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Cultural Intelligence: Extending the Nomological Network

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CULTURAL INTELLIGENCE:

EXTENDING THE NOMOLOGICAL NETWORK

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Ena K. Sawhney

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To: Interim Dean Michael R. Heithaus
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This dissertation, written by Ena K. Sawhney, and entitled Cultural Intelligence: Extending the Nomological Network, having been approved in respect to style and intellectual content, is referred to you for judgment.

We have read this dissertation and recommend that it be approved.

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DEDICATION

To my parents, Karamvir and Inderjit, who have supported me all these years in my endeavors, my adventures, my successes, and my failures. Your unconditional love and guidance has always been with me and has seen me here to this day, and for this, I am eternally grateful. Thank you for all that you have done and for all you continue to do. I could not have done this without you.

ABSTRACT OF THE DISSERTATION

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Professor Chockalingam C. Viswesvaran, Major Professor

This dissertation consists of three independent studies, which study the nomological network of cultural intelligence (CI)—a relatively new construct within the fields of cross-cultural psychology and organizational psychology. Since the introduction of this construct, CI now has a generally accepted model comprised of four codependent subfactors. In addition, the focus of preliminary research within the field is on understanding the new construct's correlates and outcomes. Thus, the goals for this dissertation were (a) to provide an additional evaluation of the factor structure of CI and (b) to examine further the correlates and outcomes that should theoretically be included in its nomological network. Specifically the model tests involved a one-factor, three-factor, and four-factor structure. The examined correlates of CI included the Big Five personality traits, core self-evaluation, social self-efficacy, self-monitoring, emotional intelligence, and cross-cultural experience. The examined outcomes also included overall performance, contextual performance, and cultural adaption in relation to CI. Thus, this dissertation has a series of 20 proposed and statistically evaluated hypotheses. The first study in this dissertation contained the summary of the extant CI literature via meta-

analytic techniques. The outcomes of focus were significantly relevant to CI, while the CI

correlates had more inconclusive results. The second and third studies contained original

data collected from a sample of students and adult workers, respectively. In general, the

results between these two studies were parallel. The four-factor structure of CI emerged

as the best fit to the data, and several correlates and outcomes indicated significant

relation to CI. In addition, the tested incremental validity of CI showed significant results

emerging in both studies. Lastly, several exploratory analyses indicated the role of CI as a

mediator between relevant antecedent and the outcome of cultural adaption, while the

data supported the mediator role of CI. The final chapter includes a thorough discussion

of practical implications as well as limitation to the research design.

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CHAPTER I: INTRODUCTION

Today's world hardly has any physical and geographical boundaries. As economic, political, and cultural practices diffuse across national borders, globalization is occurring at rates much faster than originally predicted. Unfortunately, research on the process of globalization, its conceptualization, and practical implications is moving at a much slower pace. While globalization research certainly has no lull, as its study spans multiple fields ranging from technological to environmental to sociological, understanding the relevant psychological elements is necessary (Gelfand, Lyons, & Lun, 2011).

The ideologies surrounding globalization vary greatly and each of them has unique practical implications. For this reason, experts emphasize the importance and need to distinguish theories according to philosophies. Globalism, or global ideology, is a philosophy where globalization is inevitable and leads to eventual positive outcomes (Steger, 2009). According to Steger (2009), the philosophy of globalism indicates discarding any national or social identity and promoting a unified identity for all. Global ideology predicts an eventual homogenous world. Another line of ideology has a proposition that globalization is a myth or a mask and is not a naturally occurring paradigm shift. The scholars adhering to this ideology believe that globalization is an international marketing strategy, which governments and organizations, mostly Western, employ to disperse their products (Dounglas & Wind, 1987; Hirst & Thompson, 1999). According to this belief, proponents of globalization are persuading others to believe that only the societies, systems, and organizations that adopt international strategies will succeed. While globalization increases homogeny across the world, centralists adopt a

moderate view. Centralists agree that globalization is not positive and that structures can be placed to block the process when appropriate (Conversi, 2010; Ritzer, 2011). Regardless of philosophy though, globalization is undoubtedly now a reality that institutions must manage appropriately.

Broadly described, globalization refers to the set of processes leading to multidirectional flow of people, objects, places, information, systems, and structures across barriers (Ritzer, 2011). In other words, globalization has the mark of diminishing national and cultural borders, allowing for increased exchanges between differing groups. While the exact beginnings of globalization are unclear, the process clearly began when boundaries between groups weakened (Conversi, 2010). Prior to globalization, people had limited interactions, restricted to those that were physically nearby. The isolation, immobility, and subsequent barriers became reasons for the reinforcement of values, beliefs, systems, and structures of groups. With time, changes in the environment and society have increased interactions between groups of people despite these physical barriers. Specifically, significant advances in transportation, technology, and communication have made cross-cultural interactions a daily occurrence for a large number of people.

As mentioned, globalization has affected a variety of systems including economics, politics, education, and marketing, to name a few. As the moderate perspective suggests, globalization brings many opportunities, but it also raises many challenges for international practices. Within state and national boundaries, unique cultural practices exist. Learned through formal and informal experiences within a lifetime, culture is a prominent perception affecting daily activities. Comprising of

values, beliefs, and norms, culture provides structure for people regarding communication and interaction. In the context of culture, communication is essentially more than language, which includes appropriate verbal and nonverbal behaviors. Thus, people use a system to determine the appropriate display and interpretation of language and behavior. People belonging to the same culture generally share the same values and beliefs, which are helpful in facilitating interactions. When people from varying cultures interact, the variances in values and beliefs are likely to have negative influence on the interactions, if individuals are not mindful of the differences.

Originating from globalization research, cross-cultural research examines the influence of culture in individual and group level phenomena. At the individual level, cross-cultural researchers might examine the process of acculturation, which is marked by a period of adjustment and adaption to a new culture (Hazuda, Stern, & Hoffner, 1988). For example, a manager who travels overseas is likely to go through a period of learning and adapting to the new the culture prior to creating effective supervisory relationships with new employees. At the group level, researchers might examine how culture is influential to the success of a new international product. An example of research at this level would include studies with focus on the influence of culture on the success of advertising internationally. Advertisements are a means by which organizations communicate information about their products to a wide audience, and the success of advertisements hinge on their cultural appropriateness. Each of the aforementioned examples shows the importance of understanding the cross-cultural interface, as its implications are quite extensive.

With the increasing number of global organizations, researchers have found opportunities to study cross-cultural phenomena. Organizations falling within this category include those that have locations across countries and those that market products internationally. Organizational psychologists have recognized the research opportunity out of globalization as a fair volume of cross-cultural organizational literature. Over the years, numerous qualitative pieces have reviews of the progressive developments and trends within the field (Aycan, 2000; Barrett & Bass, 1976; Drenth & Groenendijk, 1984; Gelfand, Erez, & Ayca, 2007; Triandis, 1994). Initial studies include a focus on intercultural interactions from the prospective of Western organizations that were expanding into Asia. These studies indicated the limited applicability of Western culture abroad and showed little guidance on how to resolve cross-cultural conflict (Gelfand et al., 2007). Common areas of study included culture and motivation, teams, conflict, negotiation, and leadership. However, with the creation of cultural typologies, a more comprehensive and well-rounded examination of cross-cultural interactions occurs (Hofstede, 1991; Gelfand et al., 2007; Triandis, 1994). Moving beyond the contrast of cultural influences on behaviors and communication, organizational psychologists have begun to pursue the study of cross-cultural interactions in the context of international and expatriate assignments. The purpose for this line of research is to determine the factors that foster positive and successful cross-cultural interactions.

The Cross-Cultural Interface and International Success

People who relocate internationally often immerse themselves into a culture other than their own. The period of adjustment indicates the need to learn new cultural systems and merge them with one's own. Studying this process within cross-cultural

organizational research is imperative as it can result in costly outcomes, financial and otherwise, for organizations and their people. According to the National Foreign Trade Council, the one-time cost to relocate internationally is over $60,000 per person (Dolainksi, 1997). Furthermore, Ferraro (1990) estimated that 45–85% U.S. expatriates return prematurely. Poor expatriation can result in psychological stress, inadequate performance, and long-term career repercussions for the individual (Forester, 1997). Surveys of returning expatriates indicate the reason reported for deficiency is the lack of ability to adapt and understand the new culture rather than lacking any technical or professional competence, as Ferraro noted. Therefore, distinguishing those who are likely to be successful abroad from those who are not is essential.

The components of expatriate success span across several dimensions, including completion of assignment, cross-cultural adjustment, and performance (Caligiuri, 1997). Completion of the assignment is the most basic and transparent criterion for assessing expatriate assignment. Success in this manner occurs when expatriates remain in the host country for the entirety of time scheduled, and failure occurs with a request to return to the home country (Black & Gregersen, 1991). While the situation may be uncomplicated, certain organizational factors (e.g., organizational withdrawal and lack of resources) are outside the expatriate's control, which may prematurely terminate an international assignment. Thus, completion of assignment is only appropriate when the expatriate chooses to terminate the stay (Caligiuri, 1997).

Cross-cultural adjustment refers to a psychological state of comfort within a new culture. The background for this research relating to this criterion is in the culture shock literature, which shows the amount of anxiety experienced because of culture shock

varies according to internal influences rather than external factors (Caligiuri, 1997). Progressions in the field have led to the study of cross-cultural adjustment as a proxy for overall cultural adaptation or acculturation. Black and Stephens (1989) identified three relevant facets of expatriate adjustment: *general adjustment*, *work adjustment*, and *interaction adjustment*.

General adjustment refers to overall adaptation to living in the new foreign culture, and includes adjusting to housing conditions, food, and living conditions. This facet of adjustment is often associated with mental health and well-being (Aycan, 1997). Adjustment to work involves adjusting to new tasks, work roles, and work environments. Work adjustment, which relates to work behaviors and attitudes, has its influence from the similarity of conditions between the original work location and the new foreign location (Aycan, 1997; Black & Stephens, 1989). Lastly, interaction adjustment refers to one's level of comfort when interacting with host nationals in work and nonwork settings. Being able to adjust to society is necessary to have positive experiences and to function effectively; however, this facet is the most difficult of the three to achieve (Black & Stephens, 1989). Although adjustment to all three facets is a strong indicator of expatriate success, researchers also recognize the need to achieve a certain level of performance overseas.

Similar to clearly defining and measuring job performance for domestic workers, doing the same for expatriates is difficult. The commonly implemented model is that of task performance and contextual performance (Borman & Motowidlo, 1993). Within the context of expatriate assignments, task performance refers to performance dimensions relating to tasks and duties, and often includes the negotiation of joint ventures, managing

international accounts, and training foreign workers. Caligiuri (1997) considered these components as technical proficiencies for expatriates. Contextual performance dimensions, however, have no significance to technical duties and consist of prosocial and helping behaviors. Additionally, extant literature indicated other expatriate-specific performance dimensions, which include information transfer, cultural proficiency, relationship building, and fostering commitment, according to Caligiuri. Regardless of the adopted model or specific criteria, the manifestation of performance for expatriates is unique. Considering the high stakes involved for individuals and organizations, researchers and practitioners recognize the need to determine predictors of expatriate success for the aforementioned criteria.

Despite eventual success or failure, the majority of people endure some negative experiences due to differences in values, beliefs, norms, language, and perceptions when relocating internationally. Brislin (1981) identified several coping strategies that people utilize during new cultural experiences: *Unacceptance* refers to a lack of effort in learning the host culture's communication system. *Substitution* involves the replacement of behaviors and responses with those that are appropriate within the host culture. *Addition* involves adding new culturally appropriate behaviors and responses to one's repertoire. *Synthesis* refers to the merging of varying culture-appropriate communication. The strategies that the expatriate adopts are likely influential to the amount of success during an international assignment. Additionally, the coping mechanisms that individuals utilize often depend upon their unique set of characteristics.

Research indicated that several employee characteristics have an effect to adjustment and performance outcomes during cross-national assignments. One evident

characteristic is previous cross-cultural experience. In social learning theory, Bandura (1977) suggested that international experiences allow people to acquire coping skills through observation, modeling, and reinforcement. Expatriates themselves report that previous experiences help them form realistic expectation prior to departure and adjust upon arrival in the new culture (Brewster, 1991). In other words, previous cross-cultural experiences are useful for the individual to cope with uncertainty and ambiguity.

Another set of individual difference variables linked to expatriate success is motivation research. Specifically, self-efficacy and learning orientation are influential to adjustment and performance during international assignments. Self-efficacy is a belief in one's capability to act effectively, according to Bandura (1997). In other words, people who are high in self-efficacy believe in their ability to be successful. Researchers suggest that self-efficacy is a specifically related cultural adaption for expatriates (Harrison, Chadwick, & Scales, 1996; Palthe, 2004). Learning orientation refers to one's receptiveness to learning experiences, and those high in learning orientation are open to and motivated by the opportunity to learn (Ames & Archer, 1988). Learning orientation, which has an effect on expatriate outcomes, is influential to the manner in which expatriates manage struggles and allow themselves to learn from new experiences (Palthe, 2004; Porter & Tansky, 1996).

Personality characteristics are another set of individual variables considered antecedents of expatriate success. The research in this field is quite extensive and much support is essential to determine the influence of personality in predicting expatriate outcomes. Ones and Viswesvaran (1997) summarized the literature in a narrative review and concluded that personality is a determinant of premature return, performance, and

adjustment of expatriates. The majority of personality research in the field indicates focus on the five-factor model (Costa & McCrae, 1992), which includes openness to experience, conscientiousness, agreeableness, extraversion, and emotional stability. Personality traits outside of the five-factor model linked to expatriate success include sociability, emotional intelligence, and cultural flexibility (Arthur & Bennett, 1995; Aycan, 1997; Caligiuru, 2000; Johnson, Kristof-Brown, van Vianen, de Pater, & Klein, 2003; Viswesvaran & Ones, 2004). Thus, a clear relationship exists between international assignment success and personality traits, motivational characteristics, and other individual characteristics.

Cross-Cultural Interactions in Domestic Settings

While the majority of research in the field has focused on expatriate performance and international success, organizational psychologists also understand that individuals are likely to engage in cross-cultural interactions in domestic settings. In fact, organizations are making an active effort to increase their workforces' diversity, and with these efforts intercultural interactions should also increase. According to Cox and Blake (1991), organizations intentionally seek out culturally diverse candidates to fill positions with the hopes of improving talent strength for creativity, problem solving, decision making and other key competencies for performance. The researchers also observe that individuals tend to hold to their cultural roots despite being immersed in a new or different culture. As a result, multi-cultural interactions are also occurring in domestic settings.

Similarly, university settings are ripe with cultural diversity despite being domestic. Not only do universities encourage applicants from culturally backgrounds,

they also engage in strong international recruiting efforts to increase diversity. Recognizing the increase in cross-cultural interactions, many universities are now providing workshops to students, faculty and staff to improve skills in communication and teamwork for working within multicultural contexts (McCauley et al., 2000). With organizations and universities pushing for increased cultural diversity, there is also a need to understand cross-cultural interactions in domestic settings.

Considering the abundance of evidence supporting the relationship between individual variables and outcomes in multi-cultural environments, organizational psychologists suggest the assessment of these characteristics. Assessing characteristics for selection, development and other purposes is common and effective, and expanding the techniques specifically for cross-cultural settings is more than appropriate. Recently, researchers have proposed a new individual difference variable, cultural intelligence, which is specific to cross-cultural interactions and can be useful for these settings.

What is Cultural Intelligence?

