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# Contextualized Extraversion And Its Change In Cross-Cultural Adjustment

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**CONTEXTUALIZED EXTRAVERSION AND ITS CHANGE  
IN CROSS-CULTURAL ADJUSTMENT**

by

**MENGQIAO LIU**

**THESIS**

Submitted to the Graduate School

of Wayne State University,

Detroit, Michigan

in partial fulfillment of the requirements

for the degree of

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2014

**MAJOR: PSYCHOLOGY**  
(Industrial-Organizational)

Approved By:

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Advisor

Date

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## **DEDICATION**

I would like to dedicate the following work to my parents, Lu Li and Shimin Liu, who have always believed in me and encouraged me to do my best. Although thousands of miles apart, their unconditional love and support have been the biggest impetus behind my achievements.

## **ACKNOWLEDGMENTS**

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## TABLE OF CONTENTS

Dedication .....	ii
Acknowledgements .....	iii
Preface .....	iv
List of Tables .....	vi
List of Figures .....	vii
Chapter 1 .....	1
Personality and the Trait Approach .....	3
Change in Personality .....	6
Contextualized Personality .....	13
Cross-cultural Adjustment and Personality .....	19
Chapter 2 .....	40
Participants .....	40
Procedure .....	41
Measures .....	42
Statistical Analyses .....	47
Chapter 3 .....	48
Data Screening .....	48
Demographics .....	49
Hypothesis Testing .....	49
Exploratory Analyses .....	52
CHAPTER 4 .....	56
Summary of Findings .....	56

Change in Personality .....	57
Contextualizing Personality.....	58
Personality and Cross-cultural Adjustment .....	59
Practical Implications .....	59
Limitations.....	60
Future Directions .....	62
Appendix A.....	81
Appendix B.....	86
Appendix C.....	88
References.....	92
Abstract.....	115
Autobiographic Statement .....	116

## LIST OF TABLES

Table 1: Schedule for Survey Administrations .....	66
Table 2: Descriptive Statistics and Intercorrelations for Study Variables .....	67
Table 3: Time 1 Global and Contextualized Extraversion Predicting Cross-cultural adjustment .....	68
Table 4: Time 1 Global and Contextualized Extraversion Predicting Withdrawal Cognitions .....	69
Table 5: Time 1 Global and Contextualized Extraversion Predicting School Satisfaction .....	70
Table 6: Latent Growth Model for Contextualized Extraversion .....	71
Table 7: Intercept and Slope of Contextualized Extraversion Predicting Cross-cultural adjustment .....	72
Table 8: Intercept and Slope of Contextualized Extraversion Predicting Withdrawal Cognitions .....	73
Table 9: Intercept and Slope of Contextualized Extraversion Predicting School Satisfaction .....	74
Table 10: Cultural Flexibility Predicting Changes in Contextualized Extraversion .....	75
Table 11: Cross-cultural Motivation Predicting Changes in Contextualized Extraversion .....	76
Table 12: Social Skills Predicting Changes in Contextualized Extraversion .....	77
Table 13: Summary of Findings .....	78

## LIST OF FIGURES

Figure 1: The Model of Latent Growth Curve.....	80
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## CHAPTER 1

### **Contextualized Extraversion and Its Change in Cross-Cultural Adjustment**

Personality has long been used as a key to understanding human behavior. In everyday conversation and discourse, the use of personality is pervasive – Allport and Odbert (1936) identified 18,000 personality-related terms in an English dictionary. Psychologists commonly use personality traits to refer to consistent individual differences in behaving, thinking, and feeling (Winter, John, Stewart, Klohnen, & Duncan, 1998) and have successfully applied personality traits to predict important life outcomes (John, Robins, & Pervin, 2008).

In the field of Industrial-Organizational (I/O) psychology, researchers have utilized personality to predict work-related outcomes such as job performance (e.g., Barrick & Mount, 1991; Barrick, Mount, & Judge, 2001), job satisfaction (e.g., Judge, Heller, & Mount, 2002), organizational citizenship behavior (e.g., Chiaburu, Oh, Berry, Li, & Gardner, 2011; Organ & K. Ryan, 1995), burnout (e.g., Alarcon, Eschleman, & Bowling, 2009), team performance (Peeters, Van Tuijl, Rutte, & Reymen, 2006), and leadership (e.g., Bono & Judge, 2004). Despite the popularity of personality traits as predictors of work outcomes, meta-analyses have consistently shown relatively modest validities of personality measures in predicting performance outcomes (Morgeson et al., 2007; Murphy & Dzieweczynski, 2005). In order to better address the DVs above, a closer understanding of the personality variable in situation may be beneficial. It has been proposed that the lack of strong validity of personality in predicting workplace outcomes may be attributed, in part, to the variation in behavior across situations (Tellegen, 1991). Specifically, global personality scales are typically designed to capture broad, context-blind individual tendencies across situations, which may not correspond highly with specific behavioral tendencies at work (Robie, Schmit, Ryan, & Zickar, 2000).

Two developments in personality research that emerged over the past decade or so motivated the current research. First, challenging the notion that personality represents relatively enduring dispositions, researchers have demonstrated personality changes across the life course (Caspi & Roberts, 2001). Specifically, meta-analytic review has revealed increases in mean-levels of Conscientiousness, Emotional Stability and some domains in Extraversion as people age (Roberts, Walton, & Viechtbauer, 2006). In addition, research has demonstrated individual differences in patterns of personality change (e.g., Ludtke, Roberts, Trautwein, & Nagy, 2011).

Second, a number of studies have demonstrated the advantage of using contextualized personality over global (noncontextualized) personality in predicting outcomes in various aspects of life (e.g., Bing, Whanger, Davison, & VanHook, 2004; DeGroot & Kluemper, 2007; Shaffer & Postlethwaite, 2012). For instance, in a recent meta-analysis, Shaffer and Postlethwaite (2012) concluded that contextualized personality measures had higher validity in predicting job performance than noncontextualized personality measures, such that the increases in validity exceeded at least 100% for four of the five Big Five dimensions (Openness to Experience, Extraversion, Agreeableness, and Emotional Stability).

Given the proximity of contextualized personality to one's experience in a particular context (e.g., work personality to work experience), I contend that contextualized personality is a good candidate for the examination of personality change, and changes in contextualized personality can predict important outcomes within that context. Studying contextualized personality change is important to I/O psychology for three primary reasons. First, by recognizing the malleable aspect of personality, I/O psychologists can explore and identify the driving forces in the workplace that are changing people's personality. Second, examining changes in contextualized personality may enhance our ability to predict workplace outcomes

above and beyond personality traits. Third, this approach allows us to capture the ongoing experience of work and view each individual as a dynamic being instead of an object with a fixed quantity of personality traits (Weiss & Rupp, 2011).

In the current study, I take on a particular context, cross-cultural adjustment, to study contextualized personality change. Previous investigations have supported the important role of personality traits in cross-cultural adjustment (e.g., Peltokorpi, 2008; Sri Ramalu, Che Rose, Uli, & Kumar, 2010; Swagler & Jome, 2005), yet none has examined personality change or contextualized personality in this particular context. Therefore, building on the aforementioned line of personality research, this current study has two purposes: (a) to demonstrate changes in contextualized personality; (b) to link personality changes to cross-cultural adjustment outcomes.

## **Personality and the Trait Approach**

### **History of Personality Trait Research**

The idea of personality and its impact on human behavior can be traced back to the beginning of human language (Matthews, Deary, & Whiteman, 2009). In his writing of the *Ethics*, Aristotle (384-322 BC) described stable dispositions (e.g., vanity, modesty, and righteous indignation) as the determinants of moral or immoral behavior, such that achieving an excellent level of these dispositions was an important pre-condition of well-being (Matthews, Deary, & Whiteman, 2009).

As a research discipline, personality psychology emerged in the late 1930s (Barenbaum, 2000). As Allport (1937) described in *Personality: a Psychological Interpretation*, "In everyday life, no one, not even a psychologist, doubts that underlying the conduct of a mature person there are characteristic dispositions or traits." (p. 1)

Although some discrepancies exist in personality definitions (McAdams & Pals, 2006; Mischel & Shoda, 1995), the *trait approach* to personality represents a generally accepted school of thought that views personality as representing “characteristics of the person that account for consistent patterns of feeling, thinking, and behaving” (Pervin & John, 2001, p.4). Two important characteristics of personality traits are implied. First, personality trait represents patterns of behaviors that have both rank-order (interindividual) consistency and absolute (intraindividual) consistency, such that the ranking of individuals on a particular trait is stable across situations, and the extent to which an individual exhibits certain trait is stable across situations (Church, 2010). Second, personality traits can be inferred from behavioral aggregates, which can then be used to make inferences on additional behaviors and/or other phenomena (Tellegen, 1991).

Today, the five-factor model (FFM) of personality is the most widely used taxonomy of personality traits. The FFM summarizes personality along five basic dimensions: Openness to Experience (aesthetic, curious, imaginative, and open to feelings and new experiences), Conscientiousness (competent, achievement-orientated, disciplined, and deliberate), Extraversion (warm, gregarious, assertive, and excitement-seeking), Agreeableness (trusting, altruistic, modest, and tender minded), and Neuroticism (anxious, hostile, impulsive, and vulnerable; Costa & McCrae, 1985). These five general factors have emerged from different instruments (e.g., Clark & Livesley, 2002; Lanning, 1994; Saucier, 1997) and across different cultures (Digman, 1990).

### **Personality Traits in I/O**

The field of I/O psychology, in both science and practice, has benefited greatly from personality theories. Since the use of Woodworth’s (1920) Personal Data Sheet in World War I, the next few decades witnessed an increasing demand for research in personality used for

selection, diagnosis, and placement in industries (John et al., 2008). Since then, personality traits have been widely utilized to predict work performance, work adjustment, and other important work-related outcomes.

Despite the popularity of personality traits in the I/O field, the validity of personality as predictor of job performance has been rather modest (Morgeson et al., 2007; Murphy & Dzieweczynski, 2005). Barrick and Mount (1991) investigated the FFM dimensions as predictors of job performance (i.e., job proficiency, training proficiency, and personnel data) in five occupational groups (i.e., professionals, police, managers, sales, and skilled/semi-skilled). Results from 117 studies published between 1952 and 1988 revealed that Conscientiousness was the most yet only valid predictor of all three job performance criteria across all occupational groups. The other dimensions showed various degrees of validity depending on the criteria and occupations. For instance, Extraversion was shown to be a valid predictor of all three job performance criteria but only in managers and sales occupations where interpersonal skills were highly valued. In addition, Extraversion and Openness to Experience predicted training proficiency across occupations. However, the remaining true score correlations for other personality dimensions were relatively small (i.e.,  $\rho = .10$  or less). Therefore, some I/O psychologists remain skeptical in using personality trait measures in recruitment and selection (e.g., Morgeson et al., 2007).

Aside from validity-related issues, the use of stable personality traits in organizational research suffers from criticisms by treating people as objects with stable characteristics and ignoring the dynamic interaction between the people and the environment (Weiss & Rupp, 2011). The alternative perspective, as proposed by Weiss and Rupp, is to focus on the “lived-through experience” of individuals that captures changes in experiences and behavior. While I/O research

on personality focuses on the stable characteristics of the person (typically the FFM), research in personality and developmental psychology has demonstrated personality change. In the next section, I will mainly discuss personality change and its impact on various life outcomes.

### **Change in Personality**

One of the misconceptions of the personality trait model, as Lewis (1999) noted, was viewing personality traits as static and non-developmental in nature. Research in the past two decades has demonstrated the malleability of personality over the life course (Caspi & Roberts, 2001). In this section, I will first introduce the different forms of consistency to facilitate the understanding of personality changes, followed by a discussion on how personality changes: over time (developmental) versus driven by significant life experiences and events. Lastly, I will discuss the relationship between personality changes and various life outcomes.

### **Different Forms of Personality Consistency**

Prior to the investigation of personality changes, it is necessary to briefly discuss the various forms of measuring personality trait consistency. Roberts and DelVecchio (2000) argued that four types of trait consistency are essential in the research domain of personality change or consistency, including population-level approaches (mean-level consistency and rank-order consistency) and individual-level approaches (intraindividual differences in consistency and ipsative consistency). For instance, the traditional view of personality that argues for high rank-order consistency and low intraindividual differences in personality (Church, 2010) have taken both the population-level approach (i.e., the rank order of individuals on a particular personality trait is stable across all situations) and the individual-level approach (i.e., the extent to which an individual exhibits certain trait is stable across all situations). Though no particular approach is

privileged per se, the particular choice is driven by the research question, and can directly determine the methodology to be used and the inferences to be made (Fleeson & Nofhle, 2008).

To serve the purposes of the current study, both the mean-level consistency and intraindividual differences in consistency will be examined. Mean-level consistency is a population-level index that reflects the absolute changes in the average trait level of a population. Such changes are often driven by maturation or historical processes that are normative in nature (Caspi, Roberts, & Shiner, 2005). The intraindividual differences in consistency is an individual-level index that represents the magnitude of change in a given personality trait within an individual over time, and is most commonly assessed via correlations between different scores (Roberts & Helson, 1997) or latent growth analysis (Tate & Hokanson, 1993). In the current study, both the mean-level changes in personality (population-level approach) and intraindividual differences in personality changes (individual-level approach) will be examined to better understand the personality changes in the process of cross-cultural adjustment.

### **Personality Changes over Time (Developmental)**

Different frameworks have been proposed to explain consistency or change in personality. The “essentialist” perspective represents a school of thought that argues for the role of genes in the development of personality traits (McCrae & Costa, 1999). In particular, personality traits are relatively stable in adulthood and should not be altered by environmental factors. According to this view, personality traits are essentially “temperaments” and development is merely driven by genetic factors rather than influence of the environment or experiences (McCrae et al., 2000).

The “essentialist” approach of personality development has received some empirical support. In a large-scale ( $N = 7,363$ ) cross-sectional research, McCrae et al., (1999) examined age differences in personality across five cultures (Germany, Italy, Portugal, Croatia, and South

Korea). Results indicated an overall universal trend of age differences in personality, such that older cohorts scored higher on Agreeableness and Conscientiousness, and lower on Neuroticism, Extraversion, and Openness to Experience than the younger cohorts. Results suggested an increasing psychological maturity over the life course, indicated by people becoming more agreeable, more conscientious, and less neurotic as they age. Findings also revealed minimum cultural differences, which supported the “essentialist” approach of personality development that emphasizes the genetic influence on personality rather than environmental factors or experiences (McCrae & Costa, 1999; McCrae et al., 2000). However, due to the lack of direct assessment on environmental factors and the limitation in cross-sectional design, findings from this study were a mere reflection of cohort effects rather than true development in personality.

Different from the “essentialist” perspective, the person-environment interactional approach of personality development recognizes the active role people take in their environment, and emphasizes the interactive dynamics between the traits and environmental contexts in shaping personality changes (Fraley & Roberts, 2005). A meta-analysis compiling 92 longitudinal studies on mean-level change in personality traits concluded several patterns in personality development that supports the interactional theory (Roberts et al., 2006). First, as people age, there were linear increases in levels of Social Dominance (a facet of Extraversion), Conscientiousness, and Emotional Stability. Second, quadratic relationship between change and cohort was observed, such that the levels of Social Vitality (a facet of Extraversion) and Openness increased in adolescence and decreased in old age. Results indicated normative change in personality traits across the life course. While the most prominent changes were exhibited in young adulthood, changes in personality extended even beyond middle adulthood. Findings from this meta-analysis contradicted the “essentialist” view that pinpoints a specific age (e.g., 30 years

old) when personality stops developing (McCrae & Costa, 1999). Instead, findings were in line with the person-environment interactional view that recognize the critical period of young adulthood where the most substantial personality changes should take place (Roberts et al., 2006).

The development of personality has received less supported on the individual-level. For instance, Robins, Fraley, Roberts and Trzesniewski (2001) examined individual-level trait changes in a 4-year longitudinal study among a sample of college students ( $N = 270$ ). Results showed that the majority of the sample did not report meaningful changes in personality structures, indicating high levels of intraindividual consistency. The proportion of individuals who remained a relatively stable personality profile ranged from 73% (Neuroticism) to 91% (Openness to Experience). However, it was also revealed that a considerable proportion of the sample (64%) showed some mean-level changes on one or more of the FFM dimensions.

Although it was concluded that individuals' personality structure remains relatively stable (high intraindividual consistency), the changes in specific personality dimensions among the majority (64%) of the participants and why these individuals vary in personality changes are still worth examining. While the developmental theories may fail to explain the variability in personality changes, the answer can be found in the particular life experiences and events that drive people to change differently.

### **Personality Changes associated with Life Experiences and Events**

Empirical evidence has highlighted the critical transition from adolescence to young adulthood where the most significant changes in life take place (e.g., Roberts et al., 2006). One of the most comprehensive theoretical explanations for this phenomenon was summarized in Roberts, Wood, and Caspi's (2008) four mechanisms that describe personality changes through the influence of normative life experiences. The first mechanism involves the specific

environmental contingencies within social roles, such that different reward-and-punishment structures may shape personality changes differently. The second and third mechanisms were described as *watching ourselves* and *watching others*, referring to changes in personality originated from observing changes in our own behavior or modeling other people's behavior. The last mechanism was through listening to others and adopting feedbacks, which may also facilitate change in personality.

These four mechanisms have received empirical support from longitudinal studies. For instance, work experiences was shown to be associated with personality trait changes, such that individuals with higher work participation or advances in status also reported increases in domains of Conscientiousness (agency and norm adherence; Roberts, 1997; Roberts, Caspi, & Moffitt, 2001) and in the Social Dominance facet of Extraversion (self-confidence and assertiveness; Clausen & Gilens, 1990). Positive work experiences were found to correlate with decreases in domains of Neuroticism, such as anxiety and psychoneuroticism (Roberts & Chapman, 2000; Scollon & Diener, 2006). In addition, experience of military training was related with decreased level of Agreeableness (Jackson, Thoemmes, Jonkmann, Lütke, & Trautwein, 2012). Experiences from social relationships can also contribute to change in personality traits, such that relationship satisfaction was linked to increases in Emotional Stability and Conscientiousness among women (e.g., Roberts & Chapman, 2000; Robins, Caspi, & Moffitt, 2002; Scollon & Diener, 2006), and first time in a serious partner relationship was associated with increases in Extraversion and Conscientiousness, as well as decreases in Neuroticism (e.g., Lehnart, Neyer, & Eccles, 2010; Neyer & Lehnart, 2007; however, see Asendorpf & Wilpers, 1998).

In addition to the impact of normative life experiences, argument has been made that major non-normative life events could also facilitate personality trait changes (e.g., Lockenhoff, Terracciano, Patriciu, Eaton, & Costa, 2009; Specht, Egloff, & Schmukle, 2011; Vaidya, Gray, Haig, & Watson, 2002). For instance, an 8-year longitudinal study revealed that individuals undergone an extremely adverse life events (25% of the total sample,  $N = 458$ ) experienced increases in Neuroticism, as well as decreases in Openness to Experiences and the Compliance facet of Agreeableness (Lockenhoff et al., 2009).

The relationship between major life events and personality has been theorized as interactive. On the one hand, *selection effects* posit that personality traits predict life events, such that people with different personality traits would select themselves into different events or be selected by others into different situations (Headey & Wearing, 1989). On the other hand, *socialization effects* refer to the influence of life events on personality traits, such that personality changes are reactions to these events (Roberts & Mroczek, 2008). Longitudinal studies have supported both effects (e.g., Specht et al., 2011; Vaidya et al., 2002). For instance, in a two-wave longitudinal study, selection effects were confirmed by showing that college students who scored higher on initial levels of Extraversion, Agreeableness, and Conscientiousness were more likely to experience positive events later on, whereas negative events were predicted by lower initial levels of Agreeableness and Conscientiousness, as well as higher initial levels of Neuroticism. Socialization effects were also supported, where significant correlations existed between positive events (at Time 1) and increases in Extraversion, and between negative events (at Time 1) and increases in Neuroticism over time (Vaidya et al., 2002). Similar patterns of results were also shown in a 4-year longitudinal study (Ludtke et al., 2011). Comparing samples of young adults who followed different career paths, initial levels of personality traits had a significant impact on

career choices (i.e., attending college or vocational training), while experiences and events in different careers also predicted changes in personality traits among these individuals. Therefore, it can be concluded that personality traits predict as well as respond to life events and experiences.

