<i>t</i>	<i>p</i>	95% CI	
					Lower	Upper
Model 1 ( $R^2 = .05$ )						
(Constant)	3.09	.296	10.44	<.001	2.51	3.68
Overall Fit	0.26	.072	3.64	<.001	0.12	0.40
Model 2 ( $R^2_{Change} = .03$ )						
(Constant)	3.41	0.31	10.95	<.001	2.79	4.02
Overall Fit	0.26	0.07	3.66	<.001	0.12	0.40
Openness to Criticism Fit	-0.38	0.13	-2.90	.004	-0.64	-0.12
Model 3 ( $R^2_{Change} = .02$ )						
(Constant)	3.10	0.34	9.26	<.001	2.44	3.76
Overall Fit	0.28	0.07	3.94	<.001	0.14	0.42
Openness to Criticism Fit	-0.41	0.13	-3.12	.002	-0.67	-0.15
Flexibility of Opinion Fit	0.27	0.12	2.31	.022	0.04	0.49

Table 7

*Linear Regression Models for Path Analysis*

	<i>B</i>	<i>SE(B)</i>	<i>t</i>	<i>p</i>	95% CI	
					Lower	Upper
Direct Effect of Conscientiousness on Individual Adaptivity ( $R^2 = .02$ )						
(Constant)	3.39	0.13	27.19	<.001	3.15	3.64
Conscientiousness	0.09	0.03	2.59	.010	0.02	0.16
Direct Effect of Conscientiousness on Employee Engagement ( $R^2 = .04$ )						
(Constant)	2.83	0.30	9.52	<.001	2.24	3.41
Conscientiousness	0.30	0.08	3.72	<.001	0.14	0.47
Direct Effects of Conscientiousness and Adaptivity on Engagement ( $R^2 = .15$ )						
(Constant)	0.22	0.50	0.44	.663	-0.77	1.21
Conscientiousness	0.23	0.08	2.97	.003	0.08	0.39
Individual Adaptivity	0.77	0.12	6.27	<.001	0.53	1.02

## CHAPTER V: DISCUSSION

In this study, we examined Individual Adaptivity, adaptive performance, the fit between the person's Adaptivity and the requirements of their job, employee engagement, and conscientiousness. Our results indicate that an Individual's Adaptivity is related to the performance, both as an Overall Adaptivity and as a reflection of the individual dimensions of adaptivity. With the bivariate correlations between trait and performance being significant, it does provide some evidence that research question one, and each of the sub-questions, is factual: a person's Individual Adaptivity is related to their Adaptive Performance on the job—both for the Overall Adaptivity and each dimension. These relationships are not too surprising as both the trait measures and the performance measures are self-reported responses and the dimensions of the traits match those of the performance dimensions. Some of the off-dimension relationships are unexpected, e.g., proactive learning is related to every performance metric. The proactive learning link, however, can be seen as exemplifying the LePine et al. (2000) idea of Adaptive Performance as a factor of general cognitive ability.

The study also indicated that a complex multiple regression model could not be used to predict employee engagement, however, when re-evaluated utilizing stepwise selection a successful model was reached with overall adaptive fit, openness to criticism, and flexibility of opinion. This suggests that the overall research question two, and sub-questions “f” and “g” are correct: the fit between an Individual's Adaptivity—as an overall score of adaptation and within the dimensions of openness to criticism and flexibility of opinion—and the requirements of their job can be utilized to predict employee engagement. The daily fluctuation of engagement over time (Bakker &

Demerouti, 2007; Kahn, 1990) may account for the overall fit predicting employee engagement—as the job requirements change those who are able to cope with change may come through the time with higher levels of employee engagement contrasted with those who are not as able to cope with the change. The successful link from openness to criticism could be tethered to the amount of feedback an employee receives about his or her job. Price, Handley, and Millar (2011) posit that feedback and engagement go hand in hand, which could suggest that, in the case of openness to criticism, those with lower engagement are not receiving constructive feedback from superiors. This can hinder their motivation, which Warr and Inceolglu (2012) suggest that motivation may be a more important factor than their fit within the position. Greco, Laschinger, and Wong (2006) would add the leader's behavior drives the changes in the working environment, which is generally where feedback comes from. This can also tie in with flexibility of opinion as the clash that can arise with an employee who is obstinate when it comes to suggestions and opinions about their work—feedback. Additionally, Saks (2006) suggests that feedback and autonomy are two important job characteristics when predicting employee engagement. This could link the fit between wanting feedback and autonomy and getting them, or wanting them and not getting them, could drive, or hinder, employee engagement.