Rapidly becoming the focus within the field, cultural intelligence refers to one's ability to acculturate (Earley & Ang, 2003). For over a century, researchers considered intelligence as a fundamental component in the study of human interactions. Originating from the theory of social intelligence by Thorndike (1920), some scholars accept the notion that intelligence is relative to societal norms, values, and expectations and, thus, exists in multiple forms (Gardner, 1983; Mayor and Salovey, 1997; Sternberg, 2000). With globalization, cross-cultural researchers propose a new form of intelligence reflecting the successful interaction of people from varying cultures, that is, cultural intelligence (CI; Earley & Ang, 2003).

Considering that CI is a relatively new construct, no clear consensus is evident regarding its definition. Originally proposed by Earley and Ang (2003), the authors broadly defined CI as one's capability to adapt effectively to new cultural contexts. Thomas (2006) defined CI as the ability to interact effectively with people from other cultures. These authors view CI from a capabilities perspective, as do most researchers. However, researchers can also view CI from an outcomes perspective and describe it as an individual's success when adjusting to another culture (Brislin, Worthley, & MacNab, 2006). Regardless of perspective, the focus of CI is on intercultural interactions and behaviors.

Conceptualizations of CI have consistently identified it as an aggregate multidimensional construct consisting of several factors. Some researchers believed CI has a four-factor structure consisting of *metacognitive CI*, *cognitive CI*, *motivational CI*, and *behavioral CI* (Ang, van Dyne, & Koh, 2006; Earley & Peterson, 2004), while others argued a three-factor structure in which cognitive CI is subsumed under metacognitive CI (Earley & Mosakowski, 2004; Thomas, 2006). Metacognitive CI refers to a higher order level of cognitive processing in which individuals are consciously aware of cultural differences during cross-cultural interactions (Ang & van Dyne, 2008). People who are high in metacognitive CI have knowledge and control over thought processes during such interactions and are able to make adjustments when appropriate. These people actively question, monitor, and revise mental models based on their own cultural assumptions (Ang et al., 2007; Triandis, 2006).

Cognitive CI is a lesser order cognitive process that reflects one's knowledge of cultural norms, practices, and conventions. Such knowledge includes an understanding of

culture-specific social, economic, and legal systems; individuals gain it through personal experiences and formal education. People with high cognitive CI do not only understand similarities and differences across cultures, but also see themselves as belonging to a culture (Ang et al., 2007; Ang & van Dyne, 2008).

Motivational CI refers to the individual's capability to direct attention and energy towards learning cultural systems and functioning in culturally diverse situations. Ang and colleagues (2007, 2008) defined motivational CI as grounded in the expectancy theory of motivation. Those who are high in motivational CI, according to the authors, expect to adapt and function successfully in cross-cultural situations and place some value on their success. Additionally, the value associated with cross-cultural effectiveness likely come from an intrinsic interest for individuals high in motivational CI (Ang et al., 2007; Ang & van Dyne, 2008).

Lastly, behavioral CI refers to one's ability to exhibit appropriate verbal and nonverbal behaviors during situations marked with cultural diversity. To express culture-appropriate verbal and nonverbal behaviors, the behaviors must be included in the actor's repertoire of behaviors and the actor must be able to identify when a behavior is appropriate. Thus, individuals with high behavioral CI are flexible and can adjust the behavior they exhibit to specifics of a situation (Ang et al., 2007; Ang & van Dyne, 2008). CI researchers suggest that behavioral CI may be the most critical factor of CI, which is the most salient among the factors during cross-cultural interactions. When interacting with others, determining cognitions and motivation is nearly impossible among people; however, behaviors are observable and become an indicator of thoughts and intentions (Ang & van Dyne, 2008).

Studies indicated relationships between CI and individual difference characteristics. Specifically, significant relationships exist between CI and personality, emotional intelligence, general mental ability, and motivational orientations (Ang & van Dyne, 2008; Oodlers, Chernyshenko, & Stark, 2008; Ward & Fisher, 2008). Additionally, scholars have found significant relationships between CI and expatriate outcomes including adjustment and performance (van Dyne, Ang & Koh, 2008; Ward & Fisher, 2008). However, research in the field remains scarce and results are often conflicting. Thus, further evaluation of the CI construct and its correlates are necessary.

Another area of research relating to CI that is significantly lacking is its relationship to outcomes in culturally diverse domestic settings. Understandably, the majority of research is specific to expatriate outcomes, as these indicate more relevance to CI. However, globalization has resulted to an increase in cultural diversity even within domestic settings, which is quite evident considering the abundance of cultural diversity training programs (J. M. Bennett & Bennett, 2001). During the development of intercultural sensitivity model, Bennett (1993) followed students for several years while they attended classes and workshop at a local university. The study found that most students faced challenges relating to cultural difference, especially when communicating; thus, training in this regard is essential. In 2005, the State of New Jersey added cultural competency training to the licensure requirements of physicians (Salas-Lopez, Holmes, Mouzon, & Soto-Green, 2007). Furthermore, a simple Internet search demonstrates the use of cultural diversity training in a variety of professional settings from health care to corporations to law enforcement. Clearly, cross-cultural concerns are not limited to

expatriate and global work assignments, while CI research must broaden its scope beyond international settings to multicultural settings.

Dissertation Purpose

The framework and theory of CI is still in the development phase. With further validation and empirical support, CI is likely to have critical implications for global organizations and general cross-cultural interactions. The limited number of quantitative studies shows a significant gap in CI theory. The purpose for the present dissertation is to further develop the CI construct and examine its relationship with other relevant variables. Specifically, this dissertation consists of three studies designed to assess the factor structure of CI and its nomological network.

Study 1. The purpose for Study 1 was to summarize the current pool of literature on CI and its correlates. Assessing the strength of the relationships between CI, its antecedents, and consequences involved the use of meta-analytic techniques. Considering the limited number of studies published, the inclusion criteria had minimal restrictions. In other words, student samples, organizational samples, expatriate samples, and domestic samples were all included. The antecedent correlates that corresponded to the inclusion criteria for this meta-analysis consist of the Big Five personality traits, emotional intelligence, cognitive ability, demographic characteristics, and cross-cultural experience. Outcomes correlates included those that comprised performance and cultural adaptation.

A comprehensive literature search was essential to identify studies included in the meta-analysis. The compilation of data from those studies was possible with the use of *bare bones* meta-analytic technique, which Hunter and Schmidt (1990) proposed. As Rosenthal (1991) suggested, the bare bones technique is an appropriate procedure to

maintain a conservative approach. The analyses indicated an overall effect size for the relationships between CI and its correlates. The meta-analysis has two purposes. First, it includes a summary of the extant literature and concerns regarding inconsistencies in empirical evidence. Second, the meta-analysis is useful for evaluating the nomological network and outcomes of CI, especially for a review of the literature.

Study 2. Considering that CI is a relatively new construct, understanding it fully is still essential. Questions regarding its factor structure and nomological network remain and further investigation is necessary for proving the usefulness of CI assessment in applied settings. The purpose for Study 2 was to analyze the structure of CI and test for its relationships with theoretically relevant variables. Data for this study came from a student sample. While the majority of cross-cultural research includes focus on organizational environments, educational settings are diverse and students must often interact with peers from varying cultural backgrounds.

First, testing the one-, three- and four-factor structures of CI involved the use of confirmatory factor analysis to determine the amount of overlap between each of the factors and test the competing models. The analysis was helpful in identifying the models that best explained the data.

Second, examining CI's nomological network involved the use of correlation analyses. Antecedent variables included were the Big Five (Costa & McCrae, 1992), emotional intelligence (Salovey & Mayer, 1990), cross-cultural experience, self-monitoring (Snyder, 1974), self-efficacy (Sherer et al., 1982), and core self-evaluation (Judge & Bono, 2001). Included in measuring cultural adaptation and performance outcomes were interaction adjustment (Black & Stephens, 1989), mental well-being

(Goldberg & Williams, 1998), contextual performance (Podsakoff & MacKenzie, 1994), and overall performance (Markel & Frone, 1998). For each of these variables, assessing the strength of their relationship with CI involved the correlations.

Finally, assessing the incremental and predictive validities of CI beyond the antecedent variables included the regression analyses in predicting performance and adjustment outcomes. Specifically, regression was useful in examining the increase in variance explained by overall CI. Additionally, the role of CI as a mediator between individual differences and cross-cultural work outcomes was tested. These analyses combined provide a deeper understanding of the nomological network of CI.

Study 3. The purpose for Study 3 was to replicate the findings of Study 2 to demonstrate generalizability across samples. Similar to Study 2, Study 3 included an assessment of the factor structure and nomological network, but in a working sample. Again, confirmatory factor analysis was useful to test the factor structure of CI to determine which model fits the data best. Next, testing the strength of the relationship between CI and relevant individual characteristics, cultural adjustment, and work performance included the use of correlation analyses (van Dyne & LePine, 1998). Lastly, regressions were useful in testing the predictive and incremental validities of CI beyond antecedent variables in predicting outcomes. Also tested was CI, as a mediator between relevant antecedent and outcome variables.

Summary

Cultural intelligence is a general description of a person's ability to adapt effectively to new cultural contexts, which lead to effective performance and adjustment in cross-cultural organizations (Earley & Ang, 2003; Ang & van Dyne, 2008).

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Considering the rapid rate of globalization and the dissipation of national borders (as a proxy to cultural borders), organizational psychologists recognize the need to identity individuals who are likely to perform best in new cultural contexts. As an individual difference characteristic, CI assessment has the potential for a theoretically grounded, yet practical solution to address this growing need. However, in consideration of the high stakes for organizations and individuals, further investigation of the CI construct and its role within organizations is necessary.

This dissertation included multiple statistical techniques across multiple samples to help provide a deeper understanding of CI. Study 1 contains a quantitative summary of the extant literature on CI and its correlates for addressing inconsistencies in the research and providing overall effect sizes. The goal for studies 2 and 3 was to provide further empirical support for the nomological network of CI and its impact on performance and adaptation outcomes in student and working samples. The unique contributions of these studies include an expanded and comprehensive examination of CI's nomological network as well as its role as mediator between individual characteristics and cross-cultural outcomes.

The next chapter contains a detailed literature review of the cross-cultural literature, as it relates to international assignments and the CI construct. The review includes

1. the expatriate literature, including predictors and criteria of success;

2. the development of CI as a unique individual difference variable; this will include CI's grounding in contemporary intelligence theories and its foundation in the cognitive, motivational, and behavioral bases;

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3. the conceptualization of CI will be discussed including its factor structure; and

4. the nomological network of CI.

The comprehensive review consists of the individual difference correlates of CI and its incremental and predictive validities over correlates in predicting workplace outcomes. In its entirety, the literature review is a justification for the importance of CI within cross-cultural organizational theory.

CHAPTER II: LITERATURE REVIEW

This chapter is a comprehensive review of the cultural intelligence (CI) literature, which includes the multiple definitions and theoretical foundations for CI. The chapter also includes a thorough discussion of the factor structure of CI. Finally, the chapter contains a proposed nomological network for CI, in accordance with extant literature, which includes the antecedents and outcomes. Similarly presented in the review are hypotheses for Studies 1, 2, and 3.

Cultural Intelligence

With increased movement across borders, a growing interest is prevalent in understanding why some people perform and function successfully during cross-cultural interactions while others do not. The CI approach to understanding why some fare better than others indicates that some people are inherently better than others in cross-cultural interactions; therefore, CI is characteristic of individual difference. However, the specifics of CI and its conceptualization are not always consistent. This review of CI begins with addressing the multiple definitions within the literature.

Definitions of CI. In general, CI refers to a person's capacity to interact appropriately with others from varying cultures. While use of the term is widespread, its definitions have variations. Additionally, the applications of CI vary slightly with each conceptualization, warranting further clarification.

Perhaps the most commonly cited definition is that of Earley and Ang (2003), who stated that CI is a person's capability for successful adaptations to new cultural settings. Earley and Ang's research on CI came from observed differences in expatriate performance and the need for further understanding from an organizational perspective.

According to the Earley and Ang definition, people who are high in CI are likely to be more successful when working in new cultural contexts than those who are low in CI. The conceptualization of CI as a work-related measure is typically associated with global assignments and diversity training outcomes, which are quite limited in scope. Since Earley and Ang's work, the definition of CI has expanded greatly as a result of additional study and research.

Earley and Mosakowski (2004) expanded the conceptualization of CI, defining it as a person's natural ability to interpret unfamiliar and ambiguous gestures the way a compatriot would. The 2004 definition of CI was an addition to the original work of Earley and Ang (2003) by including specific mind and body indicators. Specifically, these authors explained that people with high CI have effective learning strategies that help them understand how unfamiliar cultures differ from their own. Additionally, these people are able to communicate in terms of the new cultural norms with verbal and nonverbal language. Earley and Mosakowski further emphasized that those with high CI have confidence in their ability to adapt and are unlikely to give up when faced with challenges in cross-cultural settings. Accordingly, outcomes of CI expanded to overall behaviors beyond the organizational context.

In 2004, Earley and Peterson presented a variation to the definition of CI by addressing its implications for multicultural teams. These authors stated that CI reflects a person's ability to gather, interpret, and act upon cultural cues to function effectively across multicultural settings. The Earley and Peterson operationalization is a contribution to the learning and development of CI and an indication that intercultural training should focus on developing the underlying skills that individuals need to adapt. The significance

of the extended definition lies in the assumption that CI can improve, as opposed to stated definitions, describing it as an innate ability. Other groups of researchers (Earley, Ang, & Tan, 2006; Ang et al., 2007) accept the aforementioned definitions of CI, from which the majority of research originated.

Additional perspectives of CI originate from the work of Thomas and colleagues (Thomas, 2006; Thomas & Inkson, 2003; Thomas et al., 2008) who focused on CI as a complete system of interactions between knowledge, skills, and the external environment. According to the Thomas group, CI involves understanding the occurrence of intercultural interactions and being mindful of the differences in behaviors. Specifically, their line of work demonstrates that those who are high in CI will adapt to cross-cultural situations by selecting and shaping specific aspects of the novel environment. Thomas and Inkson (2005) also included components of flexibility and sympathy towards the cultures of others. Thus, the person's skills and abilities, along with environmental conditions, are useful in determining CI. Outcomes of CI within this framework expand beyond performance in global assignment and training into cross-cultural communication, decision making, and relationship development. Other authors essentially rearticulate these CI definitions within the literature (Brislin et al., 2006; Johnson, Lenartowicz, & Apud, 2006; Ng & Earley, 2006).

As expected within the sciences, the conceptualization of CI originated from developed and tested theories of psychology. However, in their seminal piece arguing for the distinctness and significance of CI, Earley and Ang (2003) mentioned the grounding of over 35 "influential" theories. The lack of solidarity is a point of weakness in the theoretical framework, and a review of each theory is beyond the scope of the present

dissertation. A comprehensive review of the literature following this piece indicates that some theories are most influential to shaping the CI framework consistently. The following sections include a review of these theories.

Intelligence theories and CI. For over a century now, scholars have debated and established significant understanding of intelligence. While the argument continues, most accept that multiple conceptualizations of intelligence vary according to context. Many early pioneers in intelligence research and testing strictly defined intelligence in terms of general cognitive ability, or one's ability to learn and reason, which has become the popular understanding of intelligence today (Spearman, 1904; Thurstone, 1938). Scholars behind the theories of intelligence (e.g., social intelligence and multiple intelligences) argued that context is the determinant of intelligence; the argument refers to the intelligence theories influential to the development of the CI framework.