### **Personality Changes Predicting Outcomes**

Personality can be used to predict outcomes in various domains in life. For instance, Conscientiousness has been shown to predict work-related outcomes (e.g., job satisfaction, income, and occupational status; Judge, Higgins, Thoresen, & Barrick, 1999) and health outcomes (e.g., diabetes, hypertension, stroke, mental illnesses, and mortality; Bogg & Roberts, 2004). A number of studies have also demonstrated the linkage between Neuroticism and various health outcomes (e.g., mortality, hypertension, obesity, and metabolic syndrome; Hampson & Friedman, 2008; Mroczek, Spiro, & Turiano, 2009; Spiro, Aldwin, Ward, & Mroczek, 1995).

Building upon the empirical findings on personality and its predictive value, researchers have explored the relationship between personality changes and various outcomes. A limited number of studies demonstrated the role of personality changes in predicting outcomes above and beyond personality traits. For instance, Mroczek and Spiro (2007) found that mortality among aging men was predicted by both high initial levels and increases in Neuroticism ( $N = 1,663$ ). In a sample of children ( $N = 1,075$ , 1<sup>st</sup> – 12<sup>th</sup> grade), Hampson, Tildesley, Andrews, Luyckx, and Mroczek (2010) found that both the level and change in Hostility (a domain of Neuroticism) predicted substance use, such that high initial levels of Hostility and increasing Hostility over time both predicted higher levels in alcohol and marijuana consumptions assessed at a later time point. Similarly, Siegler and colleagues (2003) showed that gains in hostility from college to midlife was linked to a wide range of negative outcomes, such as social isolation,

obesity, lower income (only for women), as well as negative changes in economic and work life, whereas declines in hostility were related to reduced risks in these outcomes. Despite the contributions from previous research, it is clear that more research is needed to further investigate personality change and its impact on outcomes in various aspects of life.

In sum, personality can change throughout life course, and such changes can provide valuable information in understanding and predicting important life outcomes. At the same time, personality changes may occur in the workplace as well, and it is meaningful to examine personality change within the work context. Based on the variability of behaviors across contexts and the proximity of the work context to one's work personality, work-contextualized personality can be a better candidate than global personality traits to investigate change in personality in the work context.

### **Contextualized Personality**

Personality can be a valuable predictor for a multitude of work-related outcomes in I/O research, such as job performance (e.g., Barrick & Mount, 1991), job satisfaction (e.g., Judge et al., 2002), organizational citizenship behavior (e.g., Chiaburu et al., 2011), burnout (e.g., Alarcon et al., 2009), and leadership (e.g., Bono & Judge, 2004). However, the validities of the FFM in predicting workplace outcomes still show some room for improvement. It has been argued that the variability of behavior across situations may explain the rather modest prediction made from global personality (Mischel, 1968). A potential solution, proposed by I/O psychologists, is applying a *frame-of-reference* to the personality scales in an effort to eliminate the uncertainty in context. In this section, I will provide a brief discussion on the rationale behind contextualized personality measures, the *frame-of-reference* effects, as well as the validity of contextualized personality scales.

## Why Contextualize Personality Measures

Despite of the popularity of the FFM, criticism has been made that trait psychologists, in most cases, ignore the expression of personality traits in different situations, which may account for the relatively modest validity of general personality traits (Mischel, 1969). Mischel (1968, 1973) suggested that human behavior can be largely influenced by the environment, such that personality may fluctuate from one situation to another. Building on this notion, Wright and Mischel (1987) suggested that the consistency of personality may be contingent on situational conditions, referred to as *conditional dispositions*. This proposition challenged the traditional view that treats personality as a consistent property across all situations, and thus facilitated a series of studies on personality in contexts (e.g., Baird, Le, & Lucas, 2006; Donahue & Harary, 1998; Paulhus & Martin, 1988).

To bridge situations with corresponding behaviors, Mischel and Shoda (1995) introduced the “*if ... then ...*” contingencies that can be examined at the state level (e.g., Fleeson, 2001). Rather than describing behavior in a situation-free context (e.g., Person A tends to be extraverted), this approach states that *if* situation A occurs, *then* certain behavior will occur (e.g., If person A is in a social interaction, then he will be extraverted). Contextualized personality, as an alternative approach, is a compromise between global trait that aggregate across (i.e., ignore) all possible situations and specific “*if... then...*” contingencies that require assessment of all possible situations. In other words, contextualized personality can provide more details in the variation of behavior than global traits without delving into the details about every single situation.

“Contextualized trait” can be defined as “one’s typical way of thinking, feeling, and behaving in a particular context” (Heller, Ferris, Brown, & Watson, 2009). Among one of the

early studies providing empirical support for contextualized personality trait, Roberts and Donahue (1994) examined individuals' self-conceptions both in general and in terms of specific social roles. In a sample of 89 middle-aged women, it was shown that contextualized traits varied across different roles (e.g., as a worker or as a mother). In addition, role-specific traits had a significant advantage in predicting role-specific criteria in the corresponding context, whereas general traits yielded better prediction on general life outcomes. Such findings are in line with the *bandwidth-fidelity trade-off* phenomenon (Cronbach & Gleser, 1957), in which broad-band constructs sacrifice specificity for an advantage in predicting a broader scope of behaviors, while narrow-band constructs is limited in scope but can achieve higher accuracy in predictions. Since people typically possess multiple roles and our self-perceptions may vary across these roles, the use of contextualized traits was recommended when role-specific rather than general outcomes are the criteria of research (Roberts, 2007; Wood, 2007)

### **FOR, Contextualized Personality, and Validity Issues**

In a similar manner, I/O psychologists have proposed and examined the *frame-of-reference* (FOR) effects in various settings and organizations, which has been used to refer to the same measurement approach for contextualized personality. The idea of FOR is identical to the “self-conceptions” discussed in Roberts & Donahue (1994), such that FOR can refer to a specific context (e.g., at work) or social role (e.g., as a worker) in which people view themselves and how they behave. Therefore, in the subsequent session, I will be using contextualized personality and FOR interchangeably.

Among one of the first studies examining contextualized personality, Schmit, Ryan, Stierwalt, & Powell (1995) tested the effects of varying the specificity of the items (contextualized vs. no context) and the administration conditions (job-applicant instructions vs.

general instructions). As hypothesized, work-contextualized personality items and application instruction conditions yielded more positive answers on personality (i.e., more conscientious, extraverted, agreeable, and less neurotic) compared to non-contextualized items and general instruction conditions, respectively. It suggested that contextualization in either item specification or administration conditions would significantly influence how the questions are answered. Further examination revealed that a common context provided to participants may have reduced error variance and subsequently increased validity.

Extending the research by Schmit et al., (1995), Hunthausen, Truxillo, Bauer, and Hammer (2003) conducted a field study to examine the effects of common context on the validity of personality measures among a sample of customer service supervisors at a major U.S.-based airline ( $N = 206$ ). Consistent with previous findings, results showed a moderating effect of context, such that two of the dimensions in FFM (Extraversion and Openness to Experience) had higher criterion-related validities when a specific context (i.e., work context) was provided, even after controlling for cognitive ability. In a similar fashion, Bing and colleagues (2004) examined school-contextualized Conscientiousness among 342 undergraduate students using a within-person design. In line with the previous findings, results demonstrated higher criterion-related validities for contextualized personality scales compared to non-contextualized scales in both applicant (contextualized) and general instructions. Furthermore, contextualized Conscientiousness showed incremental validity above and beyond global Conscientiousness and cognitive ability (measured by ACT scores) in predicting college GPA. Taken together, field studies suggest that a corresponding context can significantly improve the criterion-related validity of personality inventories and provide incremental validity in predicting job- or school related outcomes.

In an effort to understand the mechanism of moderating effect of context, Robie et al. (2000) examined the psychometric properties of contextualized Revised NEO Personality Inventory (NEO PI-R). In a sample of 1,106 applicants for police officer positions, researchers tested the influence of differential contextualization on the psychometric properties of the Conscientiousness dimension. Results showed greater error variance on both the facet and the item levels when no common context was used. Thus, it was indicated the reduction in error variance may have contributed to the improvement in validity of contextualized personality inventories.

To further explain *why* contextualization of a personality inventory leads to better criterion-related validity, Lievens, De Corte, and Schollaert (2008) tested two competing hypothesis in a between-subjects ( $N = 337$ ) and a within-subject ( $N = 105$ ) studies. Results fully supported the notion that the improvement in reliability was contributed by a common context reducing within-person inconsistency, instead of between-person variability. In addition, increase in validity was only shown when the contextualization corresponds to the criterion being assessed (i.e., school contextualized personality corresponded with school performance).

In sum, contextualized personality has been shown to provide incremental validity above and beyond general personality in predicting outcomes within the corresponding context. Given the focus of the current study on cross-cultural adjustment in a particular context (i.e., school context), it is expected that contextualized personality measures will show incremental validity above global measures.

### **Contextualized Personality Changes Predicting Outcomes**

As discussed earlier, personality changes can be used to predict various life outcomes. However, I/O psychologists have yet to fully recognize the value of personality changes in

making job-related predictions. Given the proximity of contextualized personality, I intend to bridge the two areas of research and examine contextualized personality changes and their relationship to various outcomes. There are two major reasons for the use of this particular approach.

First, personality changes may be better captured in particular contexts. From a personality development perspective, evidence has supported the interaction between traits and contexts in shaping personality changes (Fraley & Roberts, 2005). Given the dynamics between the person and the environment, it is important to consider the corresponding context in which personality changes may take place. From another point of view, life experiences and events can also lead to subsequent personality changes. For instance, Ludtke and colleagues (2011) found that different life paths predicted different changes in personality, such that individuals on a vocational career path had higher increases in Conscientiousness and lower increases in Agreeableness than their counterparts who chose to pursue college degrees. In such cases, differences in contexts (vocation vs. school) may provide different cues that facilitate changes in personality. Therefore, as Lewis (1999) argued, the best way to study personality changes is to examine behavior in context.

Second, the contextualized personality changes may provide better prediction than global personality changes in the corresponding context. Bing et al. (2004) argued that the specificity of the reference point may account for the incremental validities of contextualized personality traits over global traits. Similarly, the validity of personality changes in predicting outcomes (in a particular context) may be improved by applying a specific context or FOR that respond with the criteria. Namely, specification of the context (e.g., school) may yield better and more accurate predictions in context-related outcomes (e.g., school performance) due to the proximity of the

predictors (e.g., school contextualized Contentiousness). Therefore, it is reasonable to expect that school contextualized personality changes may show an incremental validity over global personality changes in predicting school-related outcomes.

In order to examine contextualized personality changes and their relationship with various outcomes, choosing the context can be critical. Although research has shown that personality can change among average people, such changes may be hard to detect in a short timeframe. For that reason, I decide to take on a particular context, cross-cultural adjustment, in an effort to capture and investigate change in contextualized personality in a limited timeframe. In a cross-cultural setting, new experiences, events, and cultural influence that expatriates encounter may trigger personality to change as they adapt to the new culture. At the same time, potential personality changes may also predict their adjustment in the new cultural environment.

### **Cross-cultural Adjustment and Personality**

The trend of globalization has driven a growing body of research on cross-cultural adjustment in the I/O literature. In particular, researchers have investigated factors that can predict or determine the effectiveness of adjustment, among which are personality traits (e.g., Peltokorpi, 2008; Sri Ramaluet al., 2010; Swagler & Jome, 2005). Building on the previous research, I aim to demonstrate changes in contextualized personality and link these changes to cross-cultural adjustment outcomes. In the following section, I will discuss the overall importance of cross-cultural adjustment in the cross-cultural adjustment literature and the use of personality as predictors for cross-cultural adjustment outcomes.

### **Overall Importance of Cross-cultural Adjustment**

The use of expatriates has been utilized as a strategy for international organizations to expand business in the global market. The 2012 Global Relocation Trends Survey showed that

54% ( $N = 123$ ) of the international corporations have used expatriates in the past year (Brookfield Global Relocation Services, 2012). Expatriates can make substantial contributions to their companies in marketing, international partnerships development, and corporate culture advertisement (Brown, 1994; Klaus, 1995; Solomon, 1994). However, a considerable portion of the expatriate population failed to succeed in foreign assignments as anticipated (Caligiuri, 1997). Previous research has contributed such fails to inadequate expatriate selection procedure (Black & Gregersen, 1999), dissatisfaction of the expatriate's family (Naumann, 1992; Anderson 2005), and difficulty in adjusting to the new environment (Anderson, 2005). Among these factors, cross-cultural adjustment is a crucial contributor to expatriate success, while inability to adjust is linked to expatriate's early return and inadequate performance (Anderson, 2005; Naumann 1992; Shaffer, Harrison, & Gilley 1999).

### **Personality Traits as Predictors of Cross-cultural Adjustment Outcomes**

Since the 1960s, there has been a growing interest in exploring individual characteristics to predict cross-cultural adjustment (Arthur & Bennett, 1995; Mischel, 1965; Ones & Viswesvaran, 1999). Dispositional traits (e.g., personality traits), characteristic adaptations (e.g., values and beliefs), and specific behavioral competencies or qualities are among the most identified categories in predicting cross-cultural adjustment outcomes (Shaffer, Harrison, Gregersen, Black, & Ferzandi, 2006).

Despite the linkages shown between personality traits and expatriates' success, the specific pattern of predictions that personality can make on adjustment outcomes vary across cultures. For instance, Swagler and Jome (2005) demonstrated that high levels of Agreeableness and Conscientiousness, as well as low levels of Neuroticism, were linked to better psychological adjustment among American Sojourners in Taiwan. In addition, sociocultural adjustment was

predicted by high levels of Extraversion. Similar results were shown by Sri Ramalu et al., (2010), where high levels of Agreeableness and Extraversion were associated with better general cross-cultural adjustment among a diverse sample of expatriates in Malaysia, while greater Conscientiousness and Openness to Experience were linked to better work adjustment. In addition, Peltokorpi (2008) revealed that Emotional Stability was related to better adjustment in both non-work related (interaction and general living) and work related adjustment among expatriates from 21 countries in Japan. However, contradicting some of the aforementioned findings, Shaffer et al. (2006) showed that Agreeableness did not predict performance in a diverse sample of expatriates.

Variation in the personality-adjustment relationships across cultures may indicate cultural differences in evaluating and appreciating different types of personality. For instance, being agreeable may be more accepted and beneficial in one culture (e.g., Malaysia; Sri Ramalu et al., 2010) than others (e.g., Shaffer et al., 2006). Likewise, an extraverted individual may be better received in one culture and not so appreciated in another (Shaffer et al., 2006). Although some personality characteristics, such as Conscientiousness, have consistently been shown to predict expatriates' success across cultures (Ones & Viswesvaran, 1999), the specific cultural context should still be taken into consideration when studying personality and cross-cultural adjustment, given that cultures vary in viewing and evaluating personality.

### **Contextualized Extraversion and Cross-cultural Adjustment**

So far, I have presented that: (a) personality traits can change over the life course, especially during the transition from adolescence to young adulthood, (b) personality changes can predict various life outcomes, (c) the use of contextualized personality usually results in a better prediction of outcomes within the corresponding context than global personality, and (d)

personality can be used to predict cross-cultural adjustment. Building upon the previous discussion, it can be concluded that the proximity of contextualized personality makes it a good candidate to examine personality changes and their relationship to various cross-cultural adjustment outcomes.

In finding a good lens to examine contextualized personality changes in the U.S., I choose to focus on the Extraversion dimension in FFM in the cross-cultural adjustment process. Although it is possible that the other four dimensions (Openness to Experience, Conscientiousness, Agreeableness, and Neuroticism) may also change and influence adjustment outcomes, the important impact Extraversion has on social relationship and its distinct role in the American culture (e.g., McCrae & Terracciano, 2005) make it one of the most relevant traits in studying cross-cultural adjustment in the U.S. Therefore, the current study focuses on the role of contextualized Extraversion and its change on cross-cultural adjustment, while also exploring changes in the other four personality dimensions.

### **Extraversion and Adjustment**

Extraversion influences social relationship. Extraverts are characterized by being more outgoing, participative, and energetic in social gatherings (Costa & McCrae, 1992). Research has shown that extraverted individuals tend to engage in more social activities (e.g., Argyle & Lu, 1990; Asendorpf & Wilpers, 1998; however, see Pavot, Diener, & Fujita, 1990 for nonsignificant findings), grow a bigger social network (e.g., Asendorpf & Wilpers, 1998), and create a more positive social environment (e.g., Eaton & Funder, 2003) than the introverted ones. Not only are extraverts more sociable, they also enjoy social activities to a greater extent compared to introverts. Studies have shown that extraverted individuals tend to report higher intimacy, higher satisfaction, and less conflict in social interactions (e.g., Barrett & Pietromonaco, 1997; White,

Hendrick, & Hendrick, 2004), perceive a higher quality of their social relationships (e.g., Kalish & Robins, 2006), and view these relationships as more valuable (e.g., Berry, Willingham, & Thayer, 2000; Neyer & Asendorpf, 2001). Given its relevance in social interactions, Extraversion in a cross-cultural setting may help expatriates gain more interpersonal relationships, receive more social support, and have a higher satisfaction from interacting with others.

Aside from having more friends, extraverts also tend to be happier than introverts. The positive relationship between Extraversion and positive affect (PA) has been well established (Costa & McCrae, 1980; Lucas & Baird, 2004), with an average correlation around  $r = .40$  (Lucas & Fujita, 2000). It has been argued that extraverts are happier because they engage in more social interactions and also enjoy such activities more than introverts (Watson, 1988; Watson, Clark, McIntyre, & Hamaker, 1992). Findings from a meta-analysis also suggested that extraverted individuals tend to be happier ( $\rho = .57, k = 6, N = 829$ ) and more satisfied with life ( $\rho = .35, k = 35, N = 10,528$ ; Steel, Schmidt, & Shultz, 2008). Therefore, it is reasonable to suggest that Extraversion among expatriates may also predict happiness and satisfaction in general.

Yet another reason to emphasize the role of Extraversion in cross-cultural adjustment lies in America's overall "extraverted culture". Data has suggested that America has one of the highest average score on Extraversion in the world (McCrae & Terracciano, 2005). In addition, Extraversion has been shown to correlate with a number of culture-relevant variables, such as individualism (McCrae, 2004), democratic values, and low power distance (Smith, Dugan, & Trompenaars, 1996), all of which are characteristics of the American culture. Thus, based on the expectation of person-environment fit (Kristof-Brown & Guay, 2011), the Extraversion dimension of the FFM may be especially relevant in the adjustment process in the U.S. Therefore,

*Hypothesis 1: Global Extraversion will predict cross-cultural adjustment outcomes (i.e., cross-cultural adjustment, withdrawal cognitions, and school satisfaction).*

Given previous discussion on the advantages of contextualized personality in predicting context-related outcomes, I also expect that,

*Hypothesis 2: Contextualized Extraversion will predict cross-cultural adjustment outcomes (i.e., cross-cultural adjustment, withdrawal cognitions, and school satisfaction) above and beyond global Extraversion.*

### **Culture and Mean-level Changes in Contextualized Extraversion**

As social animals, one essential way for people to learn and adapt is through social interactions. However, cultural differences in thinking, communicating, and behaving may make it difficult for ideas to convey. Researchers have long been interested in the relationship between culture and personality. Cross-cultural studies have revealed that, even though there is within-culture variation in traits, meaningful mean differences in personality traits do exist across cultures (Church, 2010), and scores on personality traits tend to cluster among nations that are geographically close to each other (Schmitt, Allik, McCrae, & Benet-Martinez, 2007). Thus, it has been argued that culture may influence how personality traits are reinforced and expressed in different cultural contexts (Church, 2010).

Hong, Morris, Chiu, and Benet-Martínez (2000) revealed that bicultural individuals (i.e. people who internalize two or more cultures) engaged in “frame switching” when primed with different cultural contexts, where different cultural values were utilized in making judgments. The findings confirmed the dynamic constructivist view, which states that individuals access different cultural meaning systems depending on the contexts they are in. Even though it cannot be assumed that individuals switch personality depending on the cultural context, this experiment

does shed light on how cultural context can influence people's judgments and potentially behaviors.

Ramírez-Esparza, Gosling, Benet-Martinez, Potter and Pennebaker (2006) further examined the phenomenon of cultural frame switching. Specifically, the researchers suggested that different languages of the same personality test may prime the test takers to report different personalities. In the first study, mean-level differences in personality measures were tested between English-speakers in the U.S. and Spanish-speakers in Mexico. Results showed that English-speakers in the U.S. had higher levels of Extraversion, Agreeableness, Conscientiousness, and Openness to Experience, as well as lower levels of Neuroticism than Spanish-speakers in Mexico. In study 2, the effect of cultural frame switching was tested, showing that English-version of personality measures yielded higher levels of Extraversion, Agreeableness, Conscientiousness, and lower levels of Neuroticism than the Spanish-version scales among English-Spanish bilinguals. Ramirez-Esparza et al. (2006) argued that the differences in personality could be driven by specific personality facets associated with specific cultural values and attitudes. For instance, individualist cultures could be linked to assertiveness in Extraversion and achievement in Conscientiousness. Therefore, respondents primed to individualist cultures (with the English-version of the personality test) may tend to be more assertive and achievement-orientated than those primed to collectivistic cultures.