Finally, the link between conscientiousness, Individual Adaptivity, and employee engagement. The link from conscientiousness to employee engagement did lessen with the inclusion of Individual Adaptivity to the model. This suggests that the proposed mediation model—research question three—may be supported. Conscientiousness's link with Individual Adaptivity corroborates the research that has previously been done

(Griffin et al., 2010; LePine et al., 2000) just as its relationship with engagement is evidenced in the literature (Inceolglu & Warr, 2011; Kim et al., 2009). The partial mediation model may explain some of the daily fluctuations of employee engagement as the ability of the individual to cope with changes around them.

### **Limitations**

The current study did not lack a sufficient sample size, but the overall composition of the sample would have been better suited with a different blend of demographics. Specifically, nearly the entire sample indicated that they were student, the majority of which were full time. This puts some constraint on the three-quarters that are currently employed as they would not be employed in positions that necessarily need adaptation, nor would they be working full-time at both class and work. This could be helped by expanding the survey to more individuals in the working world itself, which would potentially alter the results based on a collection of full-time workers potentially needing to adapt more often than part-time employees. With the sample there is also a potential cultural skew as the vast majority of the participants were Caucasian denizens of Middle Tennessee. A larger area with more diverse cultural population could provide additional insight.

There was some concern over the lack of prior research in the subject. This really can only be overcome by increasing the research in this field. The measurement method utilized, self-reported data, does have some inherent limitations as we cannot be completely sure of the accuracy of the individual responses other than successful completion of quality assurance items. The potential accuracy issue could be caused by

the participants over- or under-estimating their contributions or the requirements of their job.

### **Research Implications**

The implications for research with these results are numerous. With the successful link between conscientiousness and Adaptivity, do other personality factors fit better within the model? The HEXACO factors of openness to experience or agreeableness have facets that could potentially predict employee engagement. Perhaps the mediation is occurring within more than one personality factor. Additional research could also further explore the trait measurement of Adaptivity. Both the MAP and I-ADAPT measures were explored via confirmatory factor analysis (Marlow et al., 2015), but higher order factors could be explored to further understand the measurement model. Employee engagement was utilized as a scale score, but it does separate into three distinct factors—vigor, absorption, and dedication—which could be further explored—although these factors are highly correlated (.73 and above).

### **Applied Implications**

With the direct link between an Individual's Adaptivity (trait) and their performance (behavior), there is potential selection uses that may be considered within jobs that require an amount of adaptation. Additionally, there was some evidence of a link to employee engagement which it itself has been linked to overall job performance (Harter et al., 2002). Examining this research again in a given organization could increase the external validity as well as potentially the generalizability of the results. It could also be useful in linking it to other work aspects like job satisfaction, burnout, turnover, job performance itself, etc.

## **Future Directions and Conclusions**

Needing to adapt within the workplace is something that is going to continue to be needed for some time to come. However, accurately measuring a person's ability to adapt has not caught up with the changing trends. This study provided evidence that a person's ability to adapt relates to organizational outcomes that should be desired—performance and engagement. However, to fully understand Adaptivity it has to have further research between it and differing desirable and undesirable outcomes. This study has been one step towards further understanding of adaptive performance; more steps should follow.