The first use of the term *social intelligence* was in 1920, when Thorndike classified intelligence into three broad categories: abstract intelligence, mechanical intelligence, and social intelligence. While abstract intelligence refers to understanding and managing ideas and mechanical intelligence involves manipulating concrete objects, social intelligence refers to one's ability to understand and relate to others. Specifically, Thorndike defined social intelligence as "the ability to understand men and women, boys and girls—to act wisely in human relations" (p. 228). Additional definitions of social intelligence include the ability to get along with others (Moss & Hunt, 1927) and ease with other people by understanding their states and traits (Vernon, 1933). Essentially, Thorndike and other theorists believe that abilities beyond reasoning and logic should be important within the field of intelligence.

Imbedded within social intelligence theory are three key principles influential to the justification for CI. First, one must be socially competent to be socially intelligent, which means that an individual must have an understanding of basic communication and social skills (Riggio, 1986). Without this foundation of social competency, a successful engagement in social interactions is impossible to achieve. Second, the socially intelligent individuals are able to understand deeply their own feelings, thoughts, and behaviors as well as those of others. Understanding these aspects of communication allows for enhanced problem solving and conflict resolution (Marlowe, 1986). Third, those with high levels of social intelligence will adapt their own behaviors according to the cues mentioned when socializing (Ford & Tiask, 1983; Piaget, 1972). Combined, these three principles indicate that social intelligence is an understanding of social norms, and an interest in and empathy for others. The socially intelligent individual is then able to adapt accordingly to have productive and meaningful exchanges with others.

Similar to social intelligence, an understanding of social norms and rules, and the use of empathy and adaptation when interacting with others are also essential to CI. However, CI theory expands upon social intelligence by including the much larger cross-cultural context. With social systems imbedded in cultural systems, an understanding of communication and social basics translates to only a small understanding of culture. Moreover, cross-cultural competence requires knowledge of cultures beyond one's own. Social intelligence theory has the assumption that content—concerning values, beliefs, norms, and process—is universal, when such may not be true. CI theory recognizes that these systems are not universal, but are specific to groups of people (Earley & Ang,

2003). Thus, many of the principles associated with CI are parallel to those of social intelligence theory, yet with a much larger cross-cultural context.

Another intelligence theory that has an impact on CI is the theory of multiple intelligences by Gardner (1983). Gardner's theory originated from a belief that individuals possess varied forms of intelligence, and that traditional definitions and tests of intelligence were too narrow, focusing only on forms of general cognitive ability. As an overall concept, Gardner defined intelligence as the potential for solving problems by gathering new knowledge. Specifically, Gardner believed that logical, verbal, and mathematical abilities had too much emphasis. In response, he identified nine forms of intelligence, which he hypothesized to be unique and autonomous from one another: (a) linguistic intelligence, (b) logical-mathematical intelligence, (c) spatial intelligence, (d) musical intelligence, (e) body-kinesthetic intelligence, (f) interpersonal intelligence, (g) intrapersonal intelligence, (h) naturalistic intelligence, and (i) existential intelligence (Gardner, 1999). While a discussion of each is beyond the scope of this dissertation, interpersonal intelligence and intrapersonal intelligence are particularly relevant to CI.

According to Gardner (1999), interpersonal intelligence refers to the ability to understand and relate to other people. Those who are high in interpersonal intelligence have developed skills in listening, empathy, organizing, and manipulating, which they use when interacting with other people. In essence, interpersonal intelligence involves the ability to "read" other people by anticipating their motivations and needs. With respect to CI, interpersonal intelligence shows the foundation for understanding the motivations and behaviors of others within cultural systems. Concepts such as mindfulness, cultural empathy, and cultural sense making or understanding, are common within the CI

literature (Earley & Peterson, 2004; Thomas et al., 2008), which essentially overlap with Gardner's conception of interpersonal intelligence.

Intrapersonal intelligence refers to the ability to introspect and understand oneself (Gardner, 1999). Included within this type of intelligence is the knowledge of one's own strengths, weaknesses, and behavioral tendencies. The skills associated with high levels of intrapersonal intelligence include self-awareness, self-confidence, critical thinking, and reflection. Building upon Gardner's theory, Earley and Ang (2003) discussed the importance of an accurate self-concept within the CI literature. For example, those people who are high in CI are able to recognize their own thoughts, values, and behaviors as guided by a cultural system when interacting with others. By understanding oneself through self-awareness and reflection, the culturally intelligent people are able to suspend judgments based on their own culture and behave accordingly.

While mapping CI theory onto either of the aforementioned theories is not perfect, social intelligence and multiple intelligence theories are influential to several fundamentals of CI theory. Specifically, these theories are useful for showing that intelligence depends upon the interaction between the individual and the context (Earley & Ang, 2003). According to Sternberg (1990), people do not think or behave within a vacuum, and any intelligence theory that does not consider the context is incomplete. It follows then that society and culture should be determinants for identifying intelligent behavior, with reference to how people perform within that society or culture. By focusing on the individual and the context, these theories indicate intelligence in terms of the individual-environment dyad and one's ability to adapt. This interaction approach is especially important to the CI framework, which refers to one's ability to adapt and

adjust across cultural contexts (Ng & Ang, 2006). In other words, CI can only be

measurable with respect to the interaction between the individual and an intercultural

context. Given this circumstance, those people who are able to adapt and adjust

effectively during cross-cultural exchanges are culturally intelligent.

Considering the interaction between individual and intercultural context is

necessary to determine why some people perform better than others do during cross-

cultural interactions. As mentioned, one's level of CI can improve through experience

(Earley & Peterson, 2004). This notion indicates that, beyond intelligence, other factors

are influential to CI. Subsequently, a number of theories outside of the intelligence

literature are influential and are part of the following discussion.

Learning theories and CI. Understanding the manner in which people learn is

helpful in clarifying CI. When participating in interactions, an underlying assumption is

that participants have some knowledge of the norms and values of their own culture. In

intercultural interactions, though, an expanded understanding of cultural systems beyond

one's own is essential. Thus, at minimum, the culturally intelligent individual has learned

the systems of multiple cultures. The learning theories influential to such fundamentals

are the social learning theory of Bandura (1977) and the experiential learning theory of

Kolb (1984).

In social learning theory, Bandura (1977) explained learning as a product of

observing and modeling external stimuli. According to Bandura, people learn by

observing the actions, attitudes, and outcomes of others. By seeing other people's actions,

reactions, and the consequences of these actions, individuals acquire an understanding of

which behaviors are appropriate and which are not. In addition, the symbols via

television, radio, and the news can also be models that people observe. Social learning theory is especially important with respect to learning cultural systems. To learn an entire cultural system by other modes of learning would be nearly impossible; thus, modeling and socialization are important in this acquisition (Bandura, 1969).

With respect to CI, social learning theory is a contributing factor to cultural knowledge and self-awareness components. As discussed, one aspect of CI is familiarity with cultural systems; with that knowledge, people act and behave according to their own system. To function effectively in cross-cultural situations, people must know their thoughts and behaviors are associated with a specific culture. They must also understand that the thoughts and behaviors of others are associated with a culture different from their own (Earley, Ang, & Tan, 2006; Thomas et al., 2008). Social learning theory is supportive of the cognitive aspects of CI. Knowing and understanding cultural systems are not enough for successful cross-cultural exchanges, but are basic requirements to navigating interactions.

Beyond socialization, Kolb (1984) noted that experiential learning theory is an additional grounding for the CI construct. According to Kolb, adult learning is unique from socialization, affected by actual experiences. In experiential learning theory, Kolb proposed that integrating learning objectives with experiences is critical to achieve optimal learning. Two main processes are influential to learning: grasping the experience and transforming the experience. Thus, experiential learning is process-driven and the emphasis is on adaptation and adjustment. Essentially, learning is a product of thinking, feeling, perceiving, and behaving when interacting with others and considering contextual cues, according to Kolb.

Relating to CI theory, experiential learning indicates insight regarding individual differences in performance during cross-cultural interactions. The theory shows that people, who have immersed themselves in cultures other than their own, are likely to have better developed CI (Ng, van Dyne, & Ang, 2009). With exposure to other cultures, an individual increases familiarity with norms, values, and other cultural artifacts. During exposure, deep processing and transference of knowledge result in the ability to adapt one's own thinking and behavior according to the new culture (Crowne, 2008). By engaging fully in experiential learning during cross-cultural experiences, people learn the skills needed to navigate intercultural situations effectively.

In addition to learning and intelligence theories, a discussion of CI groundwork incomplete without reviewing other theoretical influences relating to self-concept is worthy of discussion. These theories and their influence within the CI framework follow the next sections.

Self-concept theories and CI. While the motivational aspects of CI are not as prominent as intelligence and learning, they are determinant factors showing if people will put forth the necessary effort and energy during cross-cultural interactions. In a study of cross-cultural performance, Tung (1981) noted that motivation played a critical role in success. Earley and Ang (2003) along with Thomas (2006) suggested that theories relating to the self-concept and the social context are largely influential to one's motivation. Specifically, the propositions of social identity theory (Tajfel, 1982) and self-categorization theory (Turner, 1987) are especially important.

Tajfel (1982) first proposed the social identity theory to describe people's tendency to engage within a social group category. By assigning membership to social

groups, people identify themselves as a part of these groups, which are ultimately influential to their self-concept. A basic underlying assumption of social identity theory is that people are motivated to achieve a positive self-concept; therefore, they apply the positive characteristics of the social group to themselves (Tajfel & Turner, 1986).

Turner (1987) differentiated self-categorization theory, which is an extension of social identity theory, between personal identity and social identity, and proposed that people will shift between these identities to maintain a positive self-concept. For example, when group membership or social identity has negative attributions, one is likely to shift into a perception of personal identity to maintain a positive self-concept.

While many conclusions originate from these theories, the primary influence with respect to CI is the human desire to maintain a positive self-concept. As a motivational feature, people will choose to adapt, or not adapt, according to their self-concept (Thomas, 2006). Belonging and fitting are motivating factors for people who have integrated social and personal identities. These people maintain a positive self-concept by adjusting to cultural differences (Markus & Kitayama, 1991). Withstanding social pressure and expression of the self are motivating for people whose personal and social identities are segregated. For these people, adjusting to cultural differences has negative impacts to self-concept (Janis & Mann, 1977). Therefore, the desire to maintain a positive self-concept is relative to one's role identities and is influential to CI.

Duval and Wicklund (1972) described subjective and objective self-awareness in self-awareness theory, another theory relating to self-concept. The main difference between these two types of self-awareness is the level of consciousness during self-reflection. During subjective self-awareness, people focus outwardly and perceive

themselves according to the manner in which others perceive them. Duval and Wicklund noted that during objective self-awareness, people focus inwardly and perceive themselves without bias. The importance of self-awareness within the CI framework comes from this objective self-awareness, which is a self-evaluative component. When people see themselves without bias, the "real" self can often be discomforting if it does not match the "ideal" self. People who experience discomfort are those who fail to adapt and adjust. On the other hand, people who are responsive to self-evaluation are motivated to change and adjust, as Duval and Wicklund further emphasized. Thus, self-awareness also has an impact to the motivation to adapt during cross-cultural interactions (Brislin et al., 2006; Earley & Ang, 2003; Thomas, 2006).

For a complete model of CI, intelligence theories, learning theories, and theories relating to the self-concept all have foundations. CI is conceptually distinct from each of the theories described, but indicative of certain assumptions and principles from each. Even more, CI expands upon many of these theories, which are helpful in addressing concepts in a culture-free environment, by developing an approach cognizant of cultural contexts (Brislin et al., 2006). The next section describes a comprehensive model of CI and its factor structure.

The model and structure of CI. Earley and Ang (2003) broadly defined CI as one's capability to adapt and function effectively in culturally diverse situations. Their broad description lacks detail relevant to how CI is influential to cross-cultural interactions. To provide further clarification, researchers have developed a model of CI that consists of four factors aggregated (Earley and Ang, 2003; Ang & van Dyne, 2008). The basis for the four-factor model originated from the framework of Sternberg and

Detterman (1986) for the multiple foci of intelligence. Later studies indicated the psychometric properties of the four-factor structure of CI to find supporting empirical evidence. As mentioned in Chapter I, CI is a multidimensional construct consisting of metacognitive CI, cognitive CI, motivational CI, and behavioral CI.

Metacognitive CI, which refers to the cognitive processes individuals use to acquire and understand cultural knowledge, includes knowledge of and control over these processes (Ang & van Dyne, 2008). In other words, metacognitive CI involves understanding the manner in which individuals gain knowledge of cultural systems. People who are high in metacognitive CI have knowledge and control over their thought processes, using these processes during cross-cultural interactions to make adjustments as needed. These people are able to think and act during interactions by questioning their own cultural assumptions, releasing any judgments that result, and modifying their own behaviors to match those of other people's culture (Ang et al., 2007; Triandis, 2006). The active processing of external cues indicates that metacognitive CI is a higher order level of cognition.

Cognitive CI is a lesser order level of cognitive processing and refers to the actual knowledge one has about cultural systems and the differences among them (Ang & van Dyne, 2008). Included within cultural systems are norms, values, practices, and conventions; people who are high in cognitive CI are familiar with each of these components. Only by fully understanding cultural systems can one engage in cognitive processes associated with metacognitive CI. Thus, in metacognitive CI, cognitive CI is essential, but the reverse relationship is not true. Some researchers agreed to a three-factor structure of CI in which cognitive CI includes metacognitive CI (Earley & Ang,

2003; Earley & Mosakowski, 2004; Thomas, 2006), while others differentiated between the two (Ang et al., 2007; Ang & van Dyne, 2008).

Motivational CI refers to the capability to direct attention and energy towards learning cultural systems. It includes having the drive to function within cross-cultural situations (Earley & Ang, 2003; Ang & van Dyne, 2008). The motivational component of CI is important because it shows whether an individual even has the desire to adjust during cross-cultural interactions. Knowledge of cultural systems and understanding of differences do not equate to actual changes in behavior. Motivation or drive is essential to make necessary adjustments; for this reason, some researchers believe that this dimension of CI is most fundamental during intercultural interactions (Chen, Liu, & Portnoy, 2012; Templer, Tay, & Chandrasekar, 2006).

Lastly, behavioral CI refers to flexibility in demonstrating the appropriate behaviors when engaging in cross-cultural interactions (Ang & van Dyne, 2008). One must be able to express and display effective verbal and nonverbal behaviors during culturally diverse situations. To exhibit appropriate behaviors, the individual must exist within a suitable repertoire of responses. If these responses are lacking, people cannot fittingly express themselves (Earley & Ang, 2003). In addition, one must be able to identify successfully when certain behaviors are appropriate and when they are not. Individuals with high levels of behavioral CI are able to select correctly the appropriate verbal and nonverbal expressions according to the specifics of the situation. Ang and van Dyne (2008) believed this factor is most important for being the most salient. During interactions, determining cognitions and motivation is nearly impossible; however,

behaviors are outwardly observable. Thus, behavioral expressions become an indicator of thoughts and intentions.

Cultural intelligence has other proposed models, which scholars can record from the aforementioned model. Thomas (2006) proposed that CI is comprised of three intertwined elements: knowledge, mindfulness, and behaviors. The knowledge component of this model includes declarative and procedural knowledge, which relates to cultures. In other words, Thomas proposed that knowledge of actual cultural systems, along with the use and application of that information is essential. Fundamentally, the cognitive CI and metacognitive CI in the conceptualization of Earley and Ang (2003) captured the knowledge portion model of Thomas. The second element of Thomas, which is mindfulness, is a heightened awareness of the current experience that includes thoughts, motives, and emotions. This element of CI overlaps with the aforementioned metacognitive and motivational CI. Lastly, the behavior component of Thomas's model refers to one's ability to express culture-appropriate behaviors from a well-developed repertoire of behaviors, congruent with the behavioral CI factor in the model of Earley and Ang.