Based on the studies of cultural frame switching, it can be argued that cultural context can, to some extent, influence how personality is expressed. However, it is unknown if culture can lead to directional changes in personality traits. McCrae and Costa (2008) have suggested that, in order to examine cultural influence on personality, one should compare the personality profiles between an immigrant group and a local group, such that cultural influences are

indicated if the two profiles become more similar to each other over time. Based on this suggestion, I argue that the high standing of America on Extraversion (McCrae & Terracciano, 2005) may influence expatriates to show an overall increase in Extraversion (that approximates the average level in America) after living in the U.S.

Extraversion is a good candidate to study personality change associated with cross-cultural experience in the U.S. as a number of culture-relevant variables (e.g., cultural beliefs and values) commonly adopted in the American society have been shown to correlate with Extraversion. For instance, Smith et al., (1996) showed that being extraverted is related to having democratic values and low power distance. In another study, McCrae (2004) found a positive relationship between Extraversion and individualism. High level of Extraversion was also shown to highly correlate with self-expression (McCrae & Terracciano, 2005). Therefore, it was not surprising to see that Americans had one of the highest scores on Extraversion among 51 cultures (McCrae & Terracciano, 2005). The “Global Leadership and Organizational Behavior Effectiveness” (GLOBE) Project also revealed U.S.’s extremely high standing on both Assertiveness (a facet of Extraversion) practices and values among 61 societies (House, Hanges, Javidan, Dorfman, & Gupta, 2004). Thus, although variation exists within culture, an expatriate is still likely to find an average American person more extraverted than what he is used to in his own culture. Given the close association between Extraversion and the American culture, it is reasonable to argue for a directional change in Extraversion among expatriates who have lived in the U.S. society.

Predicting the timeframe for changes in Extraversion can be challenging, as the patterns of change can depend on a multitude of environmental and personal factors in the transition process. However, it has been argued that most changes in adaptation would occur in the early

stage of the cross-cultural experience (e.g., Ward, Okura, Kennedy, & Kojima, 1998). Oberg (1960) described the initial impact of a foreign culture as “culture shock” (p. 177), where expatriates may experience distress and withdrawal at first, followed by a period of adjustment and integration. Empirical evidence has demonstrated cross-cultural adjustment in early stage of cross-cultural experience. In a sample of Japanese students in New Zealand, Ward and colleagues (1998) demonstrated the greatest differences in both psychological (depression) and sociocultural (social difficulty) adjustment problems between initial assessment (upon arrival) and 4 months after arrival, while no significant differences in adjustment issues were shown across the subsequent time points (4, 6 and 12 months). Thus, it was concluded that the initial period of overseas experience can be critical in capturing meaningful changes among international students. Therefore,

*Hypothesis 3: Expatriates will show an increase in contextualized Extraversion over the initial period in the U.S after controlling for initial levels of contextualized Extraversion.*

### **Contextualized Extraversion Changes and Cross-cultural Adjustment**

Even though the American culture can have an overall impact on the mean-level of contextualized Extraversion among expatriates, it is reasonable to expect that people will vary in magnitude (i.e., the amount of change) or even directions (i.e., increase, decrease, or remain the same) of change. Previous research has suggested that the tendency/ability to elevate one's personality expressions when needed can be conceptualized as important individual difference variable that predicts desirable outcomes (e.g., Minbashian, Wood, & Beckmann, 2010). For instance, Minbashian et al. found that individuals tend to adjust their Conscientiousness in response to task demands (i.e., task difficulty and task urgency), which subsequently predicted adaptive performance. More importantly, individual differences in task-contingent

Conscientiousness represented stable differences between people and can be used to predict specific outcomes. In the current study, I argue that expatriates vary in their tendency and ability to adjust personality (e.g., Extraversion) in response to cross-cultural challenges, and such differences may, in part, determine the quality of cross-cultural adjustment. Therefore,

*Hypothesis 4: Expatriates will differ on changes in contextualized Extraversion.*

Cross-cultural adjustment encompasses adaptation in many aspects of life. For instance, it has been proposed that cross-cultural adjustment can be captured in three dimensions – general adjustment, interaction adjustment, and work adjustment (Black, 1988; Black & Stephens, 1989). Beyond subjective perception of adjustment, withdrawal cognitions and satisfaction can also be used as valuable indicators of adjustment outcomes. In the following sections, I will discuss the impact of Extraversion and its change on cross-cultural adjustment, withdrawal cognitions, and satisfaction.

***Cross-cultural Adjustment.*** How extraverted an expatriate is may, in part, determine how well he or she can adjust in a new cultural environment, especially in the U.S. When encountered with a new environment, Extraversion can be important for expatriates in initiating and maintaining interaction with others, thus helping the newcomers build a social network. Research has shown that extraverted individuals enjoy interacting with others (Costa & McCrae, 1992), which may play an important role in familiarizing expatriates with the local culture and customs (Leiba-O'Sullivan, 1999). Being extraverted may tend to be especially important in the U.S. given the cultural beliefs and attitudes towards Extraversion (McCrae & Terracciano, 2005).

Expatriates who tend to be extraverted may also be perceived as more similar to the native people in the U.S., and such similarity may lead to an advantage over introverts in the process of adaptation. In an experiment, Krebs (1975) showed that participants observing a

person in pleasure and pain showed more empathy (i.e., had greater psychophysiological reactions) and were more willing to offer help when the person was perceived as similar rather than different from themselves. It was therefore concluded that similarity may facilitate helping behavior, even at the unconscious level. Applying this argument to a social setting, it is reasonable to expect that an extraverted expatriate may receive more empathy and help from the local people due to the perceived similarity, and thus have better adjustment outcomes.

Recognizing the role of Extraversion in social interactions, previous research has examined and demonstrated the relationship between Extraversion and cross-cultural adjustment outcomes (e.g., Swagler & Jome, 2005). However, these studies have largely ignored the possibility that people may change in how extraverted they are due to cultural influences (discussed earlier). That is not to say that the previous conclusions were wrong – at any single point, a more extraverted individual may have better cross-cultural adjustment than an introverted one. However, as discussed earlier, introverted expatriates may become more extraverted as they live in the American society. Holding constant the initial level of Extraversion, the individuals who elevate their Extraversion may have better adjustment outcomes than those who remained introverted. Therefore:

*Hypothesis 5: The initial level of contextualized Extraversion will positively predict cross-cultural adjustment, such that expatriates with higher initial contextualized Extraversion will have better cross-cultural adjustment.*

*Hypothesis 6: Changes in contextualized Extraversion will positively predict expatriate adjustment, such that increases in contextualized Extraversion will be linked to better cross-cultural adjustment after controlling for initial levels of contextualized Extraversion.*

***Withdrawal Cognitions.*** Withdrawal cognitions refer to expatriates' tendency to prematurely quit their oversea assignments (Black & Gregersen, 1990; Takeuchi, Yun, & Tesluk, 2002; Shaffer et al., 2006). Due to the difficulty in obtaining the actual turnover data in organizational research, withdrawal cognitions have been used as valuable proxies for employees' tendency to refrain from a job or an organization culture (Shaffer & Harrison, 1998). In the expatriate literature, withdrawal cognitions can also be used as an indicator of failure to adjust. Anderson (1994) argued that adjusting and adapting to a new culture can present challenges to an expatriate's identity, and having difficulty in coping with these challenges can result in frustration, exhaustion, and withdrawal cognitions (Shaffer & Shoben, 1956). Eventually, these reactions are likely to lead to expatriates' early returns or long-term psychological distress (Church, 1982; Ward, Bochner, & Furnham, 2001).

Despite its value as an adjustment indicator, limited studies have examined the relationship between personality traits and withdrawal cognitions in the cross-cultural context. It has been shown, though, that Extraversion was negatively related to withdrawal cognitions among a sample of expatriates in the U.S. (Caligiuri, 2000). On the one hand, it can be argued that extraverted expatriates are more prone to establish relationships with both host nationals and other expatriates, which can help them in learning and adapting to the host culture more effectively and thus less likely to terminate their assignments prematurely. On the other hand, compared to introverts, expatriates who tend to be extraverted may find it easier to "fit in" the American culture (McCrae & Terracciano, 2005) and subsequently more likely to remain in their oversea assignments. Beyond the trait level of Extraversion, potential changes in Extraversion may also be linked to withdrawal cognitions, as those who become more extraverted overtime may have better adjustment outcomes and lower tendency to withdrawal. Therefore,

*Hypothesis 7: The initial level of contextualized Extraversion will negatively predict withdrawal cognitions, such that expatriates with higher initial contextualized Extraversion will have lower withdrawal cognitions.*

*Hypothesis 8: Changes in contextualized Extraversion will negatively predict withdrawal cognitions, such that increases in contextualized Extraversion will be linked to lower withdrawal cognitions after controlling for initial levels of contextualized Extraversion.*

**Satisfaction.** Job satisfaction has been one of the most widely researched variables in I/O psychology (Locke, 1976; Lounsbury, Saudargas, Gibson, & Leong, 2005). Previous research has established the relationships job satisfaction has with job performance (Iaffaldano & Muchinsky, 1985), organizational commitment (Schlesinger & Zornisky, 1991), and turnover (Carsten & Spector, 1987). Due to its importance to individuals as well as organizations, a great amount of research has been devoted to explore and examine the antecedents of job satisfaction.

As one of the FFM dimensions, Extraversion has been linked to job satisfaction (e.g., Judge et al., 2002). In a meta-analysis, Judge et al. showed a positive correlation between Extraversion and job satisfaction ( $\rho = .25$ ,  $k = 75$ ,  $N = 20,184$ ). One way to explain this association is through the robust relationship between Extraversion and PA (Costa & McCrae, 1980; Lucas & Baird, 2004; Watson et al., 1992). As discussed earlier, extraverts are prone to experience more positive emotions (Costa & McCrae, 1992), engages in more social interactions, and are more likely to find interpersonal relationship enjoyable and meaningful (Watson, 1988; Watson et al., 1992). At the same time, PA has been shown in a meta-analysis to correlate positively with job satisfaction ( $\rho = .49$ ,  $k = 15$ ,  $N = 3,326$ ; Connolly & Viswesvaran, 2000), indicating that individuals with higher PA are more likely to have higher job satisfaction. Therefore, it is reasonable to argue that extraverts also experience more positive emotions and

enjoy interpersonal relationships in the work setting, which could contribute to having higher job satisfaction.

In expatriates' adjustment to the U.S. culture, both contextualized Extraversion and potential changes in contextualized Extraversion are relevant to satisfaction within the context. Specifically, extraverted individuals are likely to be happier – they tend to make more friends, participate in more social activities, and are more likely to enjoy and find meanings in socializing with peers, all of which can lead to experiencing higher satisfaction with the overall experience. Therefore, it is reasonable to argue that contextualized Extraversion may positively predict satisfaction within the corresponding context.

Previous research has shown that personality (e.g., Extraversion) changes, especially during the transition from adolescence to adulthood (e.g., Roberts et al., 2006). In a longitudinal study, Vaidya and colleagues (2002) found that college students who experienced positive events early on were more likely to show an increase in Extraversion. As discussed earlier, cultural influence may also trigger changes in contextualized Extraversion among expatriates in the states. Therefore, some relatively introverted individuals may show an increase in Extraversion after attending college in the U.S., and such change may be linked to their satisfaction with school. Compared to those who remain introverted, individuals becoming more extraverted are likely to make more friends, receive more peer support, and more prone to enjoy the social aspect of school. Therefore,

*Hypothesis 9: The initial level of contextualized Extraversion will positively predict contextualized satisfaction, such that individuals high on contextualized Extraversion will have higher satisfaction within the corresponding context.*

*Hypothesis 10: Changes in contextualized Extraversion will also positively predict contextualized satisfaction, such that increases in contextualized Extraversion will be associated with higher satisfaction within the corresponding context after controlling for initial levels of contextualized Extraversion.*

### **Individual Differences in Contextualized Extraversion Changes**

A comprehensive understanding of personality changes warrants an examination of individual differences in changes, and more importantly, factors that drive people to change differently. In the current study, three variables (i.e., cultural flexibility, cross-cultural motivation, and social skill) are proposed to differentiate individuals in their personality changes. Specifically, these three variables represent important individual differences that can be used to explain the variability in contextualized Extraversion changes.

**Cultural Flexibility.** O’Sullivan (1999) has suggested dynamic competencies, such as cultural flexibility, are closely associated with adjustment in a new cultural environment. Specifically, cultural flexibility may, in part, determine whether expatriates can effectively adopt the socially accepted way of thinking and behaving in a new culture (Shaffer et al., 2006).

Cultural flexibility refers to the ability to enjoy experiences and activities in a new cultural environment that are distinct from those in home countries (Shaffer et al., 2006). In other words, a culturally flexible individual is able to cross different social boundaries between cultures. It has been shown that being culturally flexible is associated with higher self-esteem and self-confidence among expatriates (Mendenhall & Oddou, 1985). From a socioanalytic perspective (Hogan & Shelton, 1998), cultural flexibility enables an expatriate to respond and adapt to ambiguous situations more effectively. Specifically, individuals who are more culturally flexible tend to discover and accept meaning in the new cultural environment, which may

facilitate a smoother transition (Bell & Harrison, 1996). In addition, (low) cultural flexibility has been linked to ethnocentrism, defined as favoring one's own culture while holding negative or hostile views towards other cultures (Black, 1990). Individuals who are ethnocentric tend to show disapprovals toward behaviors of the local nationals (Florkowski & Fogel, 1999), which may greatly hinder their effectiveness in social interactions (Church, 1982; Stening, 1979). Research has shown a negative correlation between cultural flexibility and ethnocentrism (Shaffer et al., 2006), suggesting that individuals with high cultural flexibility are less likely to act in a disapproving or hostile manner in cross-cultural settings. Therefore, as expected, evidence has supported a positive relationship between cultural flexibility and cross-cultural adjustment (Shaffer et al., 2006). Among a diverse sample of expatriates, cultural flexibility positively predicted work and cultural adjustment. However, the underlying mechanism is still unknown. Namely, how cultural flexibility helps expatriates to adjust and adapt to a new culture is left to be examined. In the current study, I argue for the linkage between cultural flexibility and personality to be a potential explanation for the variation in adjustment outcomes. Specifically, cultural flexibility may explain, in part, the variation in Extraversion changes among expatriates in the U.S., which may then help to predict the variability in cross-cultural adjustment.

As discussed earlier, cultural flexibility can influence how individuals act in a foreign culture, such that people with high cultural flexibility are more likely to find foreign cultures more acceptable. Given that the U.S. is one of the most extraverted societies in the world, individuals with different levels of cultural flexibility may hold different views regarding the cultural difference in Extraversion. Specifically, expatriates with high cultural flexibility may find the extraverted culture in communicating and interacting acceptable and meaningful, and are

subsequently more likely to embrace this cultural difference and act accordingly. In contrast, expatriates with low cultural flexibility may perceive such cultural difference as less acceptable, and are thus less likely to modify their behaviors. In sum, cultural flexibility may predict how much expatriates change in contextualized Extraversion through its impact on people's tendency and ability to accept and adapt to cultural differences. Therefore,

*Hypothesis 11: Cultural flexibility will positively predict changes in contextualized Extraversion, such that individuals high on cultural flexibility will show greater increases in contextualized Extraversion than those low on cultural flexibility.*

**Cross-cultural Motivation.** Cross-cultural adjustment can be challenging. Thus, successful cross-cultural adjustment requires a certain level of motivation in learning and engaging in the new environment. Cross-cultural motivation (originally named as Motivational Cultural Intelligence) is defined as “the capability to direct attention and energy toward learning about and functioning in situations characterized by cultural differences” (Ang et al., 2007). It is one of the three dimensions in the Cultural Intelligence (CQ) framework that distinctly captures the motivational basis for cultural adaptation and adjustment, while the other two dimensions reflect the cognitive and behavioral capacity in acquiring cultural knowledge and behaving in a culturally appropriate manner (Earley & Ang, 2003).

A growing body of empirical evidence has shown the importance of cross-cultural motivation in cultural adjustment. In a sample of 157 global professionals, Templer, Tay, and Chandrasekar (2006) revealed positive relationships between cross-cultural motivation and general-, interaction-, as well as work adjustment. In a series of three studies, Ang et al., (2007) demonstrated that cross-cultural motivation positively predicted cultural adaptation (but not cultural judgment, decision making, or task performance). In another study, cross-cultural

motivation was shown to correlate with job performance, and such relationship was fully mediated by work adjustment (Chen, Kirkman, Kim, Farh, & Tangirala, 2010).

Even though all three dimensions of CQ can be associated with different aspects of cross-cultural adjustment (e.g., Chen et al., 2010), Chen, Liu, and Portnoy (2012) argued that cross-cultural motivation is “more fundamental than cognitive and behavioral CQ, which are likely to result from motivational CQ” (p. 94). Cross-cultural motivation captures two distinct yet related aspects – cross-cultural self-efficacy and cross-cultural intrinsic motivation (Ang et al., 2007; Chen et al., 2010). On the one hand, individuals with high cross-cultural motivation tend to be more self-efficacious in their adaptive capability. According to the theory of self-efficacy, individuals who believe in their capability tend direct more attention and effort in gathering information and developing strategies to meet the challenges (Bandura, 2002). Thus, in a cross-cultural setting, high motivation can enable expatriates to better channel their effort and knowledge into understanding the local culture and behave accordingly. On the other hand, cross-cultural motivation reflects higher intrinsic interests in being part of the cross-cultural experiences. Compared to those with little or no motivation, highly motivated individuals enjoy social interactions with people from other cultures, and are more likely to adjust behaviors to achieve smooth and successful encounters (Chen et al., 2010). In addition, high cross-cultural motivation enables individuals to better observe the communication styles of the local nationals and develop strategies to overcome the potential cultural barriers (Chen et al., 2012; Templer et al., 2006).

Individuals with high cross-cultural motivation will have higher capacity and motives in learning and monitoring behaviors in a foreign context, which may result in them acting more extraverted in the U.S. society. As described earlier, the U.S. is among the most extraverted

societies in the world, and expatriates coming from other cultures may encounter individuals that are more assertive, gregarious, and excitement-seeking than what they are used to seeing. When these differences emerge, high cross-cultural motivation can trigger self-efficacy and help channel attention and effort in learning and adapting to the differences. As a result, when interacting with a group of extraverts, expatriates with high cross-cultural motivation may be more likely develop strategies, such as acting more extraverted, in order to ensure smooth interactions and effective communication. In addition to being more self-efficacious, expatriates with high cross-cultural motivation also tend to show more intrinsic interests in learning and engaging in the cross-cultural experiences. Compared to people with low cross-cultural motivation, highly motivated individuals may be more likely to initiate interactions with the local people, learning more about the American culture, and be more motivated in adjusting behaviors (e.g., act more extraverted) in order to tackle the barriers in social interactions. Thus:

*Hypothesis 12: Cross-cultural motivation will positively predict changes in contextualized Extraversion, such that individuals high on cross-cultural motivation will show greater increases in contextualized Extraversion than those low on cross-cultural motivation.*

**Social Skill.** Adaptation to a new culture inevitably involves interacting with the local people. However, cultural differences in communication styles may pose a great amount of uncertainty for expatriates in these situations. According to the social comparison theory (Festinger, 1954), people tend to look for guidance from others when they are uncertain of the appropriateness of their own opinions or behavior. Empirical evidence has shown that people frequently modify their opinions and/or behavior to match those of their models' (e.g., Gerard & Orive, 1987; Goethals & Darley, 1977; Latane, 1966; Suls, Martin, & Wheeler, 2000). Such

mimicry and imitation facilitate learning and improve the quality of social interactions (e.g., Lakin, Jefferis, Cheng, & Chartrand, 2003). However, further investigation revealed that not all mimicry leads to positive outcomes – the extent to which mimicry results in positive judgments from third-party observers can largely depend on mimickers' competence in understanding when and how to mimic (Kavanagh, Suhler, Churchland, & Winkielman, 2011). In other words, the strategies and skills in behavior learning and modification can predict the effectiveness of social interactions. In a cross-cultural setting, expatriates may encounter situations where uncertainty prevails. In such cases, the social skill that enables individuals to effectively and appropriately interpret others and adapt behavior may be critical in achieving smooth and successful interactions.