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APPENDICES

## APPENDIX A: IRB Approval Letter

**IRB**  
**INSTITUTIONAL REVIEW BOARD**  
 Office of Research Compliance,  
 010A Sam Ingram Building,  
 2269 Middle Tennessee Blvd  
 Murfreesboro, TN 37129



## EXEMPT APPROVAL NOTICE

11/3/2015

Investigator(s): Kristopher Marlow, Hayley Calarco, Michael Hein, Mark Frame  
 Department: Psychology  
 Investigator(s) Email: kkm3h@mtmail.mtsu.edu; hnc2u@mtmail.mtsu.edu;  
 michael.hein@mtsu.edu; mark.frame@mtsu.edu  
 Protocol Title: "Relationship of Adaptive Performance to Engagement and Satisfaction"  
 Protocol ID: 16-1098

Dear Investigator(s),

The MTSU Institutional Review Board, or a representative of the IRB, has reviewed the research proposal identified above and this study has been designated to be EXEMPT.. The exemption is pursuant to 45 CFR 46.101(b) **(2) Educational Tests, Surveys, Interviews, or Observations**

The following changes to this protocol must be reported prior to implementation:

- Addition of new subject population or exclusion of currently approved demographics
- Addition/removal of investigators
- Addition of new procedures
- Other changes that may make this study to be no longer be considered exempt

The following changes do not have to be reported:

- Editorial/administrative revisions to the consent of other study documents
- Changes to the number of subjects from the original proposal

All research materials must be retained by the PI or the faculty advisor (if the PI is a student) for at least three (3) years after study completion. Subsequently, the researcher may destroy the data in a manner that maintains confidentiality and anonymity. IRB reserves the right to modify, change or cancel the terms of this letter without prior notice. Be advised that IRB also reserves the right to inspect or audit your records if needed.

Sincerely,

Institutional Review Board  
 Middle Tennessee State University

NOTE: All necessary forms can be obtained from [www.mtsu.edu/irb](http://www.mtsu.edu/irb).

## APPENDIX B: Measure of Adaptive Performance (MAP)

Below are the directions and scales used in the current study for the MAP items:

This survey asks a number of questions about your preferences, styles, and habits at work. If you are not currently employed, please take former employment, or experience as a student, into consideration when answering the following. Read each statement carefully. Then, for each statement choose the corresponding option that best represents your opinion. There are no right or wrong answers.

- 1 = Strongly Disagree
- 2 = Disagree
- 3 = Neither Agree nor Disagree
- 4 = Agree
- 5 = Strongly Agree
- 6 = Not Applicable

### **MAP Items (Quality Assurance Items included):**

1. I take effective action when necessary without having to know the total picture or have all the facts at hand
2. I readily and easily change gears in response to unpredictable or unexpected events and circumstances
3. I deal with situations that are not black and white
4. I respect the culture of other people
5. For quality assurance purposes, please select "Not Applicable" for this statement
6. I refuse to be paralyzed by uncertainty or ambiguity
7. I enjoy working with people of different backgrounds
8. I learn about the needs and values of other people and cultures
9. I take action to understand other groups, organizations, and cultures
10. I am able to read the emotions of others well
11. I can understand how other people are feeling at any particular moment
12. I integrate well with people from different cultures
13. I am not a good person to rely on in life threatening, dangerous, or emergency situations
14. I am able to become comfortable with people with different values and customs
15. I would willingly alter my behavior to show respect for others' values and customs
16. I remain flexible and open-minded when dealing with others
17. For quality assurance purposes, please select "Strongly Disagree" for this statement
18. I listen to and consider others' viewpoints and opinions
19. I can be open and accepting of negative or developmental feedback regarding my work
20. I work well in developing effective relationships with highly diverse personalities
21. I demonstrate keen insight of others' behavior