In 2008, Thomas and associates proposed another model of CI that represents a system of interacting elements: cultural knowledge, cross-cultural skills, and cultural metacognition. Cultural knowledge refers to understanding cultural systems and recognizing the differences between cultures, harmonious with cognitive CI as Earley and Ang (2003) defined. Thomas et al. defined cultural metacognition as the control over thoughts and processes relating to cultural systems. The cultural skills element as Thomas and colleagues described refers to a broad set of skills that facilitate adjustment, including

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perceptual skills, adaptive skills, and analytical skills. Cultural metacognition and cultural skills, according to Thomas et al., are essentially the same as the metacognitive CI factor in the four-factor structure earlier presented (Earley and Ang, 2003; Ang & van Dyne, 2008).

Each of the models discussed earlier is a contributing factor to understanding CI and why some people perform better than others do during cross-cultural interactions. The model that shows a four-factor structure is most comprehensive of all, and is aligned with well-documented models of other intelligences (Sternberg & Detterman, 1986).

Hypothesis 1: Four factors of cultural intelligence will emerge—metacognitive CI, cognitive CI, motivational CI, and behavioral CI.

Although four factors of CI exist, as hypothesized, each factor is meaningless without the others. CI is an aggregate of these four factors, and the remainder of this dissertation and hypotheses only includes focus on the overall aggregate CI index.

The following sections contain information from relevant theories, the extant literature, and the model of CI to propose a nomological network. A nomological network is a representation of interrelated constructs, which includes the manifestation of these relationships (Cronbach & Meehl, 1955). The proposed nomological network of CI consists of individual difference antecedents and outcome variables that should be related to overall CI, as well as the hypotheses for each of the proposed relationships.

Individual Differences and Cultural Intelligence

Individual difference researchers and cross-cultural researchers have paid much attention to the effects of personality, motivation, and other characteristics on interpersonal communication, interaction, and adjustment. When people with culturally

diverse backgrounds interact, these stable qualities can be antecedents to important cultural concepts such as CI (Earley & Ang, 2003; Ang et al., 2006). Research in the area of cross-cultural effectiveness has successfully established the importance of individual difference characteristics (Dalton & Wilson, 2000; Ones & Viswesvaran, 1997; van der Zee & van Oudenhoven, 2000).

An overview of literature shows that a large number of personality traits are critical during cross-cultural interactions. Arthur and Bennett (1995) polled international assignees to determine factors for success. In addition to flexibility and adaptability, respondents indicated that extracultural openness is also influential to interactions. Van der Zee and van Oudenhoven (2000) reviewed the literature when developing a measure of multicultural personality. Within their research, seven personality traits consistently appeared: cultural empathy, open-mindedness, emotional stability, orientation to action, curiosity, flexibility, and extraversion. Ones and Viswesvaran (1997) reported that over 35 studies showed the relationship between personality and international performance from 1960 to 1993. Clearly, researchers believe that personality has a large influence on cross-cultural situations. However, much of the research specific to CI indicated focus on a specific model of personality: the five-factor model.

The Big Five and CI

The five-factor model of personality, also known as the Big Five, is a comprehensive framework for classifying personality (Costa & McCrae, 1992). The model originated from the work of Galton (1884), Allport and Odbert (1936), Fiske (1949), and Tupes and Christal (1961), and showed a rich history within the areas of personality and psychometrics. Since then, the early work of these researchers has fully

developed the model, well established within the personality literature (Block, 1995; Costa & McCrae, 1992; Goldberg, 1990). The five global personality traits included in the model are extraversion, emotional stability (which is often termed negatively as neuroticism), conscientiousness, agreeableness, and openness to experience. Today, the five-factor model, which is the most common framework studied in the field, is often seen as a road map or guide for personality research, as a result of its all-inclusive nature. Additionally, the five-factor model is applicable across cultures, languages, genders (Hough & Furnham, 2003), and particularly, to cross-cultural research.

Extraversion is familiar for its excitability and sociability. Extraverts prefer companionship and social stimulation (McCrae & Costa, 1987). People who are high on the extraversion traits tend to be talkative and emotionally expressive. As a consequence of preference for numerous friendships, extraverts tend to have fully developed social skills and a wide array of interests. Even more, extraverts tend to be self-confident and bold, which combines with effective social skills, often leading to positive and meaningful interactions. In contrast, people with low levels of extraversion tend to be timid, quiet, and inhibited. These characteristics indicate that nonextraverts are less able to navigate through social interactions without difficulty.

Within cross-cultural contexts, extraverts are likely to interact with others successfully as a result of their highly developed social skills. Additionally, extraverts may be motivated to engage in cross-cultural interactions to satisfy their interest in others and desire for companionship. Yet, research examining the relationship between extraversion and CI finds mixed support for these propositions. For example, a study examining the relationship between extraversion and CI in a sample of leaders found no

support for a relationship between the variables (Rockstuhl, Seiler, Ang, van Dyne, & Annen, 2011). In contrast, a number of studies indicated significant relationships between extraversion and overall CI, as well as individual CI factors (Ang et al., 2007; Ang et al., 2006; Imai & Gelfand, 2010). The inconsistencies in these results, however, lie in the strength of the relationships, as they range from weak to moderate.

Hypothesis 2: Extraversion will have a positive relationship with overall cultural intelligence.

Neuroticism or the lack of emotional stability reflects an individual's tendency to experience negative emotions, such as anxiety, anger, and depression (McCrae & Costa, 1987). People who are low in emotional stability often have low self-esteem and experience negative effects. In addition, this emotional instability may indicate feelings of hopelessness, inadequacy, and guilt. On the opposite pole, people who are emotionally stable are usually calm and normally have effective coping strategies.

Emotional stability is critical for people who are engaging in cross-cultural interactions and experiences. Unfamiliarity with cultural artifacts (i.e., symbols, values, norms, etc.) can lead to elevated levels of stress and anxiety. Emotionally stable people are more likely to engage in effective coping strategies during these interactions, while those less stable may experience heightened negative emotions. Additionally, those who are confident and have positive effect are likely to approach novel interactions with greater patience and understanding. Research examining the relationship between emotional stability and overall CI among expatriate leaders do not show support for this relationship (Rockstuhl et al., 2011). However, data collected from student samples are

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supportive of the relationship between emotional stability and motivational CI (Ang et al., 2007; Ang et al., 2006).

Hypothesis 3: Emotional stability will have a positive relationship with overall cultural intelligence.

Achievement striving or a strong sense of purpose and high aspiration levels indicate conscientiousness (McCrae & Costa, 1987). Conscientious people are often purposeful, determined, methodical, and detail-oriented. Conscientious individuals think and plan strategically and take the initiative to solve problems. Additionally, strong organization and leadership skills are characteristics of conscientiousness (McCrae & Costa, 1987).

During cross-cultural interactions, conscientious individuals should have more successful exchanges then their less conscientious counterparts. Specifically, those with high conscientiousness should be persistent despite obstacles and look for ways to resolve differences. By thinking about cultural preferences and approaching interactions in a well-planned manner, highly conscientious people should pay more attention to cues and be able to understand them to determine necessary adjustments. Despite this reasoning, research in the area of conscientiousness and CI has indicated considerably varying support for the relationship. For example, some researchers have found that conscientiousness is only relevant to metacognitive CI and behavioral CI, and not to cognitive CI and motivational CI (Ang et al., 2006; Kim, Kirkman, & Chen, 2008). Results from other studies neither indicated a relationship between conscientiousness and overall CI, nor to factor-level CI (Rockstuhl et al., 2011). However, when examining CI

in American and Asian samples, Ang and colleagues (2007) did find significant

relationships between conscientiousness and overall CI, and for each factor of CI.

Hypothesis 4: Conscientiousness will have a positive relationship with overall

cultural intelligence.

Compliance and cooperation with others indicate agreeableness (McCrae &

Costa, 1987). Agreeable people tend to be friendly, courteous, and helpful towards

others. A key marker of agreeableness is flexibility, and people with this quality are often

willing to defer to others during interactions and conflict. Thus, people who rate high on

the agreeableness traits strive for mutual understanding and exhibit competence in

interpersonal skills. At the opposite end, people who are low in agreeableness tend to

become hostile and offensive in the face of conflict.

Agreeableness is a fundamental trait for successful interactions with others, and is

especially crucial during cross-cultural interactions. Because of differences in language,

norms, values, and communication, conflict can occur often in intercultural situations.

People who are high on agreeableness are better able to tolerate differences and cooperate

with others from diverse cultural backgrounds. These people offer support and flexibility

when collaborating with others and are able to adjust socially to maintain positive

interactions. Just as with the aforementioned Big Five traits, research supporting this

rationale is inconclusive. Ang and colleagues (2007), along with Rockstuhl and

colleagues (2011) did not have data that indicated the relationship between agreeableness

and CI. However, other studies showed evidence to support the relationship between

agreeableness and overall CI as well as each individual factor of CI (Ang et al., 2006;

Kim et al., 2008).

Hypothesis 5: Agreeableness will have a positive relationship with overall cultural intelligence.

Lastly, openness to experience refers to a person's level of intellectual curiosity and sensitivity (Costa & McCrae, 1992). Openness to experiance has the characteristics of creativity, tolerance, originality, and broad thinking. People who are high on openness prefer variety, novelty, and change. Additionally, they usually have a wide array of interests and appreciate diversity. Moreover, open-minded people often think unconventionally, abstractly, and without prejudice.

Openness to experience is especially of interest to cross-cultural researchers. Essentially, this trait reflects an individual's capacity to interact with people from culturally diverse backgrounds, without judgment and with appreciation for differences. In other words, open-minded people are more likely to actively evaluate their own preferences when interacting with culturally diverse others and make the necessary adjustments in thinking without reservation. Several studies indicated a positive relationship between openness to experience and CI student and expatriate samples (Ahmadi, Shahmohamadi, & Araghi, 2011; Ang et al., 2007; Ang et al., 2006; Kim et al., 2008). Even more, this relationship showed support within specialized samples of cross-cultural negotiators (Imai & Gelfand, 2010) and leaders (Rockstuhl et al., 2011).

Hypothesis 6: Openness to experience will have a positive relationship with overall cultural intelligence.

Core Self-Evaluation and CI

As opposed to the five-factor model of personality, which classifies personality according to five distinct and unique traits, a stable personality trait, which Judge, Locke,

and Durham (1997) extracted, integrates several interrelated dispositions present in the extant literature. When examining research across personality psychology, organizational psychology, social psychology, developmental psychology, and clinical psychology, the researchers identified four constructs that comprise the personality trait of core self-evaluation. These constructs include *locus of control*, *generalized self-efficacy*, *self-esteem*, and *neuroticism* (or the inverse, emotional stability).

As a personality trait, core self-evaluation is an indicator of the evaluations that people hold about themselves, others, and the world (Bono & Judge, 2003). These self-evaluations are fundamental, meaning they are at the individual's core and occur at a subconscious level. According to Judge et al. (1997) and Judge, Thoresen, Bono, and Patton (2001), the manner in which people make appraisals remains consistent because of these fundamental traits. As such, core self-evaluation is a baseline for cognitive evaluations and appraisals. Essentially, core self-evaluation is influential to one's feelings of worthiness, effectiveness, and capabilities.

Core self-evaluation is a higher order trait, which includes the four aforementioned constructs. Locus of control refers to a belief about the causes of life events (Rotter, 1966). People with an internal locus of control attribute occurrences to their own doing, or they believe themselves to be in control. Those with an external locus of control believe that events are a result of forces beyond their own control. Generalized self-efficacy, a variation of the original conceptualization of self-efficacy by Bandura (1982), refers to a belief in one's own capabilities in general or across a variety of situations. People who have high levels of generalized self-efficacy believe that they have the ability to perform effectively (Judge et al., 1997). Self-esteem, which reflects feelings

of self-worth, is an overall value that individuals place on themselves (Rosenberg, 1965). Finally, neuroticism or low emotional stability is the individual's tendency towards negative cognitive style and appraisal (Eysenck, 1990). Accordingly, people with high core self-evaluation are generally optimistic about themselves and their capabilities, and believe they are in control. Conversely, those with low core self-evaluation generally place low value on themselves, lack confidence in their own abilities, and believe the environment is beyond their control.

While the original focus of core self-evaluation research was job satisfaction, the concept has expanded to additional areas of study, including motivation, performance, stress, and engagement (Best, Stapleton, & Downey, 2005; Bono & Judge, 2003; Erez & Judge, 2001; Judge & Bono, 2001). However, research on core self-evaluation in the cross-cultural field is minimal. Mol, Born, Willemsen, and van der Molen (2005) examined predictors of willingness to undertake cross-cultural assignments among graduating students. Results indicated that, in addition to the Big Five, core self-evaluations emerged as a strong predictor of cross-cultural readiness. Another study examined social relationships and adjustment outcomes resulting from core self-evaluations among expatriate employees (Johnson et al., 2003). Data from the Johnson et al. (2003) study supported a relationship between core self-evaluation and the number of international contacts and adjustment. Findings from these two studies indicate that people with high core self-evaluation are willing to participate in cross-cultural interactions and are better able to adapt socially to cultural differences.

No study has indicated the relationship between core self-evaluation and CI alone. However, theoretical and conceptual foundations and research in similar areas showed

that these two constructs should be relevant to each other. The culturally intelligent individual engages in self-reflection, and puts forth the effort to navigate cross-cultural interactions effectively. As such, within the CI framework, core self-evaluation is an appropriate motivational trait to consider. Within a cross-cultural context, people high on core self-evaluation should believe in their own intercultural competency and ability to exercise control over the outcomes of their effort.

Hypothesis 7: Core self-evaluations will have a positive relationship with overall cultural intelligence.

Self-Efficacy and CI

While core self-evaluation captures generalized self-efficacy, the original conceptualization of self-efficacy by Bandura (1977) referred to the belief one has in their own capabilities to perform a specific task or functions. Thus, this type of self-efficacy differs from generalized self-efficacy as it can vary as a consequence of the specificity of the situation. Another key distinction is that self-efficacy is not limited to a personality trait, but considered a cognition, which has an influence to the expression of personality, attitudes, and motivation (Bandura, 1995). Consequently, self-efficacy has a major role in how people approach novel and challenging situations.

During challenging times, Bandura (1977) states that expectations of efficacy will determine if individuals initiate coping behaviors, the amount of effort that will be exerted, and the level of persistence to sustain. People with a strong sense of self-efficacy master obstacles and recover quickly from any setbacks or disappointment. These people tend to develop a deep interest in their activities and have a strong commitment to the mastery of tasks. Conversely, people with low expectations of efficacy believe that

obstacles are beyond their capabilities and subsequently avoid undertaking challenges. Low self-efficacy leads to feelings of failure and people with these feelings quickly lose confidence in their own abilities (Bandura, 1994).

According to Bandura (1994), the development of self-efficacy has four sources. First, people who have a history of mastering experiences and overcoming obstacles develop higher levels of self-efficacy over time. The positive outcomes from these experiences reinforce the belief in one's capabilities. Second, social learning and modeling can develop and foster feelings of self-efficacy. When people see similar others with high efficacy, expectations succeed; they too believe in their own abilities to succeed. Third, social persuasion can raise efficacy expectations. If others believe in one's abilities and subsequently provide encouragement and support, one is likely to overcome self-doubt and negative self-concept. Finally, psychological reactions can either elevate or reduce feelings of efficacy. Negative emotional responses and moods, such as stress and anxiety, reduce self-efficacy, and people who are unable to minimize these psychological responses are likely affected. Each of the aforementioned developmental aspects, which Bandura (1994) identified, are applicable when viewing self-efficacy in the context of cross-cultural situations.