The idea of social skill came from social intelligence, referring to the ability to understand others and act wisely in social interaction (Thorndike, 1920). Early theory on social intelligence led to a growing body of research on social skill and its impact on social interaction. It has been argued that, a person is determined to possess social skill if he knows how to behave in an appropriate and socially accepted manner (Meichenbaum, Butler, & Gruson, 1980), one of the potential reasons being that individuals with great social skill tend to be more sensitive and responsive to subtle social cues so that they can adjust behavior accordingly (Ferris, Witt, & Hochwarter, 2001).

Given the impact of social skill in interpersonal interactions, whether expatriates possess social skill may determine the extent to which they modify behaviors (e.g., how extraverted they behave) in a cross-cultural environment. When facing ambiguity and uncertainty in cross-cultural interactions, high social skill may enable expatriates to capture the subtle cues and act upon the social expectation. For instance, when encountered with local nationals in the U.S. who tend to

act extraverted, expatriates with high social skill may be more likely to detect the cue of “Extraversion” and adjust by acting in a similarly way (i.e., being warm, gregarious, and assertive). In contrast, expatriates low on social skill may not fully grasp the social expectation or have the ability to adjust effectively. As a result, they may stick the original style of communication (e.g., stay introverted) and not change their behaviors. Therefore,

*Hypothesis 13: Social skill will positively predict changes in contextualized Extraversion, such that individuals high on social skill will show a greater increase in contextualized Extraversion than those low on social skill.*

## CHAPTER 2

### Method

#### Participants

Participants for the current study consisted of undergraduate and graduate international students from sixteen universities in the U.S. To maximize the representativeness of the current sample, three methods were utilized for recruitment. First, an e-mail advertisement was sent to personnel in Office of International Students & Scholars for universities across the United States to solicit eligible international students. In order to reach out to universities across the United States with relatively large international student body, the names of the universities were obtained from 1) the list of National Universities with Most International Students on USNews (USNews, 2012), and 2) the list of Accredited Programs in Clinical Psychology on the official website of American Psychological Association (APA, 2012). Out of the one hundred and fifty-seven universities contacted, thirteen (8.28%) universities agreed to advertise the current survey student via Listserv or Newsletter, eighteen (11.46%) declined, and the rest (80.25%) did not respond. Second, twenty-seven universities who had a Facebook page and did not respond to the e-mail inquiry were contacted on Facebook, and two universities agreed to post a study advertisement on their official Facebook page. Third, undergraduate international students enrolled in a large urban university in the Midwestern U.S. were recruited via a psychology department-based online survey system.

A total number of 590 individuals were recruited via the three aforementioned methods and participated in the first wave in the current survey. Like all longitudinal studies (see the Procedure section below for details on the design of the survey), self-selection and attrition were anticipated. To minimize the potential bias that may stem from attrition, up to three reminder e-

mails were sent to each participant at each assessment. Out of the 590 participants at the first wave, 395 (66.95%) provided usable data on the second wave, and 327 (82.78%) participated in the third wave, and 289 (88.38%) provided answers on the last wave of data collection.

### **Procedure**

Acknowledging the limitation of cross-sectional designs in making predictive inferences, the present study adopted a longitudinal design to better capture the changes in contextualized personality and to make a stronger test for predictive values of such changes (Funder, 2008). Pinpointing the timeframe for longitudinal changes to occur can be challenging, as the patterns of change can depend on a multitude of environmental and personal factors in the transition process. However, it has been shown that most issues related to adaptation would occur in the early stage of the cross-cultural experience (Ward et al., 1998; Ying, 2005). Therefore, in the current study, cross-cultural adjustment was captured in the first 4 months (one academic semester) after international students' arrival in the states. Particularly, data was collected throughout the span of one school year, starting from the beginning of fall semester (i.e., Mid-August) and winter/spring semester (i.e., Mid-January).

Upon receiving informed consent, participants were asked to complete an online survey administered under the pretext of evaluating the quality of cross-cultural experience. Measures (T1: Within the first month after arriving in the U.S.) included global and contextualized personality, cultural flexibility, and social skill. Cultural distance and English proficiency were also included as potential control variables. Previous research has shown that although global and contextualized personality can be highly correlated, the two can be assessed at the same time without one influencing the other (Slatcher & Vazire, 2009). Two months (T2) and four months (T3) after the initial assessment, participants were contacted to complete another online survey

for contextualized personality, cross-cultural adjustment, withdrawal cognitions, and school performance (See Table 1 for the scheduled administration of all measures). Five months after the initial assessment, participants were asked to report their school performance (GPA) and withdrawal in a follow-up survey for exploratory purpose. Only participants who responded to the first three surveys were included in the final analysis. Participants who complete the study were either rewarded with extra course credit (for those recruited via the psychology department on-line survey system; N = 161 from the initial sample of 590 participants) or compensated a \$10 gift card and a chance to win a \$50 gift card based on random drawing (for those recruited via university Listserve and Facebook pages).

## **Measures**

### **Personality**

***Global Extraversion.*** Items on the global Extraversion scale were obtained from the Big Five Aspect Scales (BFAS; DeYoung, Quilty, & Peterson, 2007). The 20-item Extraversion factor has two aspects – Enthusiasm (i.e., the extent to which one is outgoing, friendly, and has positive emotion; 10 items) and Assertiveness (i.e., the extent to which one is confident, direct, and self-assured; 10 items). Participants were asked to rate how well each item accurately described themselves. Sample items include: “Make friends easily” (Enthusiasm) and “Take charge” (Assertiveness). All items were administered on a 7-point Likert scale, ranging from 1 (very inaccurate) to 7 (very accurate). Cronbach’s alpha of the two aspects were .71 (Enthusiasm) and .64 (Assertiveness), with a 2-factor combined reliability of .76.

***Contextualized Extraversion.*** The 20-item global Extraversion scale was contextualized by instructing each participant to reflect only on their behavior at school settings (see Bing et al., 2004; Schmit et al., 1995). All items were administered on a 7-point Likert scale, ranging from 1

(very inaccurate) to 7 (very accurate). Cronbach's alpha of the two aspects ranged from .74 to .78 (Enthusiasm) and from .66 to .70 (Assertiveness), with a combined reliability of the two factors ranging from .74 to .81 across the three waves.

### **Predictors**

***Cultural Flexibility.*** Cultural flexibility was assessed by the 6-item scale from Black, 1990). Sample questions include: "Foreign countries have interesting and fun activities which are not common in my native country." All items were administered on a 5-point Likert scale, ranging from 1 (strong disagree) to 5 (strongly agree). The scale had a Cronbach's alpha of .77.

***Cross-cultural Motivation.*** Ang et al.'s (2007) 5-item motivational cultural intelligence (CQ) scale was used to assess cross-cultural motivation (see Chen et al., 2010). A sample question is: "I enjoy interacting with people from different cultures". All items were administered on a 7-point Likert scale, ranging from 1 (strong disagree) to 7 (strongly agree). Cronbach's alpha of the scale was .82.

***Social Skill.*** Social skill was assessed by the 7-item scale from Ferris et al. (2001). Sample questions include: "In social situations, it is always clear to me exactly what to say and do". All items were administered on a 7-point Likert scale, ranging from 1 (strong disagree) to 5 (strongly agree). The scale had a Cronbach's alpha of .85.

### **Outcomes**

***Cross-cultural adjustment.*** Items of the cross-cultural adjustment scale were obtained from a 14-item three-dimensional instrument (general adjustment, interaction adjustment, and work adjustment; Black, 1988; Black & Stephens, 1989). All items were administered on a 7-point Likert scale, ranging from 1 (very unadjusted) to 7 (very adjusted). Cronbach's alpha of the overall measure was .90.

**Withdrawal Cognitions.** Withdrawal cognitions were measured based on Shaffer et al.'s (2006) 6-item scale (adapted from Hom & Griffeth, 1991). A sample question is "I plan to leave this school." All items were administered on a 5-point Likert scale, ranging from 1 (strong disagree) to 5 (strongly agree). The measure had a Cronbach's alpha of .97.

**School Satisfaction.** School satisfaction was assessed on Lounsbury et al.'s (2005) 7-item scale. A sample question is "How satisfied are you with how much you are leaning in school?" All items were administered on a 7-point Likert scale, ranging from 1 (very dissatisfied) to 7 (very satisfied). Cronbach's alpha was .83 for the scale.

### **Control Variables**

**Cultural Distance.** To calculate the cultural distance index, each country's bias-corrected practice scores (Hanges & Dickson, 2006) on the nine cultural dimensions developed in the GLOBE study (House et al., 2004) was used, which are Performance Orientation, Future Orientation, Gender Egalitarianism, Assertiveness, Institutional Collectivism, In-Group Collectivism, Power Distance, Humane Orientation, and Uncertainty Avoidance. Using the practice (vs. value) score from GLOBE cultural dimensions, Euclidean distance (the square root of the sum of the squared difference between the native country and the U.S. on each of the nine cultural dimensions) was calculated to represent cultural distance (Huang, Kossek, Piszczek, Ruderman, & Fleenor, 2011). Each participant was assigned with a cultural distance score based on his or her native country. Algebraically, the index is as follows:

$$CD_j = \sqrt{\sum_{i=1}^9 (I_{ij} - I_{iu})^2}$$

CD<sub>j</sub>: cultural distance of the *j*th country from the USA;

*I<sub>ij</sub>*: *i*th cultural dimension of the *j*th country;

*u*: the USA.

**English Proficiency.** English proficiency was assessed via TOEFL score. Participants were asked to report their scores on each section (reading, listening, speaking, and writing) of the TOEFL test. Average scores were used if the test was taken multiple times.

**Insufficient Effort Responding.** To ensure data quality, two measures of insufficient effort responding (IER; Huang, Curran, Keeney, Potoski, & DeShon, 2012) were used to assess and screen participants who did not fully attend to the survey instructions and/or items. First, I used three items from a validated IER scale (Huang, Bowling, & Liu, 2014) designed to detect IER in low-stakes survey context. The three items are counterfactual statements, such as “I have never used a computer,” where deviation from choosing the “correct” answers (i.e., disagreement) would indicate likelihood of IER behavior. The three items were scattered in the Mini-IPIP (see Exploratory Variables for details) and were administered on the same 5-point Likert scale, ranging from 1 (very inaccurate) to 5 (very accurate). Disagreement (i.e., Very Inaccurate and Inaccurate) was coded as attentive responding (1), whereas other response options (i.e., Neither Accurate nor Accurate, Accurate, and Very Accurate) were coded as IER (0). A mean scale score was calculated for each participant, and a cutoff of .5 (equivalent of missing more than one IER item) was determined for screening purpose. The second operationalization of IER used the response time approach, where an unrealistically short survey completion time was used to indicate IER. In the current survey, a different cut-off time was imposed on each time point, using a criterion of 2-3 seconds per item (see Huang et al., 2012): 4 minutes and 30 seconds for wave 1 (101 items), 1 minute and 30 seconds for wave 2 (40 items), and 3 minutes and 30 seconds for wave 3 (87 items). No cut-off was set for the last wave, which only contained two items (i.e., GPA and Withdrawal).

## **Exploratory Variables**

***Other Domains of Big Five Personality.*** Items on the other four domains of the Big Five Personality were obtained from the 20-Item Mini-IPIP (a short form of the 50-item International Personality Item Pool; Donnellan, Oswald, Baird, & Lucas, 2006). Sample items include: “Have a vivid imagination” (Intellect/Imagination); “Often forget to put things back in their proper place” (Conscientiousness; reverse scored); “Sympathize with others’ feelings” (Agreeableness); and “Am relaxed most of the time” (Neuroticism; reverse scored). All items were administered on a 5-point Likert scale, ranging from 1 (very inaccurate) to 5 (very accurate). Cronbach’s alphas of the four dimensions were: .34 to .49 for Extraversion, .51 to .54 for Agreeableness, .36 to .49 for Conscientiousness, and .48 to .54 for Neuroticism.

***Other Domains of Contextualized Personality.*** Items in the Mini-IPIP were contextualized by instructing each participant to reflect only to their behavior at school settings. All items were administered on a 5-point Likert scale, ranging from 1 (very inaccurate) to 5 (very accurate). Cronbach’s alphas of the four dimensions were: .32 to .57 for Extraversion, .48 to .65 for Agreeableness, .37 to .49 for Conscientiousness, and .42 to .54 for Neuroticism.

***School Performance.*** School performance was assessed by asking participants to report on T4 survey their GPA from the previous term.

***Withdrawal.*** I assessed withdrawal from school by asking participants if they had registered for classes at the fourth wave.

## **Statistical Analyses**

Prior to hypothesis testing, scale internal consistency and scale means were computed. Instead of using items, scale scores were used as indicators in analysis, primarily due to the modest sample size. To test Hypotheses 1 and 2, a hierarchical regression was conducted where

global Extraversion (T1) was entered in step 1 (H1) and contextualized Extraversion (T2) was entered in step 2 (H2), with cross-cultural adjustment, withdrawal cognitions, and school satisfaction entered as three separate DVs. Latent growth curves was used via structural equation modeling in Mplus 5.2 to assess and analyze initial status as well as changes in contextualized Extraversion (McArdle, 1989, 2005). Figure 1 illustrates a LGM for assessing individual change in Extraversion. Each of the observed indicators is linked to the underlying construct. Two latent factors were used for describing growth in Extraversion: the latent intercept factor represents the initial level of contextualized Extraversion (i.e., how extraverted an individual is in a school context upon first assessment) and the latent slope factor represents the rate of change in contextualized Extraversion (i.e., how an individual's contextualized Extraversion has changed across the span of the study; Kaplan, 2009; Kline, 2005; e.g., Chan & Schmitt, 2000). The LGM simultaneously tested Hypotheses 3 and 4 in capturing the mean-level change in contextualized Extraversion as well as the differences in rate of change. In addition, Hypotheses 5 through 10 were also tested in the LGM, where initial status as well as the slope of change in contextualized Extraversion were used to predict cross-cultural adjustment (H5 and H6), withdrawal cognitions (H7 and H8), and school satisfaction (H9 and H10). Last but not least, effects of cultural flexibility (H11), cross-cultural motivation (H12), and social skill (H13) on changes in contextualized Extraversion were tested via the LGM.

## CHAPTER 3

### Results

#### Data Screening

Prior to hypothesis testing, data were carefully screened, examined, and prepared through the following four procedures. First, item-level characteristics were examined for out-of-range data, normality (i.e., skewness and kurtosis) issues, and outliers, and no significant violations to normality were observed. Second, attrition in the current study was carefully examined.

Compared to participants who dropped out after the first or second wave of survey, those who completed the all three assessments reported lower initial levels of global extraversion ( $r = -.18$ ,  $p < .001$ ) and contextualized extraversion ( $r = -.13$ ,  $p < .001$ ), as well as higher levels of social skill ( $r = .10$ ,  $p < .001$ ).

Third, to ensure accuracy in estimating the intercepts and slopes in latent growth models, I deleted individuals who did not respond to all three measurement surveys. Finally, data were screened for IER using two criteria: scores on a 3-item IER scale ( $\alpha = .78$ ) and response time. Convergence of the two IER criteria was examined via correlation between the IER scale and log-transformed response time (due to non-normality),  $r = -.45$ ,  $p < .001$ , thus supporting the use of both criteria for detecting and screening for IER. Based on the criteria described earlier, participants failing more than one of the IER items as well as the minimum survey completion time were excluded from the analyses. Out of the 289 participants who provided usable data on the first three waves, 62 (21.45%) individuals were labeled as IER and were thus removed from further analyses, leaving the final sample consisting of 227 participants.

## Demographics

The final sample consisted of 227 participants (57% females, 43% males; average age = 23,  $SD = 4$ ). Participants in the current study reported coming from a diverse range of countries, with the top five being China (18%), Canada (15%), Australia (8%), Korea (7%), and Japan (6%). No information was collected regarding whether the respondent was an undergraduate or graduate student.

## Hypothesis Testing

Descriptive statistics and scale correlations can be seen in Table 2.

Hypothesis 1 stated that global Extraversion will predict cross-cultural adjustment outcomes (i.e., cross-cultural adjustment, withdrawal cognitions, and school satisfaction). Results from three separate regression analyses showed that Global Extraversion at Time 1 significantly predicted cross-cultural adjustment,  $b = .48$ ,  $S.E. = .08$ ,  $\beta = .39$ ,  $p < .001$ , and school satisfaction,  $b = .54$ ,  $S.E. = .08$ ,  $\beta = .42$ ,  $p < .001$ . Global Extraversion explained 15% and 18% of the variances in cross-cultural adjustment and school satisfaction, respectively. Although in the expected direction, Global Extraversion did not predict withdrawal cognitions,  $b = -.21$ ,  $S.E. = .21$ ,  $\beta = -.07$ ,  $p = .33$  (n.s.). Therefore, Hypothesis 1 was partially supported.

Hypothesis 2 pertained to the incremental validity of contextualized Extraversion above and beyond global Extraversion. Using hierarchical multiple regression, the three outcome variables (i.e., cross-cultural adjustment, withdrawal cognitions, and school satisfaction) were separately regressed onto global Extraversion (step 1) and contextualized Extraversion (step 2). Results revealed that contextualized Extraversion significantly predicted cross-cultural adjustment when controlling for global Extraversion,  $b = .31$ ,  $S.E. = .11$ ,  $\beta = .27$ ,  $p = .004$ , explaining 3% additional variance. However, contextualized Extraversion did not add any

significant incremental prediction for withdrawal cognitions ( $b = -.05$ ,  $S.E. = .30$ ,  $\beta = -.02$ ,  $\Delta r^2 = .00$ ,  $p = .88$ , n.s.) or school satisfaction ( $b = .07$ ,  $S.E. = .11$ ,  $\beta = .06$ ,  $\Delta r^2 = .00$ ,  $p = .52$ , n.s.), thus providing mixed results regarding Hypothesis 2.

Hypotheses 3 and 4 concerned the magnitude and variance in changes in contextualized Extraversion over the initial period in the U.S. The initial status and changes in contextualized Extraversion were analyzed via latent growth curves, where two latent factors (i.e., the latent intercept factor and the latent slope factor) were used for describing changes in contextualized Extraversion. Results indicated that expatriates did not experience significant mean-level increase in contextualized Extraversion ( $M_s = .00$ ,  $p = .82$ , n.s.) or vary in terms of the rate of change in contextualized Extraversion ( $\sigma_s^2 = .03$ ,  $p = .16$ , n.s.). Despite the lack of variance in slope, it has been suggested that it would still be meaningful to examine and interpret growth factors with theoretically related covariates added to the model, which will result in an increase in power (Muthén, 2014). Therefore, although Hypotheses 3 and 4 did not received empirical support, I proceeded to examine the following hypotheses using slopes as predictors for cross-cultural adjustment outcomes and as criterion for predictors of changes (i.e., cultural flexibility, cross-cultural motivation, and social skill).

Hypotheses 5 and 6 stated that the initial level (H5) and the changes (H6) in contextualized Extraversion will positively predict cross-cultural adjustment, such that expatriates with higher initial contextualized Extraversion and positive changes in Extraversion will have higher cross-cultural adjustment. Using latent growth model, I used initial status as well as the slope of change in contextualized Extraversion to predict cross-cultural adjustment. Results showed that cross-cultural adjustment was positively predicted by the initial level of contextualized Extraversion ( $b = .70$ ,  $S.E. = .14$ ,  $\beta = .47$ ,  $p < .001$ ), but not by the slope of

change ( $b = -1.22$ ,  $S.E. = 1.20$ ,  $\beta = -0.26$ ,  $p = .31$ , n.s.). Therefore, Hypothesis 5 was supported whereas Hypothesis 6 was not.

Hypotheses 7 and 8 pertained to the predictive validity of the initial level (H7) and the changes (H8) of contextualized Extraversion for withdrawal cognitions. When entered in a latent growth model, initial level of contextualized Extraversion, although in the expected direction, did not predict withdrawal cognitions ( $b = -0.48$ ,  $S.E. = .29$ ,  $\beta = -0.13$ ,  $p = .10$ , n.s.). In addition, slope of change in contextualized Extraversion also did not predict withdrawal cognitions ( $b = -2.00$ ,  $S.E. = 1.86$ ,  $\beta = -0.16$ ,  $p = .28$ , n.s.). Therefore, Hypotheses 7 and 8 were not supported.

Hypotheses 9 and 10 stated that the initial level and change in contextualized Extraversion will positively predict school satisfaction, such that individuals high on initial level of contextualized Extraversion and will have higher satisfaction within the corresponding context. Using latent growth model, I used initial status as well as the slope of change in contextualized Extraversion to predict school satisfaction. Results showed that school satisfaction was positively predicted by the initial level of contextualized Extraversion ( $b = .78$ ,  $S.E. = .20$ ,  $\beta = .49$ ,  $p < .001$ ), but not by the slope of change ( $b = -2.19$ ,  $S.E. = 3.38$ ,  $\beta = -0.34$ ,  $p = .52$ , n.s.). Therefore, Hypothesis 9 was supported whereas Hypothesis 10 was not.