22. For quality assurance purposes, please select "Neither Agree nor Disagree" for this statement
23. I tailor my behavior to persuade or influence others
24. I react with appropriate and proper urgency in life threatening, dangerous, or emergency situations
25. I make split-second decisions based on clear and focused thinking
26. I quickly analyze options for dealing with danger or crises and their implications
27. I maintain emotional control and objectivity while keeping focused on the situation at hand
28. I step up to take action and handle danger or emergencies as necessary and appropriate
29. I remain composed when faced with difficult circumstances
30. I remain calm when faced with a highly demanding workload
31. I manage frustration by directing effort to constructive solutions
32. I maintain high levels of professionalism in difficult situations
33. I demonstrate enthusiasm for learning new approaches and technologies for conducting work
34. I do what is necessary to keep my knowledge and skills current
35. I quickly learn new methods to complete work tasks
36. For quality assurance purposes, please select "Not Applicable" for this statement
37. I adjust to new work processes and procedures
38. I anticipate changes in the work demands
39. I actively participate in training that will prepare me for change
40. I seek out assignments that will prepare me for change
41. I take action to improve work performance deficiencies
42. I analyze information in unique ways
43. I generate new ideas in novel situations
44. I turn problems upside-down and inside-out to find fresh, new approaches
45. I integrate seemingly unrelated information and develop creative solutions
46. I entertain wide-ranging possibilities others may miss
47. For quality assurance purposes, please select "Disagree" for this statement
48. I think outside the given parameters to see if there is a more effective approach
49. I develop innovative methods of obtaining resources when faced with insufficient
50. I create unique ways to use existing resources when the desired resources are unavailable
51. I maintain a sense of humor in emotionally challenging situations
52. I maintain control over my negative emotions
53. I hide my emotions easily
54. I understand others' emotions quickly
55. I know when people are frustrated with me
56. I see other people's criticism of my work as an opportunity to improve
57. I continuously ask for constructive criticism
58. I am open to feedback from others, even if they do not know as much as I do
59. For quality assurance purposes, please select "Agree" for this statement
60. I accept criticism from those who have not been around as long as I have been

61. I alter my own action when it is appropriate to do so based on the opinions of others
62. I willingly adjust my behavior as necessary to show respect for others
63. I willingly alter my appearance if necessary to comply with others' values and customs
64. I change my behavior when it is appropriate to the situation
65. I have the ability to determine other people's expectations
66. I get along with people from different countries
67. I get along with people of different religious beliefs
68. I alter my own opinion when it is appropriate to do so
69. There are some emotions that I cannot control
70. For quality assurance purposes, please select "Strongly Agree" for this statement

### APPENDIX C: Individual Adaptability Measure (I-ADAPT)

Below are the directions and rating scales used in the current study for the I-ADAPT items:

This survey asks a number of questions about your preferences, styles, and habits at work. If you are not currently employed, please take former employment, or experience as a student, into consideration when answering the following. Read each statement carefully. Then, for each statement choose the corresponding option that best represents your opinion. There are no right or wrong answers.

- 1 = Strongly Disagree
- 2 = Disagree
- 3 = Neither Agree nor Disagree
- 4 = Agree
- 5 = Strongly Agree
- 6 = Not Applicable

#### **I-ADAPT Items (Quality Assurance Items included):**

1. I am able to maintain focus during emergencies
2. I enjoy learning about cultures other than my own
3. I usually over-react to stressful news
4. I believe it is important to be flexible in dealing with others
5. I take responsibility for acquiring new skills
6. I work well with diverse others
7. I tend to be able to read others and understand how they are feeling at any particular moment
8. I am adept at using my body to complete relevant tasks
9. In an emergency situation, I can put aside emotional feelings to handle important tasks
10. I see connections between seemingly unrelated information
11. I enjoy learning new approaches for conducting work
12. I think clearly in times of urgency
13. I utilize my muscular strength well
14. It is important to me that I respect others' culture
15. I feel unequipped to deal with too much stress
16. I am good at developing unique analyses for complex problems
17. I am able to be objective during emergencies
18. My insight helps me to work effectively with others
19. I enjoy the variety and learning experiences that come from working with people of different backgrounds
20. I am easily rattled when my schedule is too full
21. For quality assurance purposes, please select "Not Applicable" for this statement
22. I usually step up and take action during a crisis