Consider the following example to explain further the role of self-efficacy during cross-cultural interactions. When people engage in interactions with others from culturally diverse backgrounds, challenges in verbal and nonverbal communication often arise (as presented in Chapter 1). Perceptions of self-efficacy hinge upon previous experiences, the experiences of others, a sufficient support system, and psychological responses to challenges that arise. Therefore, people who have succeeded when

navigating these interactions and/or have seen others succeed in the same context will believe in their cross-cultural competence. Additionally, having the encouragement of others and appropriate coping strategies will help navigate these interactions.

Self-efficacy beliefs should be relevant to the development of CI within individuals. People who believe in their capabilities during cross-cultural interactions are likely to have higher levels of motivation. Specifically, these people will feel more confident during these interactions, leading to increased interest and sustained effort. Additionally, people with high self-efficacy in the cross-cultural context are likely to have larger behavioral repertoire's built upon their own experiences and the behavior of others. As such, higher self-efficacy should lead to better developed CI, especially in relation to motivational and behavioral factors. MacNab, Brislin, and Worthley (2012) studied the role of efficacy among participants in an eight-week experience-based CI development program. Participants in the studies were located in varying countries and their previous international experiences varied from never to over 10 times. Results from this study indicated that self-efficacy is relevant to CI and more pervasive than experience. This finding indicates that self-efficacy acts as an antecedent to the development of CI within individuals.

Hypothesis 8: Self-efficacy will have a positive relationship with overall cultural intelligence.

Self-Monitoring and CI

Self-monitoring is another individual difference linked to behavior during social interactions, and has thus gained much attention among CI researchers. Snyder (1974) first proposed the concept of self-monitoring to describe observed differences in

expressive behavior. According to Snyder, an underlying self-control component is influential to the manner in which people express themselves during social interactions. By monitoring verbal and nonverbal communication, people are able to avoid inappropriate expression of behavior and emotion.

Snyder (1974) originally proposed the concept of self-monitoring during a time of heightened debate among researchers between personal and environmental influences in social expression. Some researchers argued that personal characteristics were responsible for social behaviors (Freud, 1959; Wicker, 1969), while others believed that environmental cues overpower personal characteristics (Ekman & Friesen, 1969). As an attempt to resolve these arguments, Snyder suggested that for some individuals, personality and attitudes had the highest influence on behavioral expression, and for others, contextual cues were far more influential. Hence, people who are low on self-monitoring have limited control in their expression and their behaviors align with internal states. High self-monitors, on the other hand, initiate self-control when individuals interact with others and adjust their behaviors according to social cues.

Originally, the self-monitoring literature suggested five processes that lead to self-monitoring and behavioral change (Snyder, 1974, 1979). First, concern for the appropriateness of social behaviors must exist. Second, the individual must pay attention to social comparisons and cues of appropriateness. Third, one must have the ability to control or modify self-expression. Fourth, one must utilize the ability to self-regulate during social interactions. Finally, variability must be apparent, such that behaviors change according to specific situations. While Snyder posited that all of these components lead to positive social outcomes, later research and conceptualizations of

self-monitoring showed that two main underlying components have the most influence: the ability to modify self-presentation of behaviors and the sensitivity to the expressive behaviors of others (Lennox & Wolfe, 1982).

As a result of the nature of self-monitoring, a logical extension is to apply the concept to cross-cultural domains. People high in self-monitoring should be able to utilize these capabilities to better navigate interactions with culturally diverse others. By recognizing and being sensitive to culturally appropriate cues and modifying behavior accordingly, people with high self-monitors are likely to navigate cross-cultural interactions better than their low self-monitoring counterparts. Harrison et al. (1996) assessed the relationship between self-monitoring and adjustment among expatriate military personnel, finding a relationship between self-monitoring and adjustment. Specifically, self-monitoring was relevant to general adjustment and interaction adjustment, but not to work adjustment. These results indicate that high self-monitors are able to modify behaviors when engaging in cross-cultural interactions. While other scholars proposed these relationships (Markus & Kitayama, 1991; Triandis, 1989), additional empirical support is unavailable.

Researchers should consider self-monitoring within the framework and development of CI. Just as with self-efficacy, self-monitoring is likely to be important in motivational and behavioral factors. Individuals with high self-monitors are motivated by positive self-presentation (Snyder, 1979), and it follows that these individuals will want to modify their behavior according to what is culturally appropriate. Furthermore, these individuals should have the ability to express these behaviors appropriately. Self-

monitoring individuals are also likely to process cues actively during interactions, suggesting influences on the cognitive components of CI as well.

Hypothesis 9: Self-monitoring will have a positive relationship with overall cultural intelligence.

Emotional Intelligence and CI

Similar to self-monitoring of behaviors, emotional intelligence refers to the ability to perceive, control, and evaluate emotions (Salovey & Mayer, 1990). Similar to CI, emotional intelligence (EI) originates from the social intelligence work of Thorndike (1920) and the multiple intelligences which Gardner (1983) proposed. As an extension of these theories, EI shows a variety of characteristics and abilities in assessing one's own affective states, as well as those of others. While several conceptualizations and models of EI exist (Bar-On, 1997; Goleman, 2006; van Rooy, Whitman, & Viswesvaran, 2010), the model that Salovey and Mayor proposed (1990) has received the most attention within the field (Mayer, Salovey, & Caruso, 2000).

Mayer and Salovey (1997) defined EI as the set of abilities that account for how people's perceptions and understandings of emotions vary in accuracy. These authors believed that EI is a set of mental abilities, and that people high on these abilities are more socially effective than others. The model Mayor and Salovey proposed consists of four specific abilities: perceiving emotions, reasoning with emotions, understanding emotions, and managing emotions.

Perceiving and expressing of emotion is the most basic ability within the framework of EI. This ability refers to identifying and expressing one's own emotions accurately, as well as accurately identifying and expressing the emotions of others. The

emphasized term is accurate, as the perceptions should be in alignment with the true psychological states, feelings, and thoughts of the actor. The second ability, reasoning with emotions or assimilating emotions in thought, is distinctive of using emotions in cognition. The second ability allows for people to prioritize attention, thought, and reactions according to emotions. Additionally, emotions aid judgments and memory. Understanding and analyzing emotions, the third ability, involves labeling emotions correctly and understanding the relationships associated with those emotions. The third ability, involves recognizing emotions, knowing how they unfold, and reasoning accordingly. The final ability, managing emotions or regulating emotions, reflects responding with emotions appropriately and responding appropriately to the emotions of others (Mayer & Salovey, 1997).

Other models of EI have mixed models; scholars consider EI as a combination of abilities and personality characteristics (van Rooy, Viswesvaran, & Pluta, 2005). The model of Goleman (1996), for example, is essentially parallel with that of Mayer and Salovey's, and includes the addition of two motivation characteristics: zeal and persistence. The model of Bar-On (1997), however, follows a substantially different framework consisting of interpersonal skills, intrapersonal skills, adaptability, stress management, and general mood (i.e., happiness and optimism). Despite the lack of agreement between models, cross-cultural researchers have long been interested in the impact of EI. Related to many positive outcomes (van Rooy & Viswesvaran, 2004), EI has shown promise in alleviating adverse impact concerns when used in selection batteries (van Rooy, Alonso, & Viswesvaran, 2004) as well as being less prone to response distortion (Whitman, van Rooy, Viswesvaran, & Alonso, 2008)

As ability or trait, EI became the focus of much attention with respect to intercultural outcomes, such as adjustment and performance. Bar-On (1997) suggested that behaviors associated with EI provide the competency to adapt to varying cultures despite difficulty. By monitoring emotional expressions, cues, and reactions, people with high EI experience less stress due to uncertainty and change. Additionally, emotionally intelligent people apparently have more social ties and stronger support systems. Research in the field supports EI as a predictor of cross-cultural success in work and nonwork environments (Engelberg & Sjöberg, 2004; Kumar, Rose, & Subramaniam, 2008; Yoo, Matsumoto, & LeRoux, 2006). However, EI, conceptualized and measured, does not show variations among emotions and expression across cultures.

According to Earley and Ang (2003), EI theory indicates familiarity with cultural-specific norms and values, which is not always the case. A person can display EI within a culture; however, EI may not be transferrable to other cultural contexts. While EI and CI are somewhat related, they are conceptually distinct due varying assumptions regarding familiarity with cultures. CI theory does not have the presumption that people know and understand various cultures other than their own, which is subsequently influential to cross-cultural success. Processes such as perceiving, reasoning, and regulating emotions do overlap between EI and CI; nonetheless, the context in which these processes occur is unique. A significant amount of research has indicated the relationship between EI and CI and findings support a positive one. Not only has the relationship showed within student and working samples, (Ang et al., 2007; Ang et al., 2006; Kim et al., 2008; Lin, Chen, & Song, 2012; Ward, Fischer, Lam, & Hall, 2009), the relationship has existed within

specialized samples of cross-cultural negotiators (Imai & Gelfand, 2010) and leaders (Rockstuhl et al., 2011).

Hypothesis 10: Emotional intelligence will have a positive relationship with overall cultural intelligence.

Cross-Cultural Experience and CI

The final individual difference characteristic, cross-cultural experience, falls within the realm of biodata or biographical information. Biodata are facts about one's life experiences and personal history (J. E. Hunter & Hunter, 1984). As mentioned in the discussion of experiential learning theory (Kolb, 1984), life experiences facilitate learning and development within individuals. Therefore, with intercultural experiences, people are likely to have developed the necessary knowledge, skills, and behaviors for cross-cultural interactions.

Experience interacting with people from varying cultural backgrounds is essential in the development of CI abilities (Ang & van Dyne, 2008; Earley & Ang, 2003; MacNab et al., 2012). Specifically, people with this experience should have better developed mental models of culture. In other words, people who have engaged in cross-cultural interactions are likely to know the norms, values, and additional artifacts of cultures other than their own. Additionally, these people are likely to remain aware of differences, recognize social cues, and make adjustments accordingly. Numerous studies have included cross-cultural experience items when assessing CI, and the data from this research generally supports these propositions. While MacNab and colleagues (2012) found no evidence of a relationship between cross-cultural experience and CI, the majority of data does find support for a relationship between international experience,

overall CI, and factor-level CI (Ang et al., 2007; Ang et al., 2006; Imai & Gelfand, 2010; Kim et al., 2008; Lin et al., 2012; Rockstuhl et al., 2011; Ward et al., 2009).

Hypothesis 11: Experience with cross-cultural interactions will have a positive relationship with overall cultural intelligence.

As the aforementioned review and the numerous studies cited show, researchers have long been interested in the relationship between CI and the Big Five, emotional intelligence, and cross-cultural experience. However, the lack of clarity regarding the strength of these relationships warrants further research. Therefore, an examination of Hypotheses 2 through 6, 10, and 11 is essential in each of the three studies of this dissertation, including meta-analysis and primary research.

Research in the area of core self-evaluations, self-efficacy, and self-monitoring as they relate to CI is scarce in the extant literature. Consequently, a summary of these relationships is yet to be available via meta-analytic techniques. This dissertation will expand the nomological network of CI by assessing the relationships in Studies 2 and 3.

Outcomes of Cultural Intelligence

When CI was originally proposed, the goal of Earley and Ang (2003) was to explain why some people function and perform better than others do during culturally diverse situations. Prior to the introduction of CI, researchers examined several individual difference variables, including other intelligences, personality, experiences, values, attitudes, and more, to assess cross-cultural competency (Paige, 2004). Subsequently, researchers developed over 10 scales to make assessments (Ang & van Dyne, 2008; Paige, 2004). While these scales measured overlapping and unique constructs, the reason was still unclear about why some people were better suited for cross-cultural exchanges

than others (Ang & van Dyne, 2008). However, the reasons behind why existing approaches lacked cohesiveness and why theoretical foundations were incoherent were clear. Consequently, these constructs and measures had limited applicability.

Diversity training and expatriation literature are the bases of significant research involving cross-cultural predictors and outcomes. Logically, the criteria established within these studies included focus on adjustment and performance overseas. Similarly, the study of CI indicated much emphasis on these outcomes. For example, Kim et al. (2008) proposed a theoretical model in which expatriate adjustment (i.e., general adjustment, work adjustment, and interaction adjustment; Caligiuri, 1997) mediates the relationship between CI and expatriate performance. While the development of Kim et al. (2008) model is in progress, its application is limited to people who have extended international assignments. Shaffer and Miller (2008) proposed a different theoretical model in which CI mediates the relationship between personal, job and cultural factors, and expatriate success (expatriate adjustment, performance, and retention). Again, Shaffer and Miller's model is applicable only to workers on extended global assignments. While empirical support for these models exist (Lee & Sukoco, 2010; Lin et al., 2012; Rockstuhl et al., 2011), the scope of CI outcomes is not limited to global travel and international assignments.

As discussed in Chapter 1, globalization is greatly influential to cultural boundaries within today's societies. One does not need to travel abroad to engage in cross-cultural interactions; one only needs to consider the diversity within the United States today. Apparently, the American society has become increasingly ethnically and culturally heterogeneous (Matamala, Sawhney, Drew, Thomas, & Viswesvaran, 2012).

Even more, this trend expands beyond the United States, with increasing representation of culturally diverse groups in nations across the globe (Fearon, 2003). Subsequently, organizations, universities, large cities, and other settings are becoming increasingly multicultural. On a daily basis, people are engaging in cross-cultural interactions and CI is an influential factor during these interactions. Therefore, CI outcomes of performance and adjustment are now broader.

Cultural Intelligence and Performance

Performance is a central construct within organizational research and its operationalization varies according to context. Thus, performance in the workplace is referred to as job performance; performance at school is referred to as academic performance, and so forth. Despite the importance of context, the general understanding is that performance is an aggregate variable of multiple, discrete behaviors that occur over a specified time span (Motowidlo, 2003). Therefore, performance is variable within and between individuals, meaning that behaviors differ across time and situations and between comparative persons and within a single person. Due to its variability, performance within organizational psychology is an indicator of effectiveness based on the value attached to specific behaviors (Motowidlo, 2003).

A primary goal for performance research is to understand the causes of performance, or in other words, the factors that influence differing behaviors (Motowidlo, Borman, & Schmit, 1997). By understanding the factors that influence performance-related behaviors, it follows that these variables can be measurable to predict effective or ineffective outcomes. On the basis of research spanning several decades, Campbell (1990) proposed that declarative knowledge, procedural knowledge and skills, and

motivation are the determinants of performance. Declarative knowledge refers to knowledge of facts, principles, and procedures—essentially anything measurable by a subject matter test. Procedural knowledge and skills reflect doing or acting according to declarative knowledge, and is a combination of knowing what to do and actually being able to do it. Finally, motivation, determined by several individual differences, reflects effort and persistence in actions. Specifically, the combination of abilities, personality, interests, and experience are influential to motivation.

As mentioned, performance is an aggregate property of many distinct behaviors (Viswesvaran & Ones, 2000). Thus, declarative knowledge, procedural knowledge and skill, and motivation do not all impact specific behaviors equally. Borman and Motowidlo (1993) divided performance behaviors into two broad dimensions—task performance and contextual performance—for further clarity. Task performance involves behaviors that are specific to the completion of duties. For example, attending class and taking exams comprise the task performance dimension of the student. Contextual performance involves unexpected role behaviors, but still has value. Students, for example, do not have to participate in extracurricular activities, but doing so is beneficial to overall effectiveness. Furthermore, Motowidlo and associates (1997) proposed that declarative knowledge and procedural knowledge are influential to performance dimensions, according to the specific set of required knowledge and skills. Motivational influences vary, such that cognitive ability and conscientiousness are associated with task performance, and other interpersonally oriented personality traits are associated with contextual performance.