Hypothesis 11 pertained to the predictive validity of cultural flexibility for changes in contextualized Extraversion, such that individuals high on cultural flexibility were expected to show greater increases in contextualized Extraversion than those low on cultural flexibility. Contradictory to the expectation, cultural flexibility *negatively* predicted the slopes of contextualized Extraversion,  $b = -0.08$ ,  $S.E. = .20$ ,  $\beta = -.34$ ,  $p < .001$ . Thus, results did not support Hypothesis 11.

Hypothesis 12 stated that cross-cultural motivation will positively predict changes in contextualized Extraversion, such that individuals high cross-cultural motivation were expected to show greater increases in contextualized Extraversion than those low on cross-cultural motivation. When entered in a latent growth model, cross-cultural motivation *negatively* predicted the slopes of contextualized Extraversion,  $b = -0.05$ ,  $S.E. = .02$ ,  $\beta = -.24$ ,  $p = .02$ . Thus, Hypothesis 12 was not supported.

Hypothesis 13 pertained to the effect of social skill on changes in contextualized Extraversion, such that individuals high on social skill were expected to show greater increases in contextualized Extraversion than those low on social skill. When entered in a latent growth model, social skill did not predict the slopes of contextualized Extraversion,  $b = -0.02$ ,  $S.E. = .02$ ,  $\beta = -.10$ ,  $p = .42$ , n.s. Thus, results did not support Hypothesis 13.

As mentioned earlier, cultural distance and English proficiency were measured as control variables in the current study. When controlling for cultural distance, results largely remained the same for all the hypotheses. Unfortunately, only a small subsample of participants (17.90%) reported scores regarding English proficiency. Therefore, English proficiency could not be used as a control variable for analyses.

### **Exploratory Analyses**

In the current study, I included other domains of contextualized personality (i.e., Intellect/Imagination, Conscientiousness, Agreeableness, and Neuroticism), school performance, and withdrawal as exploratory variables. Given the low reliability across all four domains of contextualized personality (i.e., .32 to .57 for Extraversion, .48 to .65 for Agreeableness, .37 to .49 for Conscientiousness, and .42 to .54 for Neuroticism), results using any of the contextualized personality scales from the Mini-IPIP could not be reliably interpreted. Therefore,

no additional analyses were conducted on the other domains of contextualized personality. In addition, missing data on school performance (38.62%) and withdrawal (34.01%) also deterred further investigation on these two variables.

Given that some of the original hypotheses were not fully supported, I conducted additional analyses in order to further explore and investigate the focal relationships amongst Extraversion, adjustment outcomes, and predictors of Extraversion. In the following sections, I present the results from additional exploratory analyses.

### *Aspects of Extraversion: Enthusiasm and Assertiveness*

The two aspects of contextualized Extraversion, namely Enthusiasm and Assertiveness, were separately examined regarding their changes (Hypotheses 3 and 4) as well as their effects on adjustment outcomes (Hypotheses 5 through 8). Results from latent growth models demonstrated significant variance in changes regarding contextualized Enthusiasm,  $\sigma_s^2 = .08$ ,  $p = .02$ , indicating that individuals varied in terms of the rate of change in contextualized Enthusiasm across the span of a semester. Further analyses showed that this variance can be predicted by cultural flexibility ( $b = -0.10$ , S.E. =  $.03$ ,  $\beta = -.28$ ,  $p = .002$ ), but not cross-cultural motivation ( $b = -0.05$ , S.E. =  $.03$ ,  $\beta = -.18$ ,  $p = .07$ , n.s.) or social skill ( $b = -0.00$ , S.E. =  $.03$ ,  $\beta = -.02$ ,  $p = .89$ , n.s.). Despite the significant variance, slopes of contextualized Enthusiasm failed to predict any outcomes of interest (i.e., cross-cultural adjustment, withdrawal cognitions, and school satisfaction). In addition, analyses on contextualized Assertiveness did not yield any additional significant findings beyond the results from hypothesis testing.

### *English vs. Non-English Speaking Countries*

In an exploratory fashion, I reexamined the hypotheses in two separate samples, namely individuals from English versus non-English speaking countries. Results did not suggest any significant difference between the two samples.

### ***Predictors of Changes in Contextualized Extraversion***

Contrary to what was expected (Hypotheses 11 and 12), cultural flexibility and cross-cultural motivation *negatively* predicted changes in contextualized Extraversion. Thus, further analysis was conducted as an attempt to elucidate such results. Using latent growth curves, I further included the intercept of contextualized Extraversion as a dependent variable and used cultural flexibility to predict both the intercept and slope of contextualized Extraversion. Results showed that cultural flexibility positively predicted the intercept of contextualized Extraversion ( $b = .36$ ,  $S.E. = .05$ ,  $\beta = .54$ ,  $p < .001$ ). In other words, individuals who are more culturally flexible also rated themselves significantly higher on contextualized Extraversion. This may provide a potential explanation for the negative effect of cultural flexibility on slopes of contextualized Extraversion ( $b = -0.08$ ,  $S.E. = .20$ ,  $\beta = -.34$ ,  $p < .001$ ) – individuals who were high on cultural flexibility were also high on contextualized Extraversion to begin with, which made them understandably less likely to become more extraverted in a fast rate throughout the course of the next few months. Additional analysis on cross-cultural motivation revealed similar patterns of results, such that cross-cultural motivation positively predicted the intercept of contextualized Extraversion ( $b = .33$ ,  $S.E. = .04$ ,  $\beta = .56$ ,  $p < .001$ ).

To uncover the mechanism of this unexpected pattern of findings and to examine whether the positive association between cultural flexibility/cross-cultural motivation and intercept of contextualized Extraversion is simply a ceiling effect, additional analyses were conducted to examine the potential difference in contextualized Extraversion changes among individuals who

are high versus low on cultural flexibility and cross-cultural motivation. Regarding cultural flexibility, results from latent growth models indicated that individuals relatively high on cultural flexibility (i.e., one standard deviation above the mean) experienced a trend of decrease in contextualized Extraversion, albeit non-significant,  $M_s = -.09$ ,  $p = .08$ , n.s.,  $N = 37$ , whereas those relatively low on cultural flexibility (i.e., one standard deviation below the mean) reported an increasing trend in contextualized Extraversion,  $M_s = .08$ ,  $p = .06$ , n.s.,  $N = 42$ . Despite the fact that the sample sizes for the two analyses were very small, which may have led to the non-significance in the estimates of slopes, the results demonstrate a promising pattern that can illuminate earlier finding regarding the negatively association between cultural flexibility and changes in contextualized Extraversion. That is, international students who are highly culturally flexible also tend to report higher contextualized Extraversion at arrival ( $r = .45$ ,  $p < .001$ ) and more likely to experience a decrease over the over the first semester. On the contrary, individuals who are culturally inflexible also tend to be introverted at the beginning but may experience an increase in contextualized Extraversion during the initial four months of their reallocation. Although cultural flexibility is likely to be inversely related to the changes of contextualized Extraversion, descriptive statistics indicated that individuals who are high cultural flexibility remain more extraverted (4.69 at T1 to 4.48 at T3) compared to those who are culturally inflexible (3.83 at T1 to 4.15 at T3), despite the changes. The same analyses pertaining to cross-cultural motivation did not reveal the same pattern. Specifically, individuals who were high or low on cross-cultural motivation did not differentiate in their change in contextualized Extraversion.

## CHAPTER 4

### Discussion

#### Summary of Findings

Despite the recent developments in personality changes and contextualized personality, it remained unexplored whether contextualized personality can change, and if so, if such a change can have predictive validity for outcomes. It was with this goal that I examined changes in contextualized personality and their impact on cross-cultural adjustment. In line with the previous findings (e.g., Hunthausen et al., 2003), the study demonstrated the incremental validity of contextualized Extraversion in predicting context-related outcomes (i.e., cross-cultural adjustment) above and beyond global Extraversion. Although no significant changes were revealed regarding contextualized Extraversion, some of the major individual characteristics (i.e., cultural flexibility and cross-cultural motivation) were shown to predict individual differences in the rate of contextualized Extraversion changes. A summary of results, including the hypotheses and their corresponding findings, can be found in Table 13.

Contrary to what was originally proposed, the variance in contextualized Extraversion changes was negatively (rather than positively) predicted by individual characteristics such as cultural flexibility and cross-cultural motivation. Although the results did not reveal any significant variance regarding changes in contextualized Extraversion, exploratory analyses provided additional information regarding the two aspects of Extraversion, namely Enthusiasm and Assertiveness, and their changes. With regard to contextualized Enthusiasm, results indicated that individuals varied in terms of the rate of change across the span of four months, and this variance can be negatively predicted by cultural flexibility. However, analysis on contextualized Assertiveness did not reveal a similar pattern. Based on the results, it is likely that

Enthusiasm is the more malleable aspect of Extraversion in the current context, such that the extent to which an individual is keen to the external world may be shaped by the environment that one is in. On the other hand, the Assertiveness aspect, reflecting how self-assured, aggressive, and dogmatic an individual is, may be more stable in a cross-cultural context.

Although not statistically significant, additional analyses may indicate that individuals who are highly culturally flexible may indeed experience diminished contextualized Extraversion, whereas culturally inflexible individuals may experience an elevated sense of contextualized Extraversion. Note that despite of the changes, people who were culturally flexible remained to have higher levels of contextualized Extraversion throughout the acculturation process than individuals who were relatively less culturally flexible.

Taken together, the current study makes a number of implications and contributions to I/O research and practice in related areas.

### **Change in Personality**

Bridging recent developments in personality change and personality contextualization, the current study is the first attempt in the literature to capture directional changes in contextualized Extraversion among individuals who are new in a foreign context and used them to predict cross-cultural adjustment beyond the initial trait level. Exploratory analyses revealed individual differences in the rate of change regarding Enthusiasm, an aspect of contextualized Extraversion. Particularly, individual characteristics, such as cultural flexibility and cross-cultural motivation, were found to play a major role in shaping the changes in contextualized Extraversion. In viewing the cross-cultural experience as a major life event or experiences, the current findings suggest that contextualized personality may be adjusted as individuals become acquainted with a new environment. Despite U.S.'s high standing on Extraversion in the world

(McCrae & Terracciano, 2005), no mean-level increase was revealed, suggesting that individual differences may play a more important role in contributing to the variation in personality changes than environment does.

The current findings may not be interpreted as evidence to discount the impact of environment. In the current study, individual traits such as cultural flexibility and cross-cultural motivation should only be enacted in a foreign context to exert an influence on contextualized Extraversion. In other words, when situated in a domestic environment, individuals may not experience any changes in contextualized Extraversion due to inactivated cultural flexibility and cross-cultural motivation. To further examine this possibility, future research may utilize experimental designs where a cross-cultural context can be directly manipulated, accompanied by an assessment of individual trait enactment and changes.

### **Contextualizing Personality**

Besides examining personality changes, the current research also contributes to the literature by examining such changes in context. While past studies showed that contextualized personality can predict relevant outcomes (e.g., Hunthausen et al., 2003), none so far looked into the potential for contextualized personality to change, which has implications on the use of contextualized personality as predictors. Building on previous research on contextualized personality, this study further confirmed the proximity of contextualized personality in predicting outcomes above and beyond global traits. Given the significant variance in contextualized Enthusiasm changes, future research should examine the relationship between contextualized personality changes and a broad set of outcomes, such as team performance and leadership effectiveness.

## **Personality and Cross-cultural Adjustment**

Given the mixed findings regarding the impact of personality on cross-cultural adjustment in different cultures, the current study focused on Extraversion, a personality trait that is believed to be relevant and important in the U.S. culture. In line with some of the existing literature (e.g., Sri Ramalu et al., 2010; Swagler & Jome, 2005), findings from the current study highlight the important role of Extraversion in assisting expatriates to adjust in a new, cross-cultural environment.

Although Extraversion was found to be associated with both cross-cultural adjustment and school satisfaction, it did not predict withdrawal cognitions. The failure to support this hypothesized effect may be attributed to other unmeasured variables that might be of greater importance in determining withdrawal from school among international students, such as funding, visa status, and family support. Thus, Extraversion might be more closely associated with the success rather than the failure of cross-cultural adjustment. To further investigate this hypothesis, researchers interested in cross-cultural adjustment should take a more holistic approach and monitor all aspects of an expatriate's experience to determine the relative importance of different predictors.

## **Practical Implications**

Despite the growing interest in studying cross-cultural adjustment, the current study is the first to successfully integrate the recent developments in personality research in a cross-cultural context. Based on the findings, the current research informs organizations to look beyond static global personality traits in selecting and evaluating expatriates. On the one hand, selection programs in the U.S. could incorporate extraversion as a selection criterion for expatriate workers. On the other hand, practitioners should recognize the malleability of personality,

especially under the influence of other individual characteristics, such as cultural flexibility. Based on that notion, organizations can develop training interventions that aim to elevate certain personality characteristics among expatriates based on the cultural context (e.g., act extraverted in the U.S.). When examining personality and its change among employees, organizations are also encouraged to take the particular context into consideration, given the advantage of contextualized personality over generalized personality in predicting context-related outcomes.

Yet another implication that stem from this study is the importance of using individual characteristics (i.e., cultural flexibility and cross-cultural motivation) to predict personality changes. Besides examining personality traits, organizations can also select expatriates based on (high) cultural flexibility and cross-cultural motivation. In doing so, the current study enables practitioners to recognize the potential in expatriates in adjusting in a new cultural environment.

### **Limitations**

Despite the contributions, this study inevitably suffers from some limitations. First, the sample of the current study may limit the generalizability of the findings. Specifically, the international student sample is likely to be an underrepresentation of the expatriate population and that cultural influence might be confounded with college experience. Although international students may share similar encounters and experiences with organizational expatriates in a foreign culture (e.g., cultural shock and adjustment), and that personality traits (e.g., Conscientiousness) have been shown to predict similar outcome variables such as work and school (e.g., job performance and school performance; Barrick & Mount, 1991; Bing et al., 2004), it is still unknown to what extent is personality driven by cultural influence or school experience, and whether findings from the current research can be fully replicated in

organizational settings. Therefore, researchers are encouraged to replicate this study using a more diverse sample (e.g., organizational expatriates).

Second, the current study was limited to cross-cultural adjustment in the U.S. culture. Due to differences in cultural values and beliefs, inferences made from this study cannot be directly applied to expatriates in other cultures. For instance, previous research has demonstrated differential relationships between personality traits and cross-cultural adjustment (e.g., Peltokorpi, 2008; Shaffer et al., 2006; Swagler & Jome, 2005). Therefore, researchers are encouraged to extend the current study and further examine the relationship between changes in different personality traits and adjustment in other cultures.

Third, despite the advantages that longitudinal design has over cross-sectional research, the timeframe (4 months) was relatively short compared to some of the other longitudinal studies in related areas (e.g., Lockenhoff et al., 2009; Ludtke et al., 2011; Ying, 2005). However, see Ward et al., 1998). Because of practical constraints, I could not measure respondents over extended period of time, which might have contributed to the failure to find mean level change in contextualized Extraversion. Future research should expand the timeframe and investigate long-term influence of personality changes on adjustment outcomes.

Fourth, in spite of my effort in motivating the participants to complete all assessments, attrition could not be avoided in the current study. Post-hoc analyses revealed that the participants in fact differed from the nonparticipants, such that individuals who completed all three assessments had lower initial levels of global Extraversion and higher initial levels of social skill. It is possible that self-selection and attrition may have restricted the generalizability of the current findings. Given the positive association between Extraversion and cross-cultural adjustment outcomes, nonparticipants may have been more adjusted to the new environment and

have higher cross-cultural adjustment and school satisfaction compared to the participants of this study. Future studies can address this potential issue by incorporating higher incentive to encourage participation and deter attrition. In addition, researchers can seek out to both participants and nonparticipants and collect qualitative data regarding their decision-making process.

### **Future Directions**

As a first attempt in the literature to examine changes in contextualized personality and their impact on cross-cultural adjustment, the current study leaves researchers with more questions than answers. Based on the findings, I recommend a few directions for future research.

1. What changes personality?

The first question that is yet to be comprehensively and systematically examined pertains to the factors that may contribute to personality changes in a cross-cultural context beyond the three individual characteristics (i.e., cultural flexibility, cross-cultural motivation, and social skills) in the current study. For instance, openness to experience may influence the extent to which one is susceptible to cultural influences and subsequently how he or she behaves in a cross-cultural context. Social desirability, the extent to which an individual is motivated to act in a desirable manner according to accepted social norms and standards, may shape how this person adjust behaviors when encountered with a new cultural environment. Demographic variables, such as age, may also play a role in whether and how much personality changes during one's adjustment in a new country.

While future studies should incorporate more individual characteristics that may predict personality changes, such influence needs to be examined in conjunction with environmental contexts. Although using the school context serves the purpose of the current study given its

proximity to the outcomes in interest (e.g., school satisfaction, withdrawal cognitions), it does not reflect the breadth or depth of the various nested environments that an expatriate may encounter on daily basis. Studying personality changes in different contexts (e.g., cultural, societal, work/school, and family) is important because it can 1) provide insight on whether expatriates' personality changes are limited to certain particular contexts (e.g., personality changes in social context but not in family context), 2) illuminate how the related environmental factors interact with individual characteristics to exert an impact on personality changes in a particular context, and 3) improve the predictive validity of the individual characteristics for the outcomes in interest.

Given that little research has been conducted so far to examine and compare personality changes among expatriates in different contexts, future research can assess contextualized personality longitudinally across different contexts via self-report by either adjusting the instructions to different contexts or by assessing personality in different contexts via experience sampling technique. Other-reports from individuals who observe and interact with the expatriate (e.g., classmates, spouse, and coworkers) can also provide useful information regarding how one's behaviors can change differentially across contexts. To improve internal validity, researchers can also create different environmental contexts in a lab setting and observe participants' change in behaviors.

## 2. When does personality change?

The second area that warrants further research investigation pertains to the timing of personality change. According to the phenomenon of cultural frame switching (Ramírez-Esparza et al., 2006), people may exhibit different behavioral patterns as soon as they are exposed to cues that are related to specific cultural values and attitudes (e.g., language). Hence, expatriates

should experience a “switch” in personality as soon as they enter a new cultural environment. Meanwhile, the theory of “culture shock” (Oberg, 1960) and subsequent research (e.g., Ward et al., 1998) hints that personality changes may take place in the initial period of overseas experience, rather than in the blink of an eye.

To capture when and how personality change takes place in a cross-cultural context, future research should expand the process of the longitudinal assessment to include a time point *before* one arrives in a new cultural environment and compare that with personality scores shortly after his or her arrival.

### 3. Selection effects vs. socialization effects

Despite the fact that personality and life experiences are interactive in nature, limited research has been conducted to study the two aspects in conjunction. As discussed earlier, the interplay of personality and life events can be described as selection effects and socialization effects. While research has been extensive on the selection effects (i.e., personality traits predict life events), the socialization effects (i.e., life events shape personality) have received less attention in the literature.

Extending longitudinal studies that have supported both the selection effects and the socialization effects (e.g., Specht et al., 2011; Vaidya et al., 2002), research on personality changes in a cross-cultural context should examine the possibility that one’s cross-cultural adjustment outcomes may influence his or her personality. For instance, an international student who is successfully adjusting to the American culture may also become more interested in reaching out to the local nationals, attending activities and events, and staying an active part of his or her surroundings, all of which indicate an increasing level of Extraversion. Future research can examine the impact of cross-cultural adjustment outcomes on personality changes, which

then should be extended to exploring the reciprocal relationship between personality and adjustment outcomes.

**Table 1***Schedule for Survey Administrations*

<b>T1 (1<sup>st</sup> week after arrival)</b>	<b>T2 (2 months after T1)</b>	<b>T3 (4 months after T1)</b>	<b>T4 (5 months after T1)</b>
Global Extraversion	Contextualized Extraversion	Contextualized Extraversion	GPA
Contextualized Extraversion	Contextualized Mini-IPIP	Cross-cultural Adjustment	Withdrawal
Cultural Flexibility		Withdrawal Cognitions	
Cross-cultural Motivation		Expected School Performance	
Social Skill		Contextualized Mini-IPIP	
English Proficiency			
Mini-IPIP			
Contextualized Mini-IPIP			

**Table 2***Descriptive Statistics and Intercorrelations for Study Variables*

Survey Scale	1	2	3	4	5	6	7	8	9	10
1 T1 Generalized Extraversion										
2 T1 Contextualized Extraversion	.77***									
3 T1 Cultural Flexibility	.45***	.48***								
4 T1 Cross-cultural Motivation	.49***	.45***	.82***							
5. T1 Social Skill	.34***	.26***	.65***	.67***						
6. T2 Contextualized Extraversion	.60**	.59***	.27***	.35***	.26***					
7 T3 Contextualized Extraversion	.57***	.57***	.27***	.34***	.24***	.72***				
8 T3 Cross-cultural adjustment	.39***	.41***	.63***	.66***	.59***	.34***	.26***			
9 T3 Withdrawal Cognitions	-.07	-.06	.40***	.35***	.54***	-.13	-.15*	.38***		
10 T3 School Satisfaction	.42***	.35***	.57***	.64***	.49***	.41***	.27***	.65***	.24***	
M	4.36	4.29	5.46	5.54	5.34	4.36	4.32	5.25	4.02	5.31
SD	0.63	0.69	0.83	0.90	0.89	0.62	0.60	0.77	1.98	0.81

Note. N = 227. \*  $p < .05$ ; \*\*  $p < .01$ ; \*\*\*  $p < .001$ .