23. I need for things to be “black and white”
24. I am an innovative person
25. I feel comfortable interacting with others who have different values and customs
26. If my environment is not comfortable (e.g., cleanliness), I cannot perform well
27. I make excellent decisions in times of crisis
28. I become frustrated when things are unpredictable
29. I am able to make effective decisions without all relevant information
30. I am an open-minded person in dealing with others
31. I take action to improve work performance deficiencies
32. For quality assurance purposes, please select “Strongly Agree” for this statement
33. I am usually stressed when I have a large workload
34. I am perceptive of others and use that knowledge in interactions
35. I often learn new information and skills to stay at the forefront of my profession
36. I often cry or get angry when I am under a great deal of stress
37. When resources are insufficient, I thrive on developing innovative solutions
38. I am able to look at problems from a multitude of angles
39. I quickly learn new methods to solve problems
40. When something unexpected happens, I readily change gears in response
41. I would quit my job if it required me to be physically stronger
42. I try to be flexible when dealing with others
43. I can adapt to changing situations
44. I train to keep my work skills and knowledge current
45. I physically push myself to complete important tasks
46. I am continually learning new skills for my job
47. I perform well in uncertain situations
48. I can work effectively even when I am tired
49. I take responsibility for staying current in my profession
50. I adapt my behavior to get along with others
51. I cannot work well if it is too hot or cold
52. For quality assurance purposes, please select “Neither Agree nor Disagree” for this statement
53. I easily respond to changing conditions
54. I try to learn new skills for my job before they are needed
55. I can adjust my plans to changing conditions
56. I keep working even when I am physically exhausted

#### APPENDIX D: Dimension Level Items

Below are the directions, rating scales, and items used in the current study for the Dimension Level items:

Read the following definition and indicate how FREQUENTLY you are REQUIRED to perform the competency described at your job.

1 = Never

2 = Rarely

3 = About Half the Time

4 = Usually

5 = Always

1. Applied Creativity – Uniquely analyzing information and generating new, innovative approaches to problems
2. Adaptability in Crisis Situations– Reacting with appropriate and proper urgency in unexpected, unstable, dangerous, or emergency situations; quickly analyzing options for dealing with threats to important goals, values, income, or health.
3. Cultural Adaptability – Learning about, integrating with, and respecting the cultures, customs, and values of others
4. Emotional Control – Maintaining control over one’s feelings and responses in challenging or stressful situations
5. Emotional Perceptiveness – Quickly being able to understand the feelings, motivations, and behaviors of others
6. Flexibility of Opinion – Willingly changing one’s own behavior, appearance, judgments, and beliefs based on the opinions of others when it is appropriate to do so
7. Openness to Criticism – Being open and accepting of feedback from various sources; seeking out such feedback when appropriate
8. Proactive Learning – Demonstrating enthusiasm for learning new approaches and technologies; taking responsibility for keeping knowledge and skills current
9. Dealing with Ambiguous Situations – Effectively adjusting plans, goals, actions, or priorities to deal with changing situations even in unclear circumstances.
10. Interpersonal Adaptability – Working well and developing effective relationships with highly diverse personalities
11. Dealing with Work Stress – Being resilient, remaining composed, and demonstrating the highest levels of professionalism in stressful circumstances
12. Physical Adaptability – Performing well despite physical discomfort and taxing or challenging environmental conditions
13. Dealing with Uncertainty – Appropriately responding to changing situations with or without all applicable information

Read the following definition and indicate how IMPORTANT the competency described is at your job.

- 1 = Not Important at All
- 2 = Of Little Importance
- 3 = Of Average Importance
- 4 = Important
- 5 = Absolutely Essential