An understanding of the relationship between overall CI and performance may be most feasible by considering the subfactors of CI first. Metacognitive CI and cognitive CI are essentially parallel with declarative knowledge and procedural knowledge and skill. These CI factors reflect knowledge of cultural artifacts and the processing of cultural knowledge to modify behaviors (Ang & van Dyne, 2008). Motivational CI includes the motivation component of performance indicators, according to the conceptualization of Campbell (1990). Lastly, behavioral CI crosses each of the three-predictor dimensions. Therefore, keeping in mind that these subfactors are codependent in their composition of CI, overall CI is likely to influence task and contextual performance to some extent.

Overall, CI is a socially driven construct suggesting that the unique set of associated knowledge, skills, motivations, and behaviors are better adept for contextual performance. Furthermore, an overlap is evident across job performance dimensions (cf. Viswesvaran, Schmidt, & Ones, 2005). Given these areas of overlap across CI dimensions as well as job performance dimensions, examining how overall CI relates to overall job performance as well as task and contextual performance would be beneficial.

While research examining the relationship between CI and performance is available, the manner of defining and assessing performance lacks cohesion. The performance behaviors and expectations for expatriates are substantially different from national samples. Studies focusing on expatriate performance have found significant relationships between CI and overall performance, task performance, and contextual performance (Lee & Sukoco, 2012; Rose, Ramalu, Uli, & Kumar, 2010). Other conceptualizations of performance linked to CI include cross-cultural leadership effectiveness (Rockstuhl et al., 2011) and adaptive performance (Oodlers et al., 2008).

In nonexpatriate student samples, Ang and colleagues (2007) found that CI was a significant predictor of performance, defined as cross-cultural judgment and decision making, in addition to task performance. Additional research examining performance outcomes in nonexpatriate samples is unavailable. Drawing from the trends in cultural mixing, the aforementioned rationale, and the limited empirical research, CI would relate to overall performance, especially, contextual performance.

Hypothesis 12: Cultural intelligence will predict overall performance.

Hypothesis 13: Cultural intelligence will predict contextual performance.

Another important consideration in the development of CI theory is to establish its benefit to the field. In line with the principle of parsimony, whenever a new construct is proposed, it bears the burden of demonstrating its significance over other related constructs (Sackett & Lievens, 2008). The new construct only adds value to the current pool of theories if it results in better predictions of criteria than already established predictor constructs. Thus, CI should provide better predictions of performance outcomes than other established predictor variables, such as personality and experience (Barrick & Mount, 1991; Hunter & Schmidt, 1998; Law, Wong, & Song, 2004).

Hypothesis 14: Personality will predict overall performance and contextual performance. Specifically, conscientiousness and extraversion will have a positive correlation with overall performance and contextual performance.

Hypothesis 15: Experience with cross-cultural interactions will predict overall and contextual performance.

Hypothesis 16: Cultural intelligence will explain incremental variance in the prediction of overall and contextual performance, beyond that explained by personality and cross-cultural experience.

Cultural Intelligence and Cultural Adaptation

Unique from performance, cultural adaptation reflects a process that people undertake to achieve a better fit within culturally diverse contexts. Cross-cultural environments are often unfamiliar and ambiguous, which can lead to stress and confusion. Moreover, the challenges that arise in these situations often result in misunderstanding and conflict (Black & Gregersen, 1991). Originating from social psychology (Lazarus & Folkman, 1984) and acculturation literatures (Berry, 1980), cultural adaptation is an outcome of coping and adjusting based upon the appraisal of sociocultural cues and stressors (Berry & Sam, 1997; Searle & Ward, 1990). Subsequently, adaptation is comprised of intertwined psychological well-being and adjustment factors.

In 1991, Black, Mendenhall, and Oddou proposed a comprehensive model of international adjustment. The model consists of general, work, and interactional dimensions. According to this model, general adjustment reflects acclimation to living situations, work adjustment reflects acceptance of job and performance standards, and interaction adjustment reflects comfort when interacting with host nationals. To experience a positive mental well-being, such as satisfaction and enjoyment, adjustment must occur within each of these dimensions (Brislin, 1981). When one has fully adjusted and experiences well-being, it follows that adaptation has occurred.

Considering the role of CI in adaptation, Earley and Ang (2003) proposed that CI is influential to one's ability to adjust. Specifically, people with high levels of CI are able to identify, recognize, and reconcile cultural differences with much less effort than those with low CI. These differences lead to easier adjustment for the culturally intelligent individual. Templer et al. (2006) examined the relationship between motivational CI and cross-cultural adjustment and found significance for each of the three international adjustment dimensions. Ang and colleagues (2007) studied each of the CI factors and found that motivational and behavioral CI related significantly to all three types of international adjustment. In addition, metacognitive CI was significantly related to general adjustment and cognitive CI was significantly related to general and interaction adjustment. Additional studies have also found empirical support for the relationship between CI and expatriate adjustment (Ahmadi et al., 2011; Lee & Sukoco, 2010).

While much empirical evidence is supportive of international adjustment model relative to CI, according to Black and associates (1991), its applicability is limited beyond expatriate samples. As discussed, the shift in demographics is essential for people to adapt to cultural differences even in domestic settings. For example, Ang and colleagues (2007) found that over 77% of their domestic student sample indicated having prior cross-cultural experiences. As cultural adaption is composite of adjustment behaviors and psychological well-being, components of the construct are relevant and applicable to any multicultural including domestic organizations. Of the three types of adjustment (Black & Stephens, 1989), interaction adjustment is certainly applicable to these cases, as it deals with socialization. It follows then that interaction adjustment and

its impact on cultural adaptation is applicable to domestic settings that are culturally diverse.

Researchers have recognized the importance of CI in cultural adaptation outcomes in a broader context, and have modified constructs and measures accordingly. For example, Ang and associates (2006) found that CI predicted interaction adjustment and psychological well-being among undergraduate students beyond demographics, cognitive ability, and emotional intelligence. While Ward and associates (2009) did not find that CI predicted psychological, sociocultural, and academic adaptive outcomes in an initial study, a follow-up longitudinal study concluded that motivational CI was in fact a predictor of psychological and sociocultural adaptation among students (Ward, Wilson, and Fischer, 2011). These results show that with an appropriate understanding of domestic cross-cultural interactions, CI will significantly influence cultural adaptation. In addition, CI is likely to show predictive power over that of personality and cross-cultural experience (Ang et al., 2007).

Hypothesis 17: Cultural intelligence will predict cultural adaptation.

Hypothesis 18: Personality will predict cultural adaptation. Specifically, openness to experience and emotional stability will have a positive correlation with cultural adaptation.

Hypothesis 19: Experience with cross-cultural interactions will predict cultural adaptation.

Hypothesis 20: Cultural intelligence will explain incremental variance in the prediction of cultural adaptation beyond that explained by personality and cross-cultural experience.

In conclusion, this dissertation includes 20 proposed hypotheses to confirm the factor structure of CI and to establish a comprehensive nomological network of correlates and outcomes. Well-established CI correlates in the literature include personality, emotional intelligence, and cross-cultural experience, studied via meta-analysis (Study 1) as well as primary analysis (Studies 2 and 3). The relationships between CI and core-self evaluations, self-efficacy, and self-monitoring have been studied at minimum, if it all, and were further investigated in Studies 2 and 3. The summary of performance and adaptation outcomes of CI is part of Study 1, and further examination is part of Studies 2 and 3. Lastly, the examined incremental validity of CI in predicting these outcomes over personality, emotional intelligence, and cross-cultural experience is part of Studies 2 and 3. A detailed review of the methodology used to test these hypotheses follows in the next chapter.

CHAPTER III: METHOD

The third chapter of this dissertation includes a detailed account of the methodology used to test the hypotheses presented in Chapter II. Three separate studies were conducted for the most comprehensive testing of the CI construct. Study 1 was a meta-analysis of the relationships between CI and the Big Five, emotional intelligence, cross-cultural experience, and the outcomes. Studies 2 and 3 consisted of primary research to test the nomological network of CI. Because of similarities among the studies, the method sections include the (a) description of the databases that compiled for each study, (b) measures used to collect primary data, and (c) procedures used to analyze the data explained for each of the three studies.

Databases

Study 1. The first study was a meta-analysis of the relationships between CI and the Big Five, emotional intelligence, cross-cultural experience, as well as performance and adaptation outcomes. Meta-analysis is a statistical technique that integrates data from a pool of empirical studies and provides a quantitative synopsis of the findings. To use a meta-analytic technique, the relationships of interest must have already been measured in several other studies. As it relates to this dissertation, meta-analysis was used to examine the relationship between CI and its commonly studied correlates (i.e., extraversion, emotional stability, conscientiousness, agreeableness, and openness to experience, emotional intelligence and cross-cultural experience). In other words, Study 1 tested Hypotheses 2 through 6, 10, and 11. Additionally, sufficient research was useful in summarizing the relationships between CI and performance and adaptation outcomes, which correspond with Hypotheses 12 and 17.

Literature search. The database used for the meta-analysis came from the extant literature examining CI. Articles were identified for possible inclusion through a computer-based literature search of PsycINFO, PsycARTICLES, and ABI/INFORM using the search term *cultural intelligence* combined with the following keywords: personality, the Big Five, the five-factor model, emotional intelligence, cross-cultural experience, performance, adaptation, and adjustment. Considering that CI is a relatively new construct, these searches had no date restrictions. The electronic search was supplemented with several other methods. First, a manual search of the references cited within all of the obtained articles was conducted. Second, programs and abstracts of recent scholarly meetings (e.g., the Society for Industrial and Organizational Psychology and the Academy of Management) were screened to collect any unpublished data. These additional searches ensured that the database was complete and comprehensive in accordance with the CI literature.

Inclusion and exclusion criteria. To be included in the meta-analysis, studies had to meet certain criteria. First, only primary studies that empirically examine the relationships between CI and the aforementioned correlates (personality, emotional intelligence, cross-cultural experience, performance, and adaptation) were included. As such, purely qualitative studies, or those that did not include statistical findings, were omitted. Second, enough information must have been reported to calculate the appropriate effect size. To be included, all studies needed to report the sample size and correlation coefficient for the target relationships (Hunter & Schmidt, 2004). Third, no restrictions were placed on sample demographics, meaning that student and working samples were included. Fourth, foreign samples were also included as CI is a culture-

related construct. Finally, because of to the limited empirical data available, no restrictions were placed on the journal in which the articles are published. Accordingly, unpublished research and dissertations were included in the study.

As part of the preliminary screening, I checked the abstracts of all research resulting from the searches. I eliminated from the database studies whose abstracts do not meet the inclusion criteria, and further examined studies whose abstracts did not clearly list criteria as needed. As a result, I reviewed 233 studies of the multiple search methods used for inclusion in the meta-analysis. Only 28 of these met all the necessary criteria. In this case, two of the included studies contributed two or more samples, resulting in 33 independent samples.

Coding of data. I coded all data and directed any questionable data to a subject matter expert for further review. Specifically, I classified personality measures beyond the Big Five according to the five-factor model and treated all measures of emotional intelligence as one. I coded cross-cultural experience in monthly increments. Lastly, I classified outcomes of CI as either performance or adaptation according to theory and reasoning. Whenever I had any questions or uncertainty about how a measure should be coded, I consulted a second researcher. The second researcher reviewed the manuscript and also coded the variable according the present meta-analysis variables. The second researcher and I were in full agreement for each of these special cases. Once I coded all articles, the database for Study 1 was complete.

Study 2. The second study was an investigation of the factor structure of CI, as well as further investigation into CI's nomological network and outcomes. In addition to examining commonly measured correlates of the Big Five, emotional intelligence and

cross-cultural experience, I also examined in this study CI relationships with core self-evaluation, self-monitoring, and self-efficacy. Thus, I tested Hypotheses 1 through 11 with the data collected in Study 2. My second aim for Study 2 was to investigate CI relationship with the outcomes of performance (overall performance and contextual performance) and cultural adaptation. Furthermore, I examined the predictive and incremental validity of CI for performance and cultural adaptation beyond the Big Five and cross-cultural experience. Therefore, I also tested Hypotheses 12 through 20 in Study 2.

Participants. In this study, I tested the aforementioned hypotheses with a sample of undergraduate psychology students at a large public university in the Southeastern United States. The study participants included 511 students, yielding 365 accurate response sets. To consider accurate, participants must have answered all six "dummy" questions correctly (i.e., "For this question, please select strongly disagree"). I maintained this strict level of accuracy as all data collected via self-report, including key outcome variables. Of this final sample, the approximately half of participants were female (52%) and the mean age was 22 years old. Participants reported a mean grade point average (GPA) of 3.20 and they worked an average of 16 hours per week. University settings are full of cultural diversity, and students must engage in cross-cultural interactions often. Far more than half of the participants reported to be of a Hispanic or Latino ethnicity (75%), with Whites/Caucasians (10%), Blacks/African Americans (8%), and Asians/Pacific Islanders (3%) following. Additionally, participants reported living or traveling outside of the United States for an average of 30 months.

I used a university-based, online research system to recruit and manage participants. Participation in the study was anonymous and voluntary. I awarded extra credit to students in exchange for their participation. Participation involved the completion of an online questionnaire, with the details described in a later section.

Procedure. When students logged into the university-sponsored research management system and volunteered to participate in this study, they were provided with a link to access the survey. Each student received the same assessment and was able to exit at any time. All data obtained from the questionnaire were confidential and all Institutional Review Board (IRB) standards were maintained. The assessment took approximately one hour to complete, and in exchange, students received one research credit upon completion.

Study 3. Similar to Study 2, the third study tested each of the hypotheses described in Chapter II. Thus, Study 3 investigated the factor structure of CI and examined an expanded nomological network including personality, emotional intelligence, core self-evaluation, self-monitoring, self-efficacy, and cross-cultural experience. Outcomes of examined CI include overall performance, contextual performance, and cultural adaptation. Lastly, Study 3 assessed the predictive and incremental validity of CI for performance and cultural adaptation beyond the Big Five and cross-cultural experience. Thus, the aim of Study 3 was to provide further evidence for CI relationships and demonstrate generalizability in a sample unique from Study 2.

Participants. The sample for Study 3 consisted of working adults, who, upon request, participated via a commercial, online platform. This tool actively recruited and paid participants to complete the online questionnaire. Use of this online platform for

research has been supported by several studies and analyses (Buhrmester, Kwang, & Gosling, 2011; Paolacci, Chandler, & Ipeiriotis, 2010). To self-select into the study, participants were required to be working 30 or more hours per week.

The 574 participants completed online questionnaires, of which 372 included complete and accurate data. Data were tested for accuracy according to six "dummy" items that were randomly placed throughout the survey, and each of the items must have been answered correctly. The strict accuracy test was applied to ensure that only high quality data was included in the analysis as all data was collected via self-report through a paid participant system. In the final sample, the majority of participants were male (56%) and the sample's mean age was 35 years old. Approximately two-thirds of participants (62%) lived in the United States, followed by Asia (34%), and Europe (1%). Less than half a percent of the remaining participants reside in Canada, the Middle East, Africa, or Latin America. Approximately half of participants reported race or ethnicity as White/Caucasian (51%), with Asian, Pacific Islander (39%), Black/African American (4%), Hispanic/Latino (4%), and other (3%) following.