**Table 3***Time 1 Global and Contextualized Extraversion Predicting Cross-cultural adjustment*

	B	SE	$\beta$	$\Delta R^2$	F
Step 1				0.15 <sup>***</sup>	40.47 <sup>***</sup>
Global Extraversion	0.48 <sup>***</sup>	0.08	0.39		
Step 2				0.03 <sup>**</sup>	25.06 <sup>***</sup>
Global Extraversion	0.22	0.12	0.18		
Contextualized Extraversion	0.31 <sup>**</sup>	0.11	0.27		

Note. N = 227. \*  $p < .05$ ; \*\*  $p < .01$ ; \*\*\*  $p < .001$ .

**Table 4***Time 1 Global and Contextualized Extraversion Predicting Withdrawal Cognitions*

	B	SE	$\beta$	$\Delta R^2$	F
Step 1				0.00	0.96
Global Extraversion	-0.21	0.21	-0.07		
Step 2				0.00	0.90
Global Extraversion	-0.17	0.33	-0.05		
Contextualized Extraversion	-0.05	0.30	-0.02		

Note. N = 227. \*  $p < .05$ ; \*\*  $p < .01$ ; \*\*\*  $p < .001$ .

**Table 5***Time 1 Global and Contextualized Extraversion Predicting School Satisfaction*

	B	SE	$\beta$	$\Delta R^2$	F
Step 1				0.18 <sup>***</sup>	48.44 <sup>***</sup>
Global Extraversion	0.54 <sup>***</sup>	0.08	0.42		
Step 2				0.00	24.36 <sup>***</sup>
Global Extraversion	0.48 <sup>***</sup>	0.12	0.37		
Contextualized Extraversion	0.07	0.11	0.06		

Note. N = 227. \*  $p < .05$ ; \*\*  $p < .01$ ; \*\*\*  $p < .001$ .

**Table 6*****Latent Growth Model for Contextualized Extraversion***

	Intercept		Slope		Model Fit				
	<i>M</i>	Variance	<i>M</i>	Variance	$\chi^2$	<i>df</i>	CFI	RMSEA	SRMR
Contextualized Extraversion	4.32***	0.27***	0.00	0.02	2.68	1	0.99	0.09	0.02

*Note.*  $N = 227$ . \*  $p < .05$ ; \*\*  $p < .01$ ; \*\*\*  $p < .001$ .

**Table 7*****Intercept and Slope of Contextualized Extraversion Predicting Cross-cultural adjustment***

	B	SE	$\beta$	$\chi^2$	<i>df</i>	CFI	RMSEA	SRMR
Intercept	0.70***	0.14	0.47	3.41	2	1.00	0.04	0.03
Slope	-1.22	1.20	-0.26					

*Note.* N = 227. \*  $p < .05$ ; \*\*  $p < .01$ ; \*\*\*  $p < .001$ .

**Table 8*****Intercept and Slope of Contextualized Extraversion Predicting Withdrawal Cognitions***

	B	SE	$\beta$	$\chi^2$	<i>df</i>	CFI	RMSEA	SRMR
Intercept	-0.48	0.29	-0.13	3.40	2	1.00	0.05	0.02
Slope	-2.00	1.86	-0.16					

*Note.* N = 227. \*  $p < .05$ ; \*\*  $p < .01$ ; \*\*\*  $p < .001$ .

**Table 9*****Intercept and Slope of Contextualized Extraversion Predicting School Satisfaction***

	B	SE	$\beta$	$\chi^2$	<i>df</i>	CFI	RMSEA	SRMR
Intercept	0.78***	0.20	0.49	6.05	2	0.99	0.09	0.04
Slope	-2.19	3.38	-0.34					

*Note.* N = 227. \*  $p < .05$ ; \*\*  $p < .01$ ; \*\*\*  $p < .001$ .

**Table 10*****Cultural Flexibility Predicting Changes in Contextualized Extraversion***

Predictor	Intercept			Slope			Model Fit				
	B	SE	$\beta$	B	SE	$\beta$	$\chi^2$	<i>df</i>	CFI	RMSEA	SRMR
Cultural Flexibility	0.36***	0.05	0.54	-0.08***	0.02	-0.34	9.95*	2	0.98	0.13	0.10

*Note.* N = 227. \*  $p < .05$ ; \*\*  $p < .01$ ; \*\*\*  $p < .001$ .

**Table 11*****Cross-cultural Motivation Predicting Changes in Contextualized Extraversion***

Predictor	Intercept			Slope			Model Fit				
	B	SE	$\beta$	B	SE	$\beta$	$\chi^2$	<i>df</i>	CFI	RMSEA	SRMR
Cross-cultural Motivation	0.33***	0.04	0.56	-0.05*	0.02	-0.24	4.62	2	0.99	0.08	0.06

*Note.* N = 227. \*  $p < .05$ ; \*\*  $p < .01$ ; \*\*\*  $p < .001$ .

**Table 12*****Social Skills Predicting Changes in Contextualized Extraversion***

Predictor	Intercept			Slope			Model Fit				
	B	SE	$\beta$	B	SE	$\beta$	$\chi^2$	<i>df</i>	CFI	RMSEA	SRMR
Social Skills	0.20***	0.05	0.34	-0.02	0.02	-0.10	2.68	2	1.00	0.04	0.02

*Note.* N = 227. \*  $p < .05$ ; \*\*  $p < .01$ ; \*\*\*  $p < .001$ .

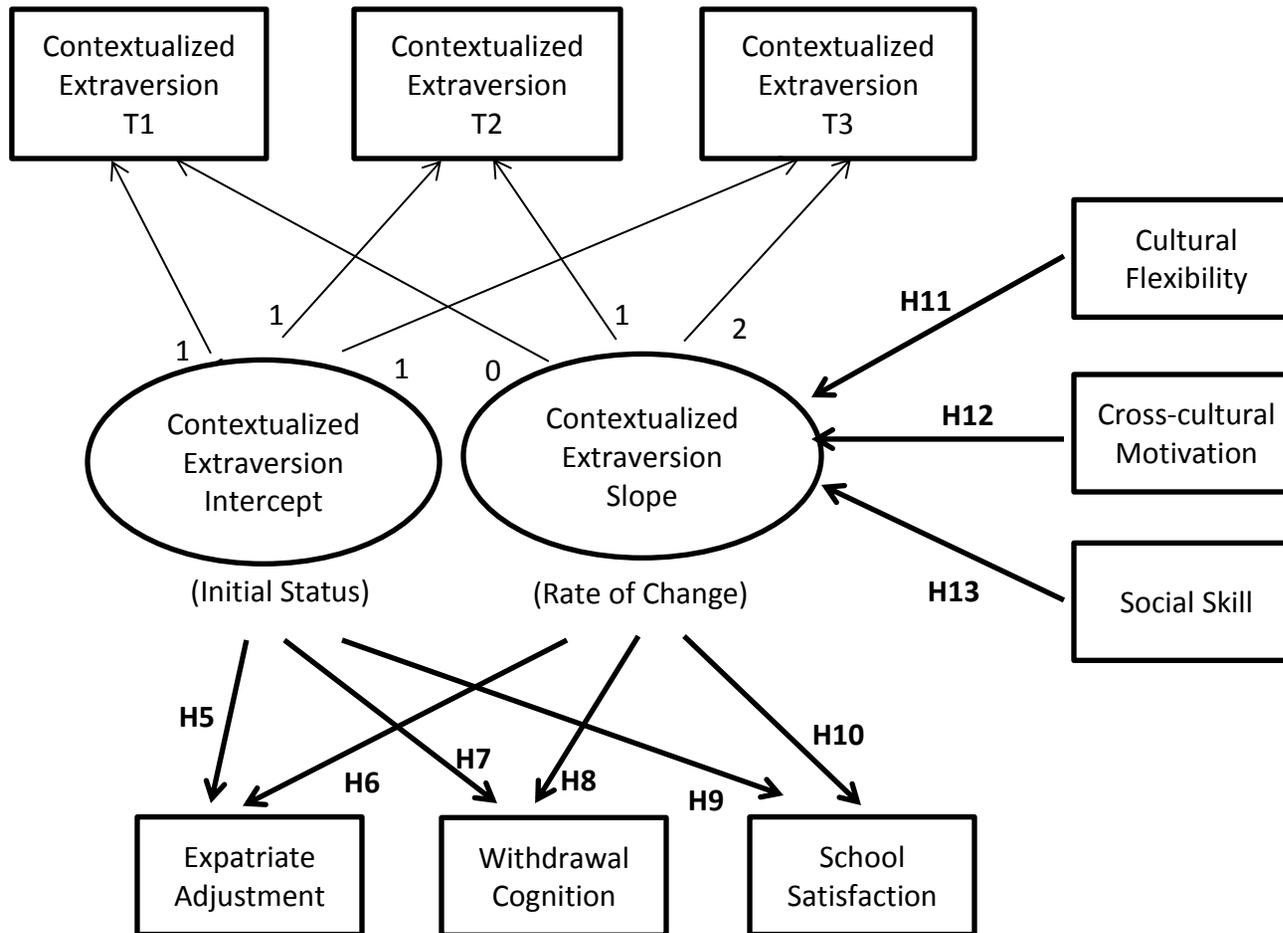
**Table 13***Summary of Findings*

Hypotheses	Results
<i>H 1</i> : Global Extraversion will predict cross-cultural adjustment outcomes (i.e., expatriate adjustment, withdrawal cognitions, and school satisfaction).	Supported for cross-cultural adjustment and school satisfaction
<i>H 2</i> : Contextualized Extraversion will predict cross-cultural adjustment outcomes (i.e., expatriate adjustment, withdrawal cognitions, and school satisfaction) above and beyond global Extraversion.	Supported for cross-cultural adjustment
<i>H 3</i> : Expatriates will show an increase in contextualized Extraversion over the initial period in the U.S after controlling for initial levels of contextualized Extraversion.	Not supported
<i>H 4</i> : Expatriates will differ on changes in contextualized Extraversion.	Not supported
<i>H 5</i> : The initial level of contextualized Extraversion will positively predict expatriate adjustment, such that expatriates with higher initial contextualized Extraversion will have higher expatriate adjustment.	Supported
<i>H 6</i> : Changes in contextualized Extraversion will positively predict expatriate adjustment, such that increases in contextualized Extraversion will be linked to higher expatriate adjustment after controlling for initial levels of contextualized Extraversion.	Not supported
<i>H 7</i> : The initial level of contextualized Extraversion will negatively predict withdrawal cognitions, such that expatriates with higher initial contextualized Extraversion will have lower withdrawal cognitions.	Not supported
<i>H 8</i> : Changes in contextualized Extraversion will negatively predict withdrawal cognitions, such that increases in contextualized Extraversion will be linked to lower withdrawal cognitions after controlling for initial levels of contextualized Extraversion.	Not supported
<i>H 9</i> : The initial level of contextualized Extraversion will positively predict contextualized satisfaction, such that individuals high on contextualized Extraversion will have higher satisfaction within the corresponding context.	Supported
<i>H 10</i> : Changes in contextualized Extraversion will also positively predict contextualized satisfaction, such that increases in contextualized Extraversion will be associated with higher satisfaction within the corresponding context after controlling for initial levels of contextualized Extraversion.	Not supported
<i>H 11</i> : Cultural flexibility will positively predict changes in contextualized Extraversion, such that individuals high on cultural flexibility will show greater increases in contextualized Extraversion than those low on cultural flexibility.	Not supported

<i>H 12</i> : Cross-cultural motivation will positively predict changes in contextualized Extraversion, such that individuals high on cross-cultural motivation will show greater increases in contextualized Extraversion than those low on cross-cultural motivation.	Not supported
<i>H 13</i> : Social skill will positively predict changes in contextualized Extraversion, such that individuals high on social skill will show a greater increase in contextualized Extraversion than those low on social skill.	Not supported

**Figure 1**

*The Model of Latent Growth Curve*



## APPENDIX A: MEASUREMENT SURVEY AT TIME 1

[Global Extraversion Measure]

Instruction: Think about yourself at in general. Rate the degree to which each of the following statements accurately describes your behavior across all life contexts.

### Response Options

- 1: Very Inaccurate
- 2: Moderately Inaccurate
- 3: Somewhat Inaccurate
- 4: Neither Inaccurate nor Accurate
- 5: Somewhat Accurate
- 6: Moderately Accurate
- 7: Very Accurate

1. **Make friends easily.**
2. **Warm up quickly to others.**
3. **Show my feelings when I'm happy.**
4. **Have a lot of fun.**
5. **Laugh a lot.**
6. **Am hard to get to know.**
7. **Keep others at a distance.**
8. **Reveal little about myself.**
9. **Rarely get caught up in the excitement.**
10. **Am not a very enthusiastic person.**
11. **Take charge.**
12. **Have a strong personality.**
13. **Know how to captivate people.**
14. **See myself as a good leader.**
15. **Can talk others into doing things.**
16. **Am the first to act.**
17. **Do not have an assertive personality.**
18. **Lack the talent for influencing people.**
19. **Wait for others to lead the way.**
20. **Hold back my opinions.**

[Contextualized Extraversion]

Instruction: Think about yourself at school. Rate the degree to which each of the following statements accurately describes your behavior at school.

### Response Options

- 1: Very Inaccurate
- 2: Moderately Inaccurate

- 3: Somewhat Inaccurate
- 4: Neither Inaccurate nor Accurate
- 5: Somewhat Accurate
- 6: Moderately Accurate
- 7: Very Accurate

1. **Make friends easily.**
2. **Warm up quickly to others.**
3. **Show my feelings when I'm happy.**
4. **Have a lot of fun.**
5. **Laugh a lot.**
6. **Am hard to get to know.**
7. **Keep others at a distance.**
8. **Reveal little about myself.**
9. **Rarely get caught up in the excitement.**
10. **Am not a very enthusiastic person.**
11. **Take charge.**
12. **Have a strong personality.**
13. **Know how to captivate people.**
14. **See myself as a good leader.**
15. **Can talk others into doing things.**
16. **Am the first to act.**
17. **Do not have an assertive personality.**
18. **Lack the talent for influencing people.**
19. **Wait for others to lead the way.**
20. **Hold back my opinions.**

[Cultural Flexibility]

Instruction: Think about yourself in general and rate the extent to which you would agree/disagree with the following statements.

### **Response Options**

- 1: Strongly Disagree
- 2: Moderately Disagree
- 3: Somewhat Disagree
- 4: Neither Disagree nor Agree
- 5: Somewhat Agree
- 6: Moderately Agree
- 7: Strongly Agree

1. **Most foreign countries have interesting and fun activities which are not common in my country.**
2. **Learning about other cultures is interesting and fun.**
3. **It is easy for me to learn to enjoy new activities.**

4. **It is easy for me to adapt to new ways of doing things.**
5. **Even though a foreign country might not have things I enjoy in my home country, it is easy for me to find new ones.**
6. **Because I find new activities to enjoy, being away from my home country does not make me homesick.**

[Cross-cultural Motivation]

Instruction: Read each statement and select the response that best describes your capabilities. Select the answer that BEST describes you as you really are.

**Response Options**

- 1: Strongly Disagree
- 2: Moderately Disagree
- 3: Somewhat Disagree
- 4: Neither Disagree nor Agree
- 5: Somewhat Agree
- 6: Moderately Agree
- 7: Strongly Agree

1. **I enjoy interacting with people from different cultures.**
2. **I am confident that I can socialize with locals in a culture that is unfamiliar to me.**
3. **I am sure I can deal with the stresses of adjusting to a culture that is new to me.**
4. **I enjoy living in cultures that are unfamiliar to me.**
5. **I am confident that I can get accustomed to the shopping conditions in a different culture.**

[Social Skill]

Instruction: Read each statement and select the response that best describes your capabilities. Select the answer that BEST describes you as you really are.

**Response Options**

- 1: Strongly Disagree
- 2: Moderately Disagree
- 3: Somewhat Disagree
- 4: Neither Disagree nor Agree
- 5: Somewhat Agree
- 6: Moderately Agree
- 7: Strongly Agree

1. **I find it easy to put myself in the position of others.**

2. I am keenly aware of how I am perceived by others.
3. In social situations, it is always clear to me exactly what to say and do.
4. I am particularly good at sensing the motivations and hidden agendas of others.
5. I am good at making myself visible with influential people in my organization.
6. I am good at reading others' body language.
7. I am able to adjust my behavior and become the type of person dictated by any situation.

[English Proficiency]

What was your TOEFL score? Please report scores on each of the following section (report highest scores if you have taken the TOEFL test multiple times):

Total Score \_\_\_\_\_ out of \_\_\_\_\_  
 Reading \_\_\_\_\_ out of \_\_\_\_\_  
 Speaking \_\_\_\_\_ out of \_\_\_\_\_  
 Writing \_\_\_\_\_ out of \_\_\_\_\_

[Mini-IPIP]

Instruction: Think about yourself at in general. Rate the degree to which each of the following statements accurately describes your behavior across all life contexts.

### Response Options

- 1: Very Inaccurate
- 2: Moderately Inaccurate
- 3: Somewhat Inaccurate
- 4: Neither Inaccurate nor Accurate
- 5: Somewhat Accurate
- 6: Moderately Accurate
- 7: Very Accurate

1. Sympathize with others' feelings.
2. Get chores done right away.
3. Have frequent mood swings.
4. Have a vivid imagination.
5. Am not interested in other people's problems.
6. Often forget to put things back in their proper place.
7. Am relaxed most of the time.
8. Am not interested in abstract ideas.
9. Feel others' emotions.
10. Like order.
11. Get upset easily.

- 12. Have difficulty understanding abstract ideas.**
- 13. Am not really interested in others.**
- 14. Make a mess of things.**
- 15. Seldom feel blue.**
- 16. Do not have a good imagination.**

[Contextualized Mini-IPIP]

Instruction: Think about yourself at school. Rate the degree to which each of the following statements accurately describes your behavior at school.

**Response Options**

- 1:** Very Inaccurate
- 2:** Moderately Inaccurate
- 3:** Somewhat Inaccurate
- 4:** Neither Inaccurate nor Accurate
- 5:** Somewhat Accurate
- 6:** Moderately Accurate
- 7:** Very Accurate

- 1. Sympathize with others' feelings.**
- 2. Get chores done right away.**
- 3. Have frequent mood swings.**
- 4. Have a vivid imagination.**
- 5. Am not interested in other people's problems.**
- 6. Often forget to put things back in their proper place.**
- 7. Am relaxed most of the time.**
- 8. Am not interested in abstract ideas.**
- 9. Feel others' emotions.**
- 10. Like order.**
- 11. Get upset easily.**
- 12. Have difficulty understanding abstract ideas.**
- 13. Am not really interested in others.**
- 14. Make a mess of things.**
- 15. Seldom feel blue.**
- 16. Do not have a good imagination.**

## APPENDIX B: MEASUREMENT SURVEY AT TIME 2

[Contextualized Extraversion]

Instruction: Think about yourself at school. Rate the degree to which each of the following statements accurately describes your behavior at school.

### Response Options

- 1: Very Inaccurate
- 2: Moderately Inaccurate
- 3: Somewhat Inaccurate
- 4: Neither Inaccurate nor Accurate
- 5: Somewhat Accurate
- 6: Moderately Accurate
- 7: Very Accurate

1. **Make friends easily.**
2. **Warm up quickly to others.**
3. **Show my feelings when I'm happy.**
4. **Have a lot of fun.**
5. **Laugh a lot.**
6. **Am hard to get to know.**
7. **Keep others at a distance.**
8. **Reveal little about myself.**
9. **Rarely get caught up in the excitement.**
10. **Am not a very enthusiastic person.**
11. **Take charge.**
12. **Have a strong personality.**
13. **Know how to captivate people.**
14. **See myself as a good leader.**
15. **Can talk others into doing things.**
16. **Am the first to act.**
17. **Do not have an assertive personality.**
18. **Lack the talent for influencing people.**
19. **Wait for others to lead the way.**
20. **Hold back my opinions.**

[Contextualized Mini-IPIP]

Instruction: Think about yourself at school. Rate the degree to which each of the following statements accurately describes your behavior at school.