- 14. Applied Creativity – Uniquely analyzing information and generating new, innovative approaches to problems
- 15. Adaptability in Crisis Situations– Reacting with appropriate and proper urgency in unexpected, unstable, dangerous, or emergency situations; quickly analyzing options for dealing with threats to important goals, values, income, or health.
- 16. Cultural Adaptability – Learning about, integrating with, and respecting the cultures, customs, and values of others
- 17. Emotional Control – Maintaining control over one’s feelings and responses in challenging or stressful situations
- 18. Emotional Perceptiveness – Quickly being able to understand the feelings, motivations, and behaviors of others
- 19. Flexibility of Opinion – Willingly changing one’s own behavior, appearance, judgments, and beliefs based on the opinions of others when it is appropriate to do so
- 20. Openness to Criticism – Being open and accepting of feedback from various sources; seeking out such feedback when appropriate
- 21. Proactive Learning – Demonstrating enthusiasm for learning new approaches and technologies; taking responsibility for keeping knowledge and skills current
- 22. Dealing with Ambiguous Situations – Effectively adjusting plans, goals, actions, or priorities to deal with changing situations even in unclear circumstances.
- 23. Interpersonal Adaptability – Working well and developing effective relationships with highly diverse personalities
- 24. Dealing with Work Stress – Being resilient, remaining composed, and demonstrating the highest levels of professionalism in stressful circumstances
- 25. Physical Adaptability – Performing well despite physical discomfort and taxing or challenging environmental conditions
- 26. Dealing with Uncertainty – Appropriately responding to changing situations with or without all applicable information

Read the following definition and indicate how well you PERFORM the competency described at your job.

1 = Very Poor

2 = Below Average

3 = Average

4 = Above Average

5 = Excellent

27. Applied Creativity – Uniquely analyzing information and generating new, innovative approaches to problems
28. Adaptability in Crisis Situations– Reacting with appropriate and proper urgency in unexpected, unstable, dangerous, or emergency situations; quickly analyzing options for dealing with threats to important goals, values, income, or health.
29. Cultural Adaptability – Learning about, integrating with, and respecting the cultures, customs, and values of others
30. Emotional Control – Maintaining control over one’s feelings and responses in challenging or stressful situations
31. Emotional Perceptiveness – Quickly being able to understand the feelings, motivations, and behaviors of others
32. Flexibility of Opinion – Willingly changing one’s own behavior, appearance, judgments, and beliefs based on the opinions of others when it is appropriate to do so
33. Openness to Criticism – Being open and accepting of feedback from various sources; seeking out such feedback when appropriate
34. Proactive Learning – Demonstrating enthusiasm for learning new approaches and technologies; taking responsibility for keeping knowledge and skills current
35. Dealing with Ambiguous Situations – Effectively adjusting plans, goals, actions, or priorities to deal with changing situations even in unclear circumstances.
36. Interpersonal Adaptability – Working well and developing effective relationships with highly diverse personalities
37. Dealing with Work Stress – Being resilient, remaining composed, and demonstrating the highest levels of professionalism in stressful circumstances
38. Physical Adaptability – Performing well despite physical discomfort and taxing or challenging environmental conditions
39. Dealing with Uncertainty – Appropriately responding to changing situations with or without all applicable information

## APPENDIX E: Utrecht Work Engagement Scale

Below are the directions and rating scales used in the current study for the UWES items:

*The following 17 statements are about how you feel at work. Please read each statement carefully and decide if you ever feel this way about your job. If you have never had this feeling, cross the '0' (zero) in the space after the statement. If you have had this feeling, indicate how often you feel it by crossing the number (from 1 to 6) that best describes how frequently you feel that way.*

0 = Never

1 = Almost Never/A few times a year or less

2 = Rarely/Once a Month or Less

3 = Sometimes/A few times a Month

4 = Often/Once a Week

5 = Very Often/A few times a week

6 = Always/Every day

1. At my work, I feel bursting with energy
2. I find the work that I do full of meaning and purpose
3. Time flies when I'm working
4. At my job, I feel strong and vigorous
5. I am enthusiastic about my job
6. When I am working, I forget everything else around me
7. My job inspires me
8. When I get up in the morning, I feel like going to work
9. I feel happy when I am working intensely
10. I am proud on the work that I do
11. I am immersed in my work
12. I can continue working for very long periods at a time
13. To me, my job is challenging
14. I get carried away when I'm working
15. At my job, I am very resilient, mentally
16. It is difficult to detach myself from my job
17. At my work I always persevere, even when things do not go well

## APPENDIX F: HEXACO Personality Inventory

Below are the directions and rating scales used in the current study for the HEXACO Personality Inventory items:

Directions: Please carefully read the following statements and select the button that corresponds to your level of agreement with the statement. Please answer every statement, even if you are not completely sure of your response.