As mentioned, the requirement was that participants worked 30 or more hours per week, and participants reported working an average of 42 hours per week. Participants represented a variety of industries including business/professional services (38%), retail (15%), education (14%), financial services (13%), health care (10%), government (6%), and agriculture/mining (4%). The majority of participants worked at nonmanagerial levels (64%) and most had not participated in any international work assignments (73%). Additionally, participants reported living or traveling outside of their home country for an average of nine months.

Because of the web-based solicitation design, participants would vary significantly, as expected, in their geographic location, industry and career level, and other demographics. Participation in the study was anonymous and voluntary. In exchange for participation, participants received a monetary reward through the online system.

Procedure. When respondents logged into the online platform, they were provided with several potential "jobs" and the pay rate for each. Those who selected to participate in this study were provided with a link to the online assessment. Each participant received the same questionnaire and was able to exit at any time. All data obtained from the questionnaire remained confidential and all IRB standards were maintained. The assessment took no longer than approximately one hour to complete, and in exchange, participants will received $1 U.S. dollar upon completion. The following section will describe the measures used to collect data in Studies 2 and 3.

Measures

Cultural intelligence. Cultural intelligence was measured using the 20-item cultural intelligence scale, which van Dyne et al. (2008) developed. Items are designed to measure one of the four factors of CI, which include metacognitive CI, cognitive CI, motivational CI, and behavioral CI. Items are scored on a 5-point scale (1: Strongly disagree, 2: Disagree, 3: Neither agree nor disagree, 4: Agree, 5: Strongly agree), with higher scores indicating higher levels of CI. Sample items include "I am conscious of the cultural knowledge I apply to cross-cultural interactions," and "I enjoy interacting with people from different cultures." To determine an overall CI score, factor-level scores will

be averaged. During scale development and validation, internal consistency reliabilities at the factor-level ranged from .78 to .81. The CSQ was used for Studies 2 and 3.

The Big Five. The Big Five inventory-10 (Rammstedt & John, 2007) was used to measure each of the five personality traits. This measured was adapted from the original Big Five inventory (BFI-44; Oliver, Donahue, & Kentle, 1991) and includes two items for each of the following traits: extraversion ($\propto$ = .89), agreeableness ($\propto$ = .74), conscientiousness ($\propto$ = .82), emotional stability ($\propto$ = .86), and openness to experience ($\propto$ = .79). Sample items include "I see myself as someone who gets nervous easily" and "I see myself as someone who does a thorough job." Items are scored on a 5-point scale ranging from 1 = "Strongly disagree" to 5 = "Strongly agree." Five items require reverse coding to maintain a positive direction. Validation studies of the Big Five inventory-10 demonstrate its generalizability across time and raters, and the measure was validated against the commonly the used NEO-PI-R (Costa & McCrae, 1992) and the BFI with sufficient support (r = .67 and .78, respectively). The Big Five inventory-10 was used in Studies 2 and 3.

Core self-evaluation. The 12-item core self-evaluation scale, which Judge, Erez, Bono, and Thoresen (2003) developed, was used to assess core self-evaluation. The scale provides one overall score for core self-evaluation and rates on a 5-point scale (1: Strongly disagree, 2: Disagree, 3: Neither agree nor disagree, 4: Agree, 5: Strongly agree). A higher score indicates higher levels of core self-evaluation. Sample core self-evaluation scale items include "When I try, I generally succeed" and "I am capable of coping with most of my problems." During scale development and validation, four

independent samples were tested, and the mean Cronbach's alpha across the samples was .84. The core self-evaluation scale was used in Studies 2 and 3.

Self-efficacy. The 23-item self-efficacy scale, which Sherer and colleagues (1982) developed, was used to assess self-efficacy. General self-efficacy is measured by 17 of the items ($\alpha = .82$), and sample items include "If I can't do a job the first time, I keep trying until I can" and "Failure just makes me try harder." Social self-efficacy is measured by six of the items ($\alpha = .71$) and sample items for this scale include "Making new friends is difficult for me" and "I have acquired my friends through my personal abilities at making friends." All item responses are on a 5-point scale from ranging from 1 = "Strongly disagree" to 5 = "Strongly agree." Scale scores are not combined to form an overall score, however. Considering the nature of the study and the CI construct, only the social self-efficacy scale items will be included in the analyses. The same social self-efficacy scale items were useful for Studies 2 and 3.

Self-monitoring. Snyder and Gangestad's (1987) revised 18-item self-monitoring scale were used to assess self-monitoring. The revised version better differentiates between high and low self-monitors than the original self-monitoring scale (Snyder, 1974). Participants indicated their responses on a 5-point Likert scale from "Nothing like me (1)" to "Just like me (5)." Sample self-monitoring scale items include "In different situations and with different people, I often act like a different person" and the reversed "I would not change my opinions (or the way I do things) to please someone or win their favor." The researchers provided several internal consistency estimates, and each is above .70. Self-monitoring was measured using the self-monitoring scale in Studies 2 and 3.

Emotional intelligence. The Wong and Law Emotional Intelligence Scale (WLEIS; Wong and Law, 2002) was used to measure emotional intelligence. The WLEIS is a 16-item measure consisting of the following four subscales: self-emotions appraisal (e.g., "I really understand what I feel"), others-emotions appraisal (e.g., "I am sensitive to the feelings and emotions of others"), use of emotion (e.g., "I am a self-motivating person"), and regulation of emotion (e.g., "I can always calm down quickly when I am angry"). Each dimension is measured with four items, and during validation the internal consistency reliabilities ranged from .76 to .90. Reponses to the WLEIS items are part of a 5-point scale (1: Strongly disagree, 2: Disagree, 3: Neither agree nor disagree, 4: Agree, 5: Strongly agree), and scores are combined to provide an overall emotional intelligence score. Higher scores indicate higher levels of emotional intelligence. The WLEIS was used to measure emotional intelligence in Studies 2 and 3.

Cross-cultural experience. Cross-cultural experience was measured by asking participants to self-report their time spent in cultures different from their primary culture. Parallel questions were written for each sample. Specifically, participants in samples were asked to report the number of months spent outside the United States for Study 2 and the number of months spent outside their home country for Study 3.

Job performance. Overall job performance captured contextual performance and task performance. As a result of the varying nature of job performance between college students and workers, different measures were used in Studies 2 and 3. In Study 2, items were selected to reflect student-related task and contextual performance. The four-item measure developed by Markel and Frone (1998) was used to measure task performance. Participants responded with how often they engage in role performance behaviors on a 5-

point scale (1: Never, 2: Almost never, 3: Sometimes, 4: Fairly often, 5: Very often).

Sample items include "Put forth a high level of effort in class" and "Complete

assignments on time." To measure contextual performance, four items were selected from

the scale developed by Podsakoff and MacKenzie (1994). Participants respond to these

items on a 5-point scale (1: Strongly disagree, 2: Disagree, 3: Neither agree nor disagree,

4: Agree, 5: Strongly agree), and sample items include "I attend and actively participate

in school meetings" and "I take steps to try to prevent problems with other students in my

classes." The aforementioned scales demonstrated alpha reliabilities above .80 during

their original validation.

For Study 3, items were selected to reflect general work-related task and

contextual performance. The four-item measure developed by van Dyne and LePine

(1998) will be used to measure task performance. Items will be score on a 5-point scale

ranging from 1 = "Strongly disagree" to 5 = "Strongly agree." Samples items from this

measure include "I perform tasks that are expected as a part of my job" and "I fulfill the

responsibilities that are specified in my job description." To measure contextual

performance, four items were also adapted from van Dyne and LePine, and scored

according to the aforementioned scale. Sample contextual performance items include "I

attend functions that are not required, but will help my company" and "I help others with

their work responsibilities." The alpha coefficients for these scales were .95 and .85,

respectively.

Cultural adaptation. Cultural adaptation was measured as a composite score of

interaction adjustment and psychological well-being. Interaction adjustment was assessed

with three items adapted from Black and Stephens (1989). The items ask how well people

are adjusted to their current situations with regard to "socializing with culturally diverse people," "interacting with culturally diverse people on a day-to-day basis," and "getting along with people from different cultural backgrounds." Responses are indicated on a 5-point scale ranging from 1 = "Extremely unadjusted" to 5 = "Extremely adjusted." The internal consistency during validation of the scale was .89. Psychological well-being was measured with four items from the General Health Questionnaire ($\propto$ = .77) of Goldberg and Williams (1988). The items ask participants to rate the extent of their general well-being for each of the following: "being able to concentrate on whatever you are doing despite cultural differences," "feeling that you are useful or are making useful contributions despite cultural difference," "feeling capable of making decisions despite cultural differences," and "being able to face up to responsibilities." Responses are indicated on a 5-point scale ranging from 1 = "Not at all" to 5 = "A great extent." The same measures were used in Studies 2 and 3.

Demographics. Demographic information that was measured includes gender, age, ethnicity, and residency for samples (Studies 2 and 3). Students comprising the Study 2 sample were also be asked to provide their class standing, GPA and the number of hours worked per week. Workers comprising the Study 3 sample were asked the number of hours worked per week, tenure with their current employer, the industry in which they work and whether they are in a managerial position.

In addition to the above demographic items, participants were also asked additional questions about their cross-cultural backgrounds. For Study 2, the questions were written towards a student sample from the United States. Participants were asked,

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1. "What percentage of your social relations (i.e., friends, family, peers, coworkers) have a cultural background different from your own?"

2. "Have you ever taken a class about culture or received any formal training about culture?"

3. "Have you ever participated in an international study abroad assignment or international work assignment?"

The first question was on a 5-point scale from 1 = "0–20%" to 5 = "80–100%." The second and third questions are answered on a yes/no scale.

For Study 3, the same questions were written towards an international working sample. Participants were asked,

1. "What percentage of your social relations (i.e., friends, family, peers, coworkers) come from a cultural background different from your own?"

2. "Have you ever received any formal training (or taken a formal class) about culture?"

3. "Have you ever participated in an international work (or school) assignment?"

The first question was on a 5-point scale from 1 = "0–20%" to 5 = "80–100%." The second and third questions are answered on a yes/no scale.

Manipulation items. Six manipulation items will be randomly dispersed throughout the questionnaire. These items were useful in determining if participants responded with accuracy, and in determining whether discarding data from the set prior to analysis is a prerequisite. A sample manipulation item is "For this question, please select the response *strongly agree.*"

Analyses

Study 1. The analyses for Study 1 followed the meta-analytic procedures, which Hunter and Schmidt (2004) designed. Experts agree that meta-analysis techniques are a powerful and accurate means to synthesize and streamline relationships within a domain of research. As Rosenthal (1991) suggested, the "bare-bones" technique was adopted to maintain the most conservative approach. These procedures were used to compute the average true effect size across multiple studies testing the same relationships. These procedures are able to determine the variability of the computed effect size across all of studies.

Meta-analytic procedures involve computing an overall effect size for each specific outcome or correlate examined in relation to CI. Key components needed for the analysis included the number of independent samples (k) and the total samples size across all studies (N). Effect sizes from these studies are then used to calculate the sample-size weighted mean correlation (r), the sample-size weighted standard deviation (SDr), the residual standard deviation (SD_{RES}), percentage variance due to sampling error (%Var), and the 80% confidence interval (80% CI), respectively.

Studies 2 and 3. Regardless of identical procedures and analyses for Studies 2 and 3, the data was chosen to be viewed separately rather than combined for several reasons. First, slight differences were evident in the wording for cross-cultural interaction items such that items may have been measuring constructs between the two samples. Second, and similarly, items measuring the outcome variables (performance and cultural adaption) were worded slightly differently to increase their relevance to the respective sample. Third, and perhaps most important, is the belief that true differences exist

between students and adult workers for the key variables of interest. To provider further

evidence for these differences, especially in outcome variables, t tests were conducted to

compare the means differences for key variables. The results are presented in Table 1.

As can be seen from the table, significant differences were found between the

student and adult sample for the following variables: emotional stability,

conscientiousness, social self-efficacy, overall performance, contextual performance, and

cultural adaptation. While differences are not found for the majority of variables, they are

found for key variables, particularly outcomes. As mentioned, the items measuring

outcome variables were parallel between the two samples, with only slight wording

differences applied to differentiate the student and adult worker context. Thus, the

differences seen for these outcomes between the two samples can be interpreted as real

differences, implying that the samples should be treated as unique.

Table 1

Mean Differences Between Student Sample (Study 2) and Adult Sample (Study 3) for

Key Variables

	Student sample		Adult sample		
	M	SD	M	SD	*t* test
Overall CI	3.46	0.50	3.45	.55	.253
Extraversion	3.21	0.84	3.12	1.02	1.343
Emotional stability	3.00	.98	2.54	.98	7.660**
Conscientiousness	3.66	0.70	3.98	0.78	5.855**
Agreeableness	3.67	0.70	3.76	0.86	1.531
Openness to experience	3.60	0.78	3.56	0.86	.565
Core self-evaluation	3.64	.53	3.56	0.64	1.838
Social self-efficacy	3.43	.58	3.33	0.71	2.083*
Self-monitoring	2.93	.47	2.86	0.52	1.888
Emotional intelligence	3.93	0.54	3.89	0.55	1.014
Overall performance	3.78	0.59	4.03	0.55	6.088**
Contextual performance	3.18	0.88	4.47	0.60	23.486**
Cultural adaptation	4.28	0.53	4.00	0.54	6.909**

Note. *N* = 365 (Study 2), *N* = 372 (Study 3). *$p < .05$, **$p < .01$.

For Studies 2 and 3, all data were entered into SPSS for analysis. Prior to analysis,

data was screened for completeness and accuracy according to the manipulation items. If

a participant's responses are found to be incomplete or inaccurate, their entire response

set will be removed. Data for negatively worded, or reversed, items were recoded to

match the scoring scale, after which scale scores were computed for the respective latent

variable (i.e., personality, core self-evaluation, self-efficacy, self-monitoring, emotional

intelligence, cross-cultural experience, overall performance, contextual performance, and

cultural adaptation). Initial analyses were run to test for normality, collinearity, and

outliers. Any special cases, including outliers and missing values, were removed

accordingly. Lastly, means, standard deviations, and correlations for all study variables were tested to provide a statistical summary of the data.

A confirmatory factor (CFA) analysis was used to test the structure of CI according to item responses on the cultural intelligence scale measure. The CFA tests observations, or the obtained data, against their hypothesized underlying latent constructs. The analysis determined how well the proposed model (i.e., the four-factor structure for CI) fits the data. Several tests and indices were used to determine the model fit, including chi-square, the comparative fit index, and the root mean square approximation. Thus, the CFA was specific to the testing of H1.

Correlations and regressions were used to test the remainder of the hypotheses with the data obtained from Studies 2 and 3. Correlations tested the direction and strength of the relationships between CI and each of the other constructs of interest (i.e., personality, core self-evaluation, self-efficacy, self-monitoring, emotional intelligence, cross-cultural experience, overall performance, contextual performance, and cultural adaptation). Regression analyses were run to further test the nature of these of these relationships. Lastly, hierarchical regression was used to determine the incremental and predictive validity of CI for performance and cultural adaptation (H16 and H20). Personality and cross-cultural experience were entered into the first step of the hierarchical regression, and CI was entered into the second step. An examination of the change F statistics, beta values, and the adjusted R^2 were examined to determine the incremental and predictive validity of CI.

In addition to the aforementioned analyses for hypotheses testing, additional analyses were run to explore CI as a mediator of relevant antecedents and outcomes.