### Response Options

- 1: Very Inaccurate
- 2: Moderately Inaccurate

- 3: Somewhat Inaccurate
- 4: Neither Inaccurate nor Accurate
- 5: Somewhat Accurate
- 6: Moderately Accurate
- 7: Very Accurate

1. Sympathize with others' feelings.
2. Get chores done right away.
3. Have frequent mood swings.
4. Have a vivid imagination.
5. Am not interested in other people's problems.
6. Often forget to put things back in their proper place.
7. Am relaxed most of the time.
8. Am not interested in abstract ideas.
9. Feel others' emotions.
10. Like order.
11. Get upset easily.
12. Have difficulty understanding abstract ideas.
13. Am not really interested in others.
14. Make a mess of things.
15. Seldom feel blue.
16. Do not have a good imagination.

### APPENDIX C: MEASUREMENT SURVEY AT TIME 3

[Contextualized Extraversion]

Instruction: Think about yourself at school. Rate the degree to which each of the following statements accurately describes your behavior at school.

#### Response Options

- 1: Very Inaccurate
- 2: Moderately Inaccurate
- 3: Somewhat Inaccurate
- 4: Neither Inaccurate nor Accurate
- 5: Somewhat Accurate
- 6: Moderately Accurate
- 7: Very Accurate

1. **Make friends easily.**
2. **Warm up quickly to others.**
3. **Show my feelings when I'm happy.**
4. **Have a lot of fun.**
5. **Laugh a lot.**
6. **Am hard to get to know.**
7. **Keep others at a distance.**
8. **Reveal little about myself.**
9. **Rarely get caught up in the excitement.**
10. **Am not a very enthusiastic person.**
11. **Take charge.**
12. **Have a strong personality.**
13. **Know how to captivate people.**
14. **See myself as a good leader.**
15. **Can talk others into doing things.**
16. **Am the first to act.**
17. **Do not have an assertive personality.**
18. **Lack the talent for influencing people.**
19. **Wait for others to lead the way.**
20. **Hold back my opinions.**

[Expatriate Adjustment]

Instruction: Think about your experience in the U.S. so far. Rate the extent to which you have adjusted (or unadjusted) to the following aspects of your life in the U.S.

#### Response Options

- 1: Very Unadjusted
- 2: Moderately Unadjusted

- 3: Somewhat Unadjusted
- 4: Neutral
- 5: Somewhat Adjusted
- 6: Moderately Adjusted
- 7: Very Adjusted

1. **Living conditions in general.**
2. **Housing conditions.**
3. **Food.**
4. **Shopping.**
5. **Cost of living.**
6. **Entertainment/recreation facilities and opportunities.**
7. **Health care facilities.**
8. **Socializing with host nationals.**
9. **Interacting with host nationals on a day-to-day basis.**
10. **Interacting with host nationals outside of school.**
11. **Speaking with host nationals.**
12. **Specific school responsibilities.**
13. **Performance standards and expectations.**
14. **Performance standards and expectations.**

[Withdrawal Cognitions]

Instructions: Please read the following statements and rate the extent to which you agree/disagree.

#### **Response Options**

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

1. **I often think about quitting my study at this school.**
2. **I intend to search for another institute so I can leave this current school.**
3. **I plan to leave this school.**
4. **I have decided to quit my study at this school.**
5. **I will quit my study at this school within the next year.**
6. **I will search for another institute within the next year.**

[School Satisfaction]

Instruction: Answer the following questions regarding to your attitude towards your college experience.

**Response Options**

- 1: Very Dissatisfied
- 2: Dissatisfied
- 3: Slightly Dissatisfied
- 4: Neutral
- 5: Slightly Satisfied
- 6: Satisfied
- 7: Very Satisfied

1. How satisfied are you with how much you are learning in school?
2. How satisfied are you with your rate of progress toward a college degree?
3. How satisfied are you with the availability of courses you want or need?
4. How satisfied are you with the general quality of professors you have taken courses from?
5. How satisfied are you with the availability and quality of academic advisors?
6. How satisfied are you with your academic major?
7. How satisfied are you with your GPA?

[School Performance]

My current cumulative GPA is \_\_\_\_\_.

[Contextualized Mini-IPIP]

Instruction: Think about yourself at school. Rate the degree to which each of the following statements accurately describes your behavior at school.

**Response Options**

- 1: Very Inaccurate
- 2: Moderately Inaccurate
- 3: Somewhat Inaccurate
- 4: Neither Inaccurate nor Accurate
- 5: Somewhat Accurate
- 6: Moderately Accurate
- 7: Very Accurate

1. Sympathize with others' feelings.
2. Get chores done right away.
3. Have frequent mood swings.
4. Have a vivid imagination.
5. Am not interested in other people's problems.
6. Often forget to put things back in their proper place.
7. Am relaxed most of the time.
8. Am not interested in abstract ideas.

- 9. Feel others' emotions.**
- 10. Like order.**
- 11. Get upset easily.**
- 12. Have difficulty understanding abstract ideas.**
- 13. Am not really interested in others.**
- 14. Make a mess of things.**
- 15. Seldom feel blue.**
- 16. Do not have a good imagination.**

**REFERENCES**

- Alarcon, G., Eschleman, K. J., & Bowling, N. A. (2009). Relationships between personality variables and burnout: A meta-analysis. *Work & Stress, 23*, 244-263.
- Allport, G. W. (1937). *Personality: A psychological interpretation*. New York: Henry Holt.
- Allport, G. W., & Odbert, H. S. (1936). Trait names: A psycho-lexical study. *Psychological Monographs, 47*, 211.
- Anderson, B. A. (2005). Expatriate selection: good management or good luck? *International Journal of Human Resource Management, 16*, 567-583.
- Anderson, L. E. (1994). A new look at an old construct: Cross-cultural adaptation. *International Journal of Intercultural Relations, 18*, 293-328.
- Ang, S., Van Dyne, L., Koh, C., Ng, K., Templer, K. J., Tay, C., & Chandrasekar, N. (2007). Cultural intelligence: Its measurement and effects on cultural judgment and decision making, cultural adaptation and task performance. *Management and Organization Review, 3*, 335-371.
- APA. (2012). Accredited programs in Clinical Psychology. Retrieved on July 15, 2012, from: <https://www.apa.org/ed/accreditation/programs/clinical.aspx>.
- Argyle, M., & Lu, L. (1990). The happiness of extraverts. *Personality and Individual Differences, 11*, 1011-1017.
- Arthur, W. J., & Bennett, W. J. (1995). The international assignee: The relative importance of factors perceived to contribute to success. *Personnel Psychology, 48*, 99-114.

- Asendorpf, J. B., & Wilpers, S. (1998). Personality effects on social relationships. *Journal of Personality and Social Psychology, 74*, 1531–1544.
- Baird, B. M., Le, K., & Lucas, R. E. (2006). On the nature of intraindividual personality variability: Reliability, validity, and associations with well-being. *Journal of Personality and Social Psychology, 90*, 512-527.
- Bandura, A. (2002). Social cognitive theory in cultural context. *Applied Psychology: An International Review, 151*, 269-290.
- Barenbaum, N. B. (2000). How social was personality: The Allports' "connection" of social and personality psychology. *Journal of the History of the Behavioral Sciences, 36*, 471-487.
- Barrett, L., & Pietromonaco, P. R. (1997). Accuracy of the five-factor model in predicting perceptions of daily social interactions. *Personality and Social Psychology Bulletin, 23*, 1173-1187.
- Barrick, M. R., & Mount, M. K. (1991). The Big Five personality dimensions and job performance: A meta-analysis. *Personnel Psychology, 44*, 1-26.
- Barrick, M. R., Mount, M. K., & Judge, T. A. (2001). Personality and performance at the beginning of the new millennium: what do we know and where do we go next? *International Journal of Selection and Assessment, 9*, 9-30.
- Bell, M. P., & Harrison, D. A. (1996). Using intra-national diversity for inter-national assignments: A model of bicultural life experiences and expatriate adjustment. *Human Resources Management Review, 6*, 47–74.

- Berry, D. S., Willingham, J. K., & Thayer, C. A. (2000). Affect and personality as predictors of conflict and closeness in young adults' friendships. *Journal of Research in Personality, 34*, 84–107.
- Bing, M. N., Whanger, J. C., Davison, H. K., & VanHook, J. B. (2004). Incremental validity of the frame-of-reference effect in personality scale scores: A replication and extension. *Journal of Applied Psychology, 89*, 150-157.
- Black, J. S. (1988). Work role transitions: A study of American expatriate managers in Japan. *Journal of International Business Studies, 19*, 277–294.
- Black, J. S. (1990). The relationship of personal characteristics with the adjustment of Japanese expatriate managers. *Management International Review, 30*, 119–134.
- Black, J. S., & Gregersen, H. B. (1990). Expectations, satisfaction, and intention to leave of American expatriate managers in Japan. *International Journal of Intercultural Relations, 14*, 485–506.
- Black, J. S., & Gregersen, H. B. (1999). The right way to manage expatriates. *Harvard Business Review, 77*, 52-62.
- Black, J. S., & Stephens, G. K. (1989). The influence of the spouse on American expatriate adjustment and intent to stay in Pacific Rim overseas assignments. *Journal of Management, 15*, 529–544.
- Bogg, T., & Roberts, B. W. (2004). Conscientiousness and health-related behaviors: A meta-analysis of the leading behavioral contributors to mortality. *Psychological Bulletin, 130*, 887–919.
- Bono, J. E., & Judge, T. A. (2004). Personality and Transformational and Transactional Leadership: A Meta-Analysis. *Journal of Applied Psychology, 89*, 901-910.

Brookfield Global Relocation Services. (2012). 2012 global relocation trends survey.

Retrieved on June 7, 2012, from:

[http://knowledge.brookfieldgrs.com/content/insights\\_ideas-2012\\_GRTS](http://knowledge.brookfieldgrs.com/content/insights_ideas-2012_GRTS).

Brown, M. (1994). The fading charms of foreign fields. *Management Today*, 8, 48–51.

Caligiuri, P. M. (1997). Assessing expatriate success: Beyond just being there. In

Saunders, D.M. and Aycan, Z. (Eds.) *New approaches to employee management* (4<sup>th</sup> ed.). Greenwich, CT: JAI Press.

Caligiuri, P. M. (2000). The Big Five personality characteristics as predictors of expatriate success. *Personnel Psychology*, 53, 67-88.

Carsten, J. M., & Spector, P. E. (1987). Unemployment, job satisfaction, and employee turnover: A meta-analytic test of the Muchinsky model. *Journal of Applied Psychology*, 72, 374-9.

Caspi, A., & Roberts, B. W. (2001). Target article: Personality development across the life course: The argument for change and continuity. *Psychological Inquiry*, 12, 49-66.

Caspi, A., Roberts, B. W., & Shiner, R. L. (2005). Personality development: Stability and change. *Annual Review of Psychology*, 56, 453-484.

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

Chen, G., Kirkman, B. L., Kim, K., Farh, C. I. C., & Tangirala, S. (2010). When does cross-cultural motivation enhance expatriate effectiveness? A multilevel

- investigation of the moderating roles of subsidiary support and cultural distance. *Academy of Management Journal*, *53*, 1110-1130.
- Chen, X. P., Liu, D., & Portnoy, R. (2012). A multilevel investigation of motivational cultural intelligence, organizational diversity climate, and cultural sales: Evidence from U.S. real estate firms. *Journal of Applied Psychology*, *97*, 93-106.
- Chiaburu, D. S., Oh, I., Berry, C. M., Li, N., & Gardner, R. G. (2011). The five-factor model of personality traits and organizational citizenship behaviors: A meta-analysis. *Journal of Applied Psychology*, *96*, 1140-1166.
- Church, A. T. (1982). Sojourner adjustment. *Psychological Bulletin*, *91*, 540-572.
- Church, A. T. (2010). Current perspectives in the study of personality across cultures. *Perspectives on Psychological Science*, *5*, 441-449.
- Clark, L.A.; Livesley, W.J. (2002). Two approaches to identifying the dimensions of personality disorder: Convergence on the five-factor model. In P. T. Costa, Jr.; T. Widiger (Eds.), *Personality disorders and the five-factor model of personality* (pp. 161-176). Washington, D.C.: American Psychological Association.
- Clausen, J. A., & Gilens, M. (1990). Personality and labor force participation across the life course: A longitudinal study of women's careers. *Sociological Forum*, *5*, 595-618.
- Connolly, J. J., & Viswesvaran, C. (2000). The role of affectivity in job satisfaction: A meta-analysis. *Personality and Individual Differences*, *29*, 265-281.
- Costa, P. T., Jr., & McCrae, R. R. (1980). Influence of extraversion and neuroticism on subjective well-being: Happy and unhappy people. *Journal of Personality and Social Psychology*, *38*, 668-678.

- Costa, P. T., Jr., & McCrae, R. R. (1992). *Revised NEO personality inventory (NEO PI-R) and NEO five-factor inventory (NEO-FFI) professional manual*. Odessa, FL: Psychological Assessment Resources.
- Cronbach, L. J., & Gleser, G. C. (1957). *Psychological tests and personnel decisions*. Urbana: University of Illinois.
- DeGroot, T., & Kluemper, D. (2007). Evidence of predictive and incremental validity of personality factors, vocal attractiveness and the situational Interview. *International Journal of Selection and Assessment, 15*, 30-39.
- DeYoung, C. G., Quilty, L. C., & Peterson, J. B. (2007). Between facets and domains: 10 aspects of the Big Five. *Journal of Personality and Social Psychology, 93*, 880-896.
- Digman, J. M. (1990). Personality structure: Emergence of the five-factor model. *Annual Review of Psychology, 41*, 417-440.
- Donahue, E. M., & Harary, K. (1998). The patterned inconsistency of traits: Mapping the differential effects of social roles on self-perceptions of the Big Five. *Personality and Social Psychology Bulletin, 24*, 610-619.
- Donnellan, M. B., Oswald, F. L., Baird, B. M., & Lucas, R. E. (2006). The mini-IPIP scales: Tiny-yet-effective measures of the Big Five factors of personality. *Psychological Assessment, 18*, 192-203.
- Eaton, L. G., & Funder, D. C. (2003). The creation and consequences of the social world: An interactional analysis of extraversion. *European Journal of Personality, 17*, 375-395.

- Earley, P. C., & Ang, S. (2003). *Cultural intelligence: An analysis of individual interactions across cultures*. Palo Alto, CA: Stanford University Press.
- Ferris, G. R., Witt, L. A., & Hochwarter, W. A. (2001). The interaction of social skill and general mental ability on work outcomes. *Journal of Applied Psychology, 86*, 1075-1082.
- Festinger, L. (1954). A theory of social comparison processes. *Human Relations, 7*, 117-140.
- Fleeson, W. (2001). Toward a structure-and process-integrated view of personality: Traits as density distributions of states. *Journal of Personality and Social Psychology, 80*, 1011-1027.
- Fleeson, W., & Nofle, E. E. (2008). Where does personality have its influence? A supermatrix of consistency concepts. *Journal of Personality, 76*, 1355-1386.
- Florkowski, G. W., & Fogel, D. S. (1999). Expatriate adjustment and commitment: The role of host unit treatment. *International Journal of Human Resource Management, 10*, 783-807.
- Fraley, R., & Roberts, B. W. (2005). Patterns of continuity: A dynamic model for conceptualizing the stability of individual differences in psychological constructs across the life course. *Psychological Review, 112*, 60-74.
- Funder, D. C. (2008). Persons, situations, and person-situation interactions. In O. P. John, R. W. Robins, L. A. Pervin (Eds.), *Handbook of personality: Theory and research* (3rd ed., pp. 568-580). New York, NY: Guilford Press.

- Gerard, H. B., & Orive, R. (1987). The dynamics of opinion formation. In L. Berkowitz (Ed.), *Advances in experimental social psychology*, Vol. 20 (pp. 171-202). New York: Academic Press.
- Goethals, G. R., & Darley, J. (1977). Social comparison theory: An attributional approach. In J. Suls & R. L. Miller (Eds.), *Social comparison process: Theoretical and empirical perspectives* (pp. 259-278). Washington, DC: Hemisphere.
- Hampson, S. E., & Friedman, H. S. (2008). Personality and health: A lifespan perspective. In O. P. John, R. W. Robins, L. A. Pervin (Eds.), *Handbook of personality: Theory and research* (3rd ed., pp. 770-794). New York, NY US: Guilford Press.
- Hampson, S. E., Tildesley, E., Andrews, J. A., Luyckx, K., & Mroczek, D. K. (2010). The relation of change in hostility and sociability during childhood to substance use in mid adolescence. *Journal of Research in Personality*, *44*, 103-114.
- Hanges, P.J., & Dickson, M. W. (2006). Agitation over aggregation: Clarifying the development of and the nature of the GLOBE scales. *The Leadership Quarterly*, *17*, 522-536.
- Headey, B., & Wearing, A. (1989). Personality, life events, and subjective well-being: Toward a dynamic equilibrium model. *Journal of Personality and Social Psychology*, *57*, 731-739.
- Heller, D., Ferris, D., Brown, D., & Watson, D. (2009). The influence of work personality on job satisfaction: Incremental validity and mediation effects. *Journal of Personality*, *77*, 1051-1084.

- Hogan, R., & Shelton, D. (1998). A socioanalytic perspective on job performance. *Human Performance, 11*, 129-144.
- Hom, P. W., & Griffeth, R. W. (1991). Structural equations modeling test of a turnover theory: Cross-sectional and longitudinal analyses. *Journal of Applied Psychology, 76*, 350–366.
- Hong, Y., Morris, M., Chiu, C. Y., & Benet-Martínez, V. (2000). Multicultural minds: A dynamic constructivist approach to culture and cognition. *American Psychologist, 55*, 709-720.
- House, R. J., Hanges, P. J., Javidan, M., Dorfman, P. W., Gupta, V. (2004). *Culture, Leadership, and Organizations: The GLOBE Study of 62 Societies*. Thousand Oaks, CA: Sage Publications.
- Huang, J. L., Bowling, N. A., & Liu, M. (2014). Insufficient effort responding: Clarifying measurement construct validity via the use of a detection scale. *Journal of Business and Psychology*. Advanced online publication.
- Huang, J. L., Curran, P. G., Keeney, J., Poposki, E. M., & DeShon, R. P. (2012). Detecting and deterring insufficient effort respond to surveys. *Journal of Business and Psychology, 27*, 99-114.
- Huang, J. L., Kossek, E. E., Piszczek, M., Ruderman, M. N., & Fleenor, J. F. (2011, April). Cultural distance and expatriate leadership effectiveness in international job assignments. In J. L. Huang & A. M. Ryan (Co-chairs), *One brick at a time: Cultural context effects at work*. Symposium presented at the annual conference of Society for Industrial and Organizational Psychology, Chicago, IL.

- Hunthausen, J. M., Truxillo, D. M., Bauer, T. N., & Hammer, L. B. (2003). A field study of frame-of-reference effects on personality test validity. *Journal of Applied Psychology, 88*, 545-551.
- Iaffaldano, M. T., & Muchinsky, P. M. (1985). Job satisfaction and job performance: A meta-analysis. *Psychological Bulletin, 97*, 251-73.
- Jackson, J. J., Thoemmes, F., Jonkmann, K., Lüdtke, O., & Trautwein, U. (2012). Military training and personality trait development: Does the military make the man, or does the man make the military? *Psychological Science, 23*, 270-277.
- John, O. P., Robins, R. W. & Pervin, L. A. (2008). *Handbook of personality: Theory and research* (Eds.). New York, NY: The Guilford Press
- Judge, T. A., Heller, D., & Mount, M. K. (2002). Five-factor model of personality and job satisfaction: A meta-analysis. *Journal of Applied Psychology, 87*, 530-541.
- Judge, T. A., Higgins, C. A., Thoresen, C. J., & Barrick, M. R. (1999). The Big Five personality traits, general mental ability, and career success across the life span. *Personnel Psychology, 52*, 621-652.
- Kalish, Y., & Robins, G. (2006). Psychological predispositions and network structure: The relationship between individual predispositions, structural holes and network closure. *Social Networks, 28*, 56-84.
- Kaplan, D. (2009). *Structural equation modeling: Foundations and extensions*. Thousand Oaks, CA: Sage.
- Kavanagh, L. C., Suhler, C. L., Churchland, P. S., & Winkielman, P. (2011). When it's an error to mirror: The surprising reputational costs of mimicry. *Psychological Science, 22*, 1274-1276.