- 1 = Strongly Disagree
- 2 = Disagree
- 3 = Neither Agree nor Disagree
- 4 = Agree
- 5 = Strongly Agree

### **HEXACO Items (Quality Assurance Items included):**

1. I would be quite bored by a visit to an art gallery.
2. I plan ahead and organize things, to avoid scrambling at the last minute.
3. I rarely hold a grudge, even against people who have badly wronged me.
4. I feel reasonably satisfied with myself overall.
5. For quality assurance purposes, please select "Disagree" for this statement
6. I would feel afraid if I had to travel in bad weather conditions.
7. I wouldn't use flattery to get a raise or promotion at work, even if I thought it would succeed.
8. I'm interested in learning about the history and politics of other countries.
9. I often push myself very hard when trying to achieve a goal.
10. People sometimes tell me that I am too critical of others.
11. I rarely express my opinions in group meetings.
12. I sometimes can't help worrying about little things.
13. If I knew that I could never get caught, I would be willing to steal a million dollars.
14. I would enjoy creating a work of art, such as a novel, a song, or a painting.
15. When working on something, I don't pay much attention to small details.
16. People sometimes tell me that I'm too stubborn.
17. For quality assurance purposes, please select "Strongly Agree" for this statement
18. I prefer jobs that involve active social interaction to those that involve working alone.
19. When I suffer from a painful experience, I need someone to make me feel comfortable.
20. Having a lot of money is not especially important to me.
21. I think that paying attention to radical ideas is a waste of time.
22. I make decisions based on the feeling of the moment rather than on careful thought.
23. People think of me as someone who has a quick temper.
24. On most days, I feel cheerful and optimistic.
25. I feel like crying when I see other people crying.
26. I think that I am entitled to more respect than the average person is.

27. For quality assurance purposes, please select "Strongly Disagree" for this statement
28. If I had the opportunity, I would like to attend a classical music concert.
29. When working, I sometimes have difficulties due to being disorganized.
30. My attitude toward people who have treated me badly is "forgive and forget".
31. I feel that I am an unpopular person.
32. When it comes to physical danger, I am very fearful.
33. If I want something from someone, I will laugh at that person's worst jokes.
34. I've never really enjoyed looking through an encyclopedia.
35. I do only the minimum amount of work needed to get by.
36. I tend to be lenient in judging other people.
37. In social situations, I'm usually the one who makes the first move.
38. I worry a lot less than most people do.
39. I would never accept a bribe, even if it were very large.
40. People have often told me that I have a good imagination.
41. I always try to be accurate in my work, even at the expense of time.
42. I am usually quite flexible in my opinions when people disagree with me.
43. The first thing that I always do in a new place is to make friends.
44. I can handle difficult situations without needing emotional support from anyone else.
45. I would get a lot of pleasure from owning expensive luxury goods.
46. I like people who have unconventional views.
47. I make a lot of mistakes because I don't think before I act.
48. Most people tend to get angry more quickly than I do.
49. Most people are more upbeat and dynamic than I generally am.
50. I feel strong emotions when someone close to me is going away for a long time.
51. I want people to know that I am an important person of high status.
52. I don't think of myself as the artistic or creative type.
53. People often call me a perfectionist.
54. For quality assurance purposes, please select "Strongly Agree" for this statement
55. Even when people make a lot of mistakes, I rarely say anything negative.
56. I sometimes feel that I am a worthless person.
57. Even in an emergency I wouldn't feel like panicking.
58. I wouldn't pretend to like someone just to get that person to do favors for me.
59. I find it boring to discuss philosophy.
60. I prefer to do whatever comes to mind, rather than stick to a plan.
61. When people tell me that I'm wrong, my first reaction is to argue with them.
62. When I'm in a group of people, I'm often the one who speaks on behalf of the group.
63. I remain unemotional even in situations where most people get very sentimental.
64. I'd be tempted to use counterfeit money, if I were sure I could get away with it.