- Klaus, K. J. (1995). How to establish an effective export program best practices in international assignment administration. *Employment Relations Today*, 22, 59–79.
- Kline, R. B. (2005). *Principles and practice structural equation modeling*. New York, NY: Guilford Publications, Inc.
- Krebs, D. (1975). Empathy and altruism. *Journal of Personality and Social Psychology*, 32, 1134-1146.
- Kristof-Brown, A., & Guay, R. P. (2011). Person–environment fit. In S. Zedeck (Ed.), *APA handbook of industrial and organizational psychology: Maintaining, expanding, and contracting the organization* (Vol. 3, pp. 3-50). Washington, DC US: American Psychological Association.
- Lakin, J. L., Jefferis, V. E., Cheng, C. M., & Chartrand, T. L. (2003). The Chameleon Effect as social glue: Evidence for the evolutionary significance of nonconscious mimicry. *Journal of Nonverbal Behavior*, 27, 145-162.
- Lanning, K. (1994). Dimensionality of observer ratings on the California Adult Q-set. *Journal of Personality and Social Psychology*, 67, 151-160.
- Latane, B. (1966). Studies in social comparison--Introduction and overview. *Journal of Experimental Social Psychology*, 2, 1-5.
- Lehnart, J., Neyer, F. J., & Eccles, J. (2010). Long-term effects of social investment: The case of partnering in young adulthood. *Journal of Personality*, 78, 639-670.
- Leiba-O'Sullivan, S. (1999). The distinction between stable and dynamic cross-cultural competencies: Implications for expatriate trainability. *Journal of International Business Studies*, 30, 709-725.

- Lewis, M. (1999). On the development of personality. In L. A. Pervin, O. P. John (Eds.) , *Handbook of personality: Theory and research* (2nd ed., pp. 327-346). New York, NY US: Guilford Press.
- Lievens, F., De Corte, W., & Schollaert, E. (2008). A closer look at the frame-of-reference effect in personality scale scores and validity. *Journal of Applied Psychology, 93*, 268-279.
- Locke, E. A. (1976). The nature and causes of job satisfaction. In M. D. Dunnette (Ed.), *Handbook of industrial and organizational psychology* (pp. 1297-1349). Chicago, IL: Rand McNally.
- Lockenhoff, C. E., Terracciano, A., Patriciu, N. S., Eaton, W. W., & Costa, P. T. (2009). Self-reported extremely adverse life events and longitudinal changes in Five-Factor Model personality traits in an urban sample. *Journal of Traumatic Stress, 22*, 53-59.
- Lounsbury, J. W., Saudargas, R. A., Gibson, L. W., & Leong, F. T. (2005). An investigation of broad and narrow personality traits in relation to general and domain-specific life satisfaction of college students. *Research in Higher Education, 46*, 707-729.
- Lucas, R. E., & Baird, B. M. (2004). Extraversion and emotional reactivity. *Journal of Personality and Social Psychology, 86*, 473-485.
- Lucas, R. E., & Fujita, F. (2000). Factors influencing the relation between extraversion and pleasant affect. *Journal of Personality and Social Psychology, 79*, 1039-1056.
- Ludtke, O., Roberts, B. W., Trautwein, U., & Nagy, G. (2011). A random walk down university avenue: Life paths, life events, and personality trait change at the

- transition to university life. *Journal of Personality and Social Psychology*, *101*, 620-637.
- Matthews, G., Deary, I. J., & Whiteman, M. C. (2009). *Personality traits* (Eds.). Cambridge, UK: Cambridge University Press.
- Mendenhall, M. & Oddou, G. (1985). The dimensions of expatriate acculturation. *Academy of Management Review*, *10*, 39-47.
- McAdams, D. P., & Pals, J. L. (2006). A new Big Five: Fundamental principles for an integrative science of personality. *American Psychologist*, *61*, 204-217
- McArdle, J. J. (1989). A structural modeling experiment with multiple growth functions. In R. Kanfer, P. L. Ackerman, & R. Cudeck (Eds.), *Abilities, motivation, and methodology: The Minnesota Symposium on Learning and Individual Differences* (pp. 71–117). Hillsdale, NJ: Erlbaum.
- McArdle, J. J. (2005). Latent growth curve analysis using structural equation modeling techniques. In D. M. Teti (Ed.), *Handbook of research methods in developmental science* (pp. 340–366). Malden, MA: Blackwell.
- McCrae, R. R. (2004). Human nature and culture: A trait perspective. *Journal of Research in Personality*, *38*, 3-14.
- McCrae, R. R., & Costa, P. T., Jr. (1985). Updating Norman's "adequacy taxonomy": Intelligence and personality dimensions in natural language and in questionnaires. *Journal of Personality and Social Psychology*, *49*, 710-721.
- McCrae, R. R., & Costa, P. T., Jr. (1999). A five-factor theory of personality. In L. A. Pervin & O. P. John (Eds.), *Handbook of personality* (pp. 139–153). New York: Guilford.

- McCrae, R. R., & Costa, P. T., Jr. (2008). The five-factor theory of personality. In O. P. John, R. W. Robins, & L. A. Pervin (Eds.), *Handbook of personality: Theory and research* (3rd ed., pp. 159–181). New York: Guilford.
- McCrae, R. R., Costa, P. T., Jr., Ostendorf, F., Angleitner, A., Hřebíčková, M., Avia, M. D., & ... Smith, P. B. (2000). Nature over nurture: Temperament, personality, and life span development. *Journal of Personality and Social Psychology*, 78, 173-186.
- McCrae, R. R., Costa, P. T., de Lima, M. P., Simões, A., Ostendorf, F., Angleitner, A., ... & Piedmont, R. L. (1999). Age differences in personality across the adult life span: parallels in five cultures. *Developmental psychology*, 35, 466-477.
- McCrae, R. R., & Terracciano, A. (2005). Personality profiles of cultures: Aggregate personality traits. *Journal of Personality and Social Psychology*, 89, 407-425.
- Meichenbaum, D., Butler, L., & Gruson, L. M. (1980). Toward a conceptual model of social competence. In J. Wine, & M. Smye (Eds.), *Social competence* (pp. 36-60). New York: Guilford Press.
- Minbashian, A., Wood, R. E., & Beckmann, N. (2010). Task-contingent conscientiousness as a unit of personality at work. *Journal of Applied Psychology*, 95, 793-806.
- Mischel, W. (1965). Predicting the success of Peace Corps volunteers in Nigeria. *Journal of Personality and Social Psychology*, 1, 517–520.
- Mischel, W. (1968). *Personality and assessment*. Hoboken, NJ: John Wiley & Sons.
- Mischel, W. (1969). Continuity and change in personality. *American Psychologist*, 24, 1012-1018.

- Mischel, W. (1973). Toward a cognitive social learning reconceptualization of personality. *Psychological Review*, *80*, 252-283.
- Mischel, W., & Shoda, Y. (1995). A cognitive-affective systems theory of personality: Reconceptualizing the invariances in personality and the role of situations. *Psychological Review*, *102*, 246–268.
- Morgeson, F. P., Campion, M. A., Dipboye, R. L., Hollenbeck, J. R., Murphy, K., & Schmitt, N. (2007). Reconsidering the use of personality tests in personnel selection contexts. *Personnel Psychology*, *60*, 683-729.
- Mroczek, D. K., & Spiro, A. (2007). Personality change influences mortality in older men. *Psychological Science*, *18*, 371-376
- Mroczek, D. K., Spiro, A., & Turiano, N. A. (2009). Do health behaviors explain the effect of neuroticism on mortality? Longitudinal findings from the VA Normative Aging Study. *Journal of Research in Personality*, *43*, 653-659.
- Muth n, L. K. (2014, January 24). Re: Mplus Home: Variances of growth factors [Online forum comment]. Retrieved from <http://www.statmodel.com/discussion/messages/14/228.html?1389120360>
- Murphy, K. R., & Dzieweczynski, J. L. (2005). Why don't measures of broad dimensions of personality perform better as predictors of job performance? *Human Performance*, *18*, 343-357.
- Naumann, E. (1992). A conceptual model of expatriate turnover. *Journal of International Business Studies*, *23*, 499–531.
- Neyer, F. J., & Asendorpf, J. B. (2001). Personality–relationship transaction in young adulthood. *Journal of Personality and Social Psychology*, *81*, 1190-1204.

- Neyer, F. J., & Lehnart, J. (2007). Relationships matter in personality development. Evidence from an 8-year longitudinal study across young adulthood. *Journal of Personality, 75*, 535–568.
- O'Sullivan, S. (1999). The distinction between stable and dynamic cross-cultural competencies: Implications for expatriate trainability. *Journal of International Business Studies, 30*, 709-725.
- Oberg, K. (1960). Culture shock: Adjustment to new cultural environments. *Practical Anthropology, 7*, 177-182.
- Ones, D. S., & Viswesvaran, C. (1999). Relative importance of personality dimensions for expatriate selection: A policy capturing study. *Human Performance, 12*, 275–294.
- Organ, D. W., & Ryan, K. (1995). A meta-analytic review of attitudinal and dispositional predictors of organizational citizenship behavior. *Personnel Psychology, 48*, 775-802.
- Paulhus, D. L., & Martin, C. L. (1988). Functional flexibility: A new conception of interpersonal flexibility. *Journal of Personality and Social Psychology, 55*, 88-101.
- Pavot, W., Diener, E., & Fujita, F. (1990). Extraversion and happiness. *Personality and Individual Differences, 11*, 1299-1306.
- Peeters, M. G., Van Tuijl, H. M., Rutte, C. G., & Reymen, I. J. (2006). Personality and team performance: A meta-analysis. *European Journal of Personality, 20*, 377-396.

- Peltokorpi, V. (2008). Cross-cultural adjustment of expatriates in Japan. *International Journal of Human Resource Management*, *19*, 1588-1606.
- Pervin, L. A., & John, O. P. (2001). *Personality: Theory and research* (Ed.). New York: John Wiley & Sons.
- Ramírez-Esparza, N., Gosling, S. D., Benet-Martínez, V., Potter, J. P., & Pennebaker, J. W. (2006). Do bilinguals have two personalities? A special case of cultural frame switching. *Journal of Research in Personality*, *40*, 99-120.
- Roberts, B. W. (1997). Plaster or plasticity: Are adult work experiences associated with personality change in women? *Journal of Personality*, *65*, 205-232.
- Roberts, B. W. (2007). Contextualizing personality psychology. *Journal of Personality*, *75*, 1071-1082.
- Roberts, B. W., Caspi, A., & Moffitt, T. E. (2001). The kids are alright: Growth and stability in personality development from adolescence to adulthood. *Journal of Personality & Social Psychology*, *81*, 670-683.
- Roberts, B. W., & Chapman, C. N. (2000). Change in dispositional well-being and its relation to role quality: A 30-year longitudinal study. *Journal of Research in Personality*, *34*, 26-41.
- Roberts, B. W., & DeVecchio, W. F. (2000). The rank-order consistency of personality traits from childhood to old age: A quantitative review of longitudinal studies. *Psychological Bulletin*, *126*, 3-25.
- Roberts, B. W., & Donahue, E. M. (1994). One personality, multiple selves: Integrating personality and social roles. *Journal of Personality*, *62*, 199-218.

- Roberts, B. W., & Helson, R. (1997). Changes in culture, changes in personality: The influence of individualism in a longitudinal study of women. *Journal of Personality and Social Psychology*, *72*, 641-651.
- Roberts, B. W., & Mroczek, D. (2008). Personality trait change in adulthood. *Current Directions in Psychological Science*, *17*, 31-35.
- Roberts, B. W., Walton, K. E., & Viechtbauer, W. (2006) Patterns of mean-level change in personality traits across the life course: A meta-analysis of longitudinal studies. *Psychological Bulletin*, *132*, 3-27.
- Roberts, B. W., Wood, D., & Caspi, A. (2008). The development of personality traits in adulthood. In O. P. John, R. W. Robins, L. A. Pervin (Eds.) , *Handbook of personality: Theory and research* (3rd ed., pp. 375-398). New York, NY US: Guilford Press.
- Robie, C., Schmit, M. J., Ryan, A. M., & Zickar, M. J. (2000). Effects of item context specificity on the measurement equivalence of a personality inventory. *Organizational Research Methods*, *3*, 348-365.
- Robins, R. W., Caspi, A., & Moffitt, T. E. (2002). It's not just who you're with, it's who you are: Personality and relationship experiences across multiple relationships. *Journal of Personality*, *70*, 925-964.
- Robins, R. W., Fraley, R., Roberts, B. W., & Trzesniewski, K. H. (2001). A longitudinal study of personality change in young adulthood. *Journal of Personality*, *69*, 617-640.
- Saucier, G. (1997). Effects of variable selection on the factor structure of person descriptors. *Journal of Personality and Social Psychology*, *73*, 1296-1312.

- Schlesinger, L. A., & Zornisky, J. (1991). Job satisfaction, service capability, and customer satisfaction: An examination of linkages and management implications. *Human Resource Planning, 14*, 141-149.
- Schmit, M. J., Ryan, A. M., Stierwalt, S. L., & Powell, A. B. (1995). Frame-of-reference effects on personality scale scores and criterion-related validity. *Journal of Applied Psychology, 80*, 607-620.
- Schmitt, D. P., Allik, J., McCrae, R. R., & Benet-Martínez, V. (2007). The geographic distribution of Big Five personality traits: Patterns and profiles of human self-description across 56 nations. *Journal of Cross-Cultural Psychology, 38*, 173-212.
- Scollon, C., & Diener, E. (2006). Love, work, and changes in extraversion and neuroticism over time. *Journal of Personality & Social Psychology, 91*, 1152-1165.
- Shaffer, J. A. & Postlethwaite, B. E. (2012). A matter of context: A meta-analytic investigation of the relative validity of contextualized and noncontextualized personality measures. *Personnel Psychology, 65*, 445-493.
- Shaffer, L. F., & Shoben, E. J., Jr. (1956). *The psychology of adjustment* (2nd ed.). Boston, MA: Hough-Mifflin.
- Shaffer, M. A., & Harrison, D. A. (1998). Expatriates' psychological withdrawal from international assignments: Work, non-work, and family influences. *Personnel Psychology, 51*, 87-118.
- Shaffer, M. A., Harrison, D. A., & Gilley, K. M. (1999). Dimensions, determinants, and differences in the expatriate adjustment process. *Journal of International Business Studies, 30*, 557-581.

- Shaffer, M. A., Harrison, D. A., Gregersen, H., Black, J., & Ferzandi, L. A. (2006). You can take it with you: Individual differences and expatriate effectiveness. *Journal of Applied Psychology, 91*, 109-125.
- Siegler, I. C., Costa, P. T., Brummett, B. H., Helms, M. J., Barefoot, J. C., Williams, R. B., & ... Rimer, B. K. (2003). Patterns of change in hostility from college to midlife in the UNC Alumni Heart Study predict high-risk status. *Psychosomatic Medicine, 65*, 738-745.
- Slatcher, R. B., & Vazire, S. (2009). Effects of global and contextualized personality on relationship satisfaction. *Journal of Research in Personality, 43*, 624-633.
- Smith, P. B., Dugan, S., & Trompenaars, F. (1996). National culture and values of organizational employees. *Journal of Cross-Cultural Psychology, 27*, 231-264.
- Solomon, C. M. (1994). Staff selection impacts global success. *Personnel Journal, 73*, 88.
- Specht, J., Egloff, B., & Schmukle, S. C. (2011). Stability and change of personality across the life course: The impact of age and major life events on mean-level and rank-order stability of the Big Five. *Journal of Personality and Social Psychology, 101*, 862-882.
- Spiro, A., Aldwin, C. M., Ward, K. D., & Mroczek, D. K. (1995). Personality and the incidence of hypertension among older men: Longitudinal findings from the Normative Aging Study. *Health Psychology, 14*, 563-569.
- Sri Ramalu, S., Che Rose, R., Uli, J., & Kumar, N. (2010). Personality and cross-cultural adjustment among expatriate assignees in Malaysia. *International Business Research, 3*, 96-104.

- Steel, P., Schmidt, J., & Shultz, J. (2008). Refining the relationship between personality and subjective well-being. *Psychological Bulletin, 134*, 138-161.
- Stening, B. W. (1979). Problems in cross-cultural contact: A literature review. *International Journal of Intercultural Relations, 3*, 269-313.
- Suls, J., Martin, R., & Wheeler, L. (2000). Three kinds of opinion comparison: The triadic model. *Personality and Social Psychology Review, 4*, 219-237.
- Swagler, M. A., & Jome, L. M. (2005). The Effects of Personality and Acculturation on the Adjustment of North American Sojourners in Taiwan. *Journal of Counseling Psychology, 52*, 527-536.
- Takeuchi, R., Yun, S., & Tesluk, P. E. (2002). An examination of crossover and spillover effects of spousal and expatriate cross-cultural adjustment on expatriate outcomes. *Journal of Applied Psychology, 87*, 655-666.
- Tate, R. L., & Hokanson, J. E. (1993). Analyzing individual status and change with hierarchical linear models: Illustration with depression in college students. *Journal of Personality, 61*, 181-206.
- Tellegen, A. (1991). Personality Traits: Issues of Definition, Evidence, and Assessment. In W. M. Grove & D. Cicchetti (Eds.), *Thinking Clearly about Psychology: Personality and psychopathology* (Vol. 2, pp. 10-35). Minneapolis, MN: University of Minnesota Press.
- Templer, K. J., Tay, C., & Chandrasekar, N. A. (2006). Motivational cultural intelligence: Realistic job preview, realistic living conditions preview, and cross-cultural adjustment. *Group and Organization Management, 31*, 154-173.
- Thorndike, E. L. (1920). Intelligence and its use. *Harper's Magazine, 140*, 227-235.

- USNews. (2012). National universities with most international students. Retrieved on July 15, 2012, from: <http://colleges.usnews.rankingsandreviews.com/best-colleges/rankings/national-universities/most-international?src=stats>.
- Vaidya, J. G., Gray, E. K., Haig, J., & Watson, D. (2002). On the temporal stability of personality: Evidence for differential stability and the role of life experiences. *Journal of Personality and Social Psychology, 83*, 1469–1484.
- Ward, C., Bochner, S., & Furnham, A. (2001). *The Psychology of Culture Shock*. (2nd Ed.). Hove, UK: Routledge.
- Ward, C., Okura, Y., Kennedy, A., & Kojima, T. (1998). The U-curve on trial: A longitudinal study of psychological and sociocultural adjustment during cross-cultural transition. *International Journal of Intercultural Relations, 22*, 277-291.
- Watson, D. (1988). Intraindividual and interindividual analyses of Positive and Negative Affect: Their relation to health complaints, perceived stress, and daily activities. *Journal of Personality and Social Psychology, 54*, 1020-1030.
- Watson, D., Clark, L. A., McIntyre, C. W., & Hamaker, S. (1992). Affect, personality, and social activity. *Journal of Personality and Social Psychology, 63*, 1011-1025.
- Weiss, H. & Rupp, D. E. (2011). Experiencing work: An essay on a person-centric work psychology. *Industrial and Organizational Psychology: Perspectives on Science and Practice, 4*, 83-97.
- White, J. K., Hendrick, S. S., & Hendrick, C. (2004). Big five personality variables and relationship constructs. *Personality and Individual Differences, 37*, 1519-1530.

- Winter, D. G., John, O. P., Stewart, A. J., Klohnen, E. C., & Duncan, L. E. (1998). Traits and motives: Toward an integration of two traditions in personality research. *Psychological Review, 105*, 230–250.
- Wood, D. (2007). Using the PRISM to compare the explanatory value of general and role-contextualized trait ratings. *Journal of Personality, 75*, 1103-1126.
- Woodworth, R. S. (1920). *Personnel data sheet*. Chicago: Stoelting.
- Wright, J. C., & Mischel, W. (1987). A conditional approach to dispositional constructs: The local predictability of social behavior. *Journal of Personality and Social Psychology, 53*, 1159-1177.
- Ying, Y. W. (2005). Variation in acculturative stressors over time: A study of Taiwanese students in the United States. *International Journal of Intercultural Relations, 29*, 59-71.

**ABSTRACT****Contextualized Extraversion and Its Change in Cross-cultural Adjustment**

By

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Bridging recent developments in personality changes and contextualized personality, the current research focuses on changes in contextualized personality and their impact on cross-cultural adjustment. Findings revealed that contextualized Extraversion provided incremental validity in predicting context-related outcomes (i.e., cross-cultural adjustment) above and beyond global Extraversion. Although no significant changes were revealed regarding contextualized Extraversion, individual characteristics (i.e., cultural flexibility and cross-cultural motivation) negatively predicted individual differences in the rate of contextualized Extraversion changes. Implications and limitations were discussed.

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