These mediation analyses followed the procedures outlined by Baron and Kenny (1986), and include a series of four regression equations. First, a simple regression is used to test the relationship between the antecedent variable and the outcome. Second, a regression equation tests the relationship between the antecedent and the mediator variable. Third, a regression equation is used to test the relationship between the mediator variable and the outcome. Finally, a multiple regression equation tests the model with the antecedent and the mediator predicting the outcome. If the path between the mediator and the outcome is significant in the final model, and after controlling for the antecedent-outcome relationship, some form of mediation is supported.

CHAPTER IV: RESULTS

Results for the three studies examining the nomological network of CI are presented below. Study 1 meta-analyzes the results of existing studies to capture the relationship between CI and several already identified correlates and outcomes. Studies 2 and 3 further investigate the factor structure of CI as well as its relationships with an extended network of correlates and outcomes in differing samples. Specifically, the studies examine the strength of the relationships and CI's incremental validity, or predictive validity, over traditional predictors. Study 2 results are based on data from a student sample and Study 3 results are based on data from an adult working sample. Lastly, several exploratory analyses assess the role of CI as a mediator between appropriate antecedents and outcomes using data from the second and third studies. Each of these studies includes a number of analyses to determine whether the data support the hypotheses proposed in previous chapters. The following sections will describe in detail the results for each of the studies.

Study 1

The first study quantitatively reviews the extant literature investigating the relationships between CI and several determined correlates and outcomes. Results of the meta-analysis are presented in Table 2. The first column indicates the specific outcome or correlate examined, followed by the number of independent samples (k) and the total samples size across all studies (N). The next columns present the sample-size weighted mean correlation (r), the sample-size weighted standard deviation (SDr), the residual standard deviation (SD_{RES}), percentage variance due to sampling error (%Var), and the 80% confidence interval (80% CI), respectively.

Observed correlations. In Table 1, the sample-size weighted mean correlations for the Big Five personality factors with CI are all weak to moderate and positive. The relationships with openness to experience and extraversion were strongest at .27 and .25, respectively. For emotional stability, the correlation with CI was .16, and the correlations were .11 for conscientiousness and agreeableness. The 80% confidence intervals for each of these effect sizes were quite wide, ranging from negative to positive values and including zero. Thus, the predicted positive relationships between the Big Five and CI were not supported (Hypotheses 2 through 6).

For emotional intelligence, the sample-size weight mean correlation with CI was .36. For this estimate, the 80% confidence interval ranged from -.18 to .90 which also includes zero, suggesting little confidence in a positive effect size. Thus, the data failed to provide support for Hypothesis 10, which predicted a positive relationship between CI and emotional intelligence.

For cross-cultural experience, the sample-size weighted mean correlation with CI was .26. Here, the 80% confidence interval for this effect size ranged from .05 to .39, which does not include the null value. Thus, the data provides support for a positive relationship between CI and cross-cultural experience as was predicted in Hypothesis 11.

Also in Table 2, weak to moderate positive relationships were found between CI and the outcome variables of performance (.26) and adaptation (.28). The 80% confidence intervals for performance and adaptation ranged from .09 to .43 and .10 to .46, respectively. Just as positive relationships were predicted, these intervals provide support for Hypotheses 12 and 13.

Table 2

Meta-Analysis of Cultural Intelligence, Correlates, and Outcomes

Category	k	N	r	SDr	SD_{RES}	%Var	80% CI
Outcome							
Performance	16	3519	0.26	0.1458	0.1294	21.28	.09 to .43
Adaptation	14	4271	0.28	0.1515	0.1403	14.17	.10 to .46
Correlate							
Conscientiousness	6	1610	0.11	0.0794	0.2751	59.26	-.23 to .46
Extraversion	9	2182	0.25	0.1173	0.3364	29.86	-.17 to .68
Agreeableness	6	1610	0.11	0.111	0.3276	30.33	-.31 to .53
Emotional stability	9	2416	0.16	0.1259	0.3494	23.57	-.29 to .61
Openness	12	2953	0.27	0.1263	0.3493	25.31	-.18 to .72
Emotional intelligence	9	2304	0.36	0.179	0.4185	11.84	-.18 to .90
Cross-cultural experience	17	4315	0.21	0.1344	0.1188	21.83	.05 to .39

Note. k = number of samples, N = the total sample size across all effect sizes, r = the sample-size weighted mean correlation, SDr = the sample-size weighted mean standard deviation, SD_{RES} = the residual standard deviation, and %Var = the percentage of observed variance attributable to sampling error, and 80% CI = 80% confidence interval.

Studies 2 and 3

The second study of this dissertation examines the factor structure and nomological network of CI. Specifically, data collected from a student sample were tested using confirmatory factor analysis to determine whether a three-factor model of CI best fit the data or the more common four-factor model. Next, several correlations and regressions were run to examine specific relationships between CI and its correlates and outcomes. Hierarchical regressions were then run to test the incremental of CI beyond studied predictors. Finally, several exploratory mediator analyses were run to examine CI's role as mediator between specific antecedent-outcome relationships

The third study repeated the same methodology and analyses as Study 2, however, using an adult working sample. As these studies followed the same procedure and tested the same hypotheses, results are as follows.

CI factor structure. While a three-factor model of CI has been proposed, the more commonly accepted is a four-factor model in which the four underlying factors are interrelated and codependent to form the higher level CI construct. Hypothesis 1 (H1) proposed that four factors or CI would emerge from the data: metacognitive CI, cognitive CI, motivational CI and behavioral CI. Preliminary correlations were run to test the relationships between the four factors and the higher level CI construct, followed by further investigation of the model via confirmatory factor analysis in which factor-structures are compared.

For Study 2 (Table 3), each of the factors correlated positively with each other and overall CI with values ranging from a moderate to high. Specifically, the relationship between overall CI and cognitive CI ($r = .81$) and metacognitive CI ($r = .80$), were the highest followed by its relationships with behavioral CI ($r = .75$) and motivational CI ($r = .71$). The relationships between the factors were all of moderate strength, ranging from .57 (metacognitive CI and behavioral CI) to .40 (motivational CI and behavioral CI).

For Study 3 (Table 4), results were similar to that of the second study such that all correlations were in the positive direction, and varied in strength from moderate to high. In addition, the pattern of the relationships when arranged by strength was nearly identical between the two studies when compared. Overall, the relationships in the third study were slightly higher than that of the second study as the relationship between overall CI and cognitive CI ($r = .84$) and metacognitive CI ($r = .82$), were the highest

followed by its relationships with behavioral CI ($r = .76$) and motivational CI ($r = .74$).

Just as in Study 2, the relationships between the factors were all of moderate strength,

ranging from .54 (metacognitive CI and behavioral CI) to .40 (motivational CI and

behavioral CI).

Table 3

Correlations Among Overall Cultural Intelligence and Subfactors (Study 2)

	1	2	3	4	5
1. Overall CI	(.87)				
2. Metacognitive CI	.80**	(.70)			
3. Cognitive CI	.81**	.50**	(.74)		
4. Motivational CI	.71**	.52**	.42**	(.64)	
5. Behavioral CI	.75**	.57**	.41**	.40**	(.65)

Notes. $N = 365$. *$p < .01$.

Table 4

Correlations Among Overall Cultural Intelligence and Subfactors (Study 3)

	1	2	3	4	5
1. Overall CI	(.90)				
2. Metacognitive CI	.82**	(.70)			
3. Cognitive CI	.84**	.57**	(.87)		
4. Motivational CI	.74**	.54**	.47**	(.78)	
5. Behavioral CI	.76**	.64**	.47**	.40**	(.77)

Notes. $N = 372$. *$p < .01$.

Confirmatory factor analysis using structural equations modeling in AMOS

software tested how well the data fit the four-factor model, as compared to the three-

factor model. Data for each of the 20 items measuring CI were entered into the model,

and the item itself was forced onto the factor for measuring. The two models tested are

illustrated in Figures 1 and 2, and are identical for Studies 1 and 2. To evaluate how well

the data fit the varying models, several fit indices were examined including the Tucker–

Lewis index (TLI), comparative fit index (CFI), root-mean-square error of approximation

(RMSEA), and the p value for the test of close fit. Due to sample size, other common

confirmatory factor analysis tests such as the chi-square test of model fit were not

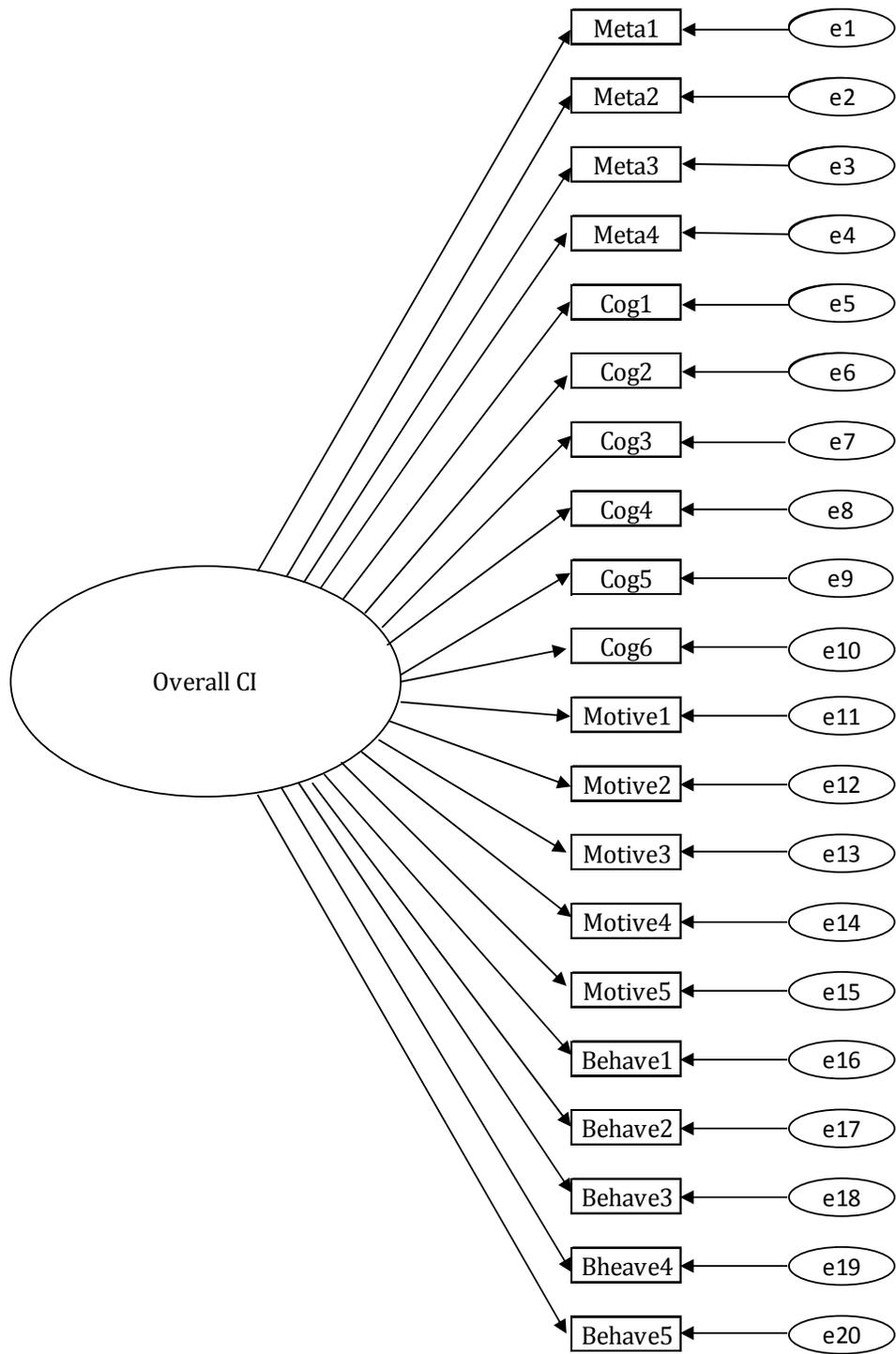appropriate tests. Results for the second and third studies are presented in Table 5.
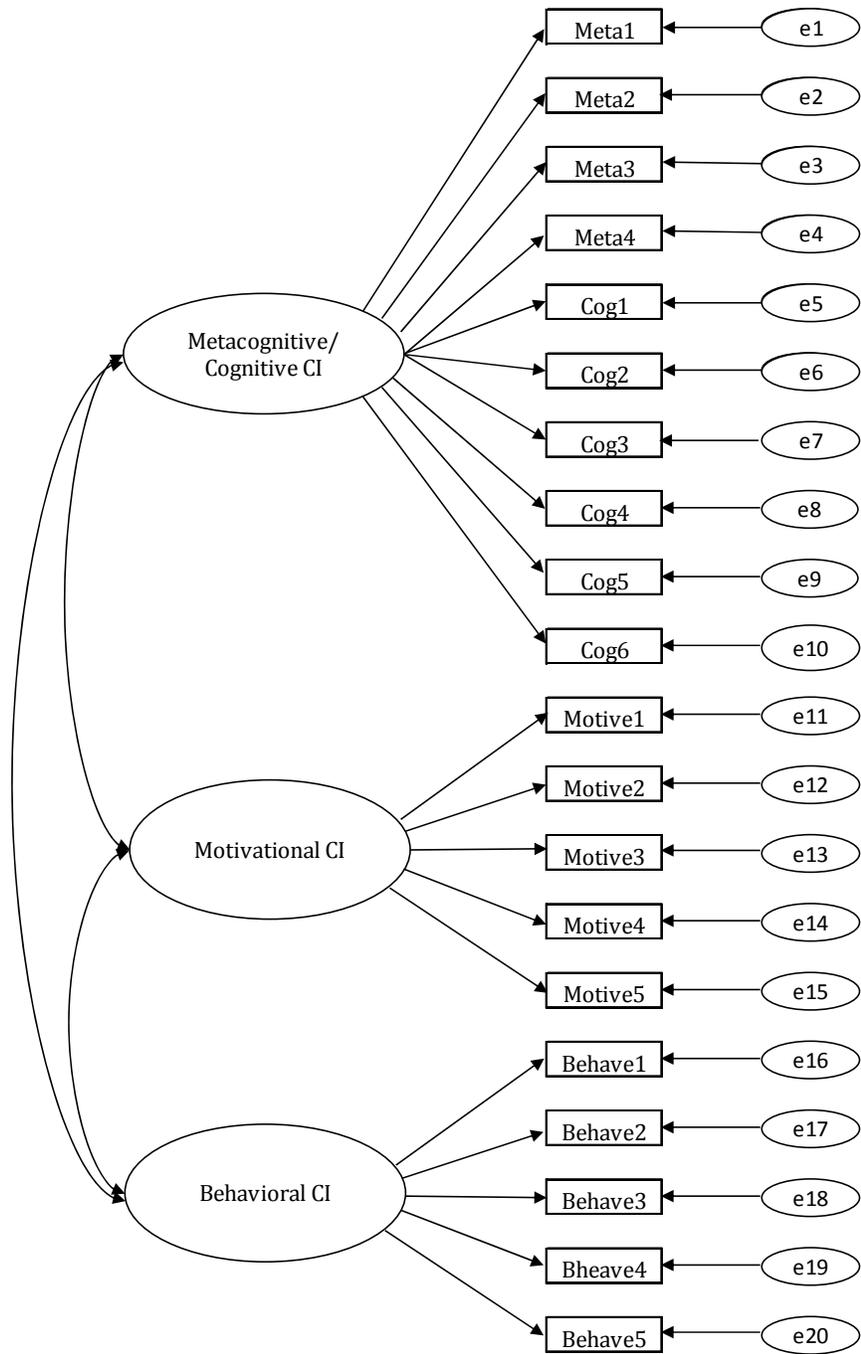
Figure 1. One-factor model of CI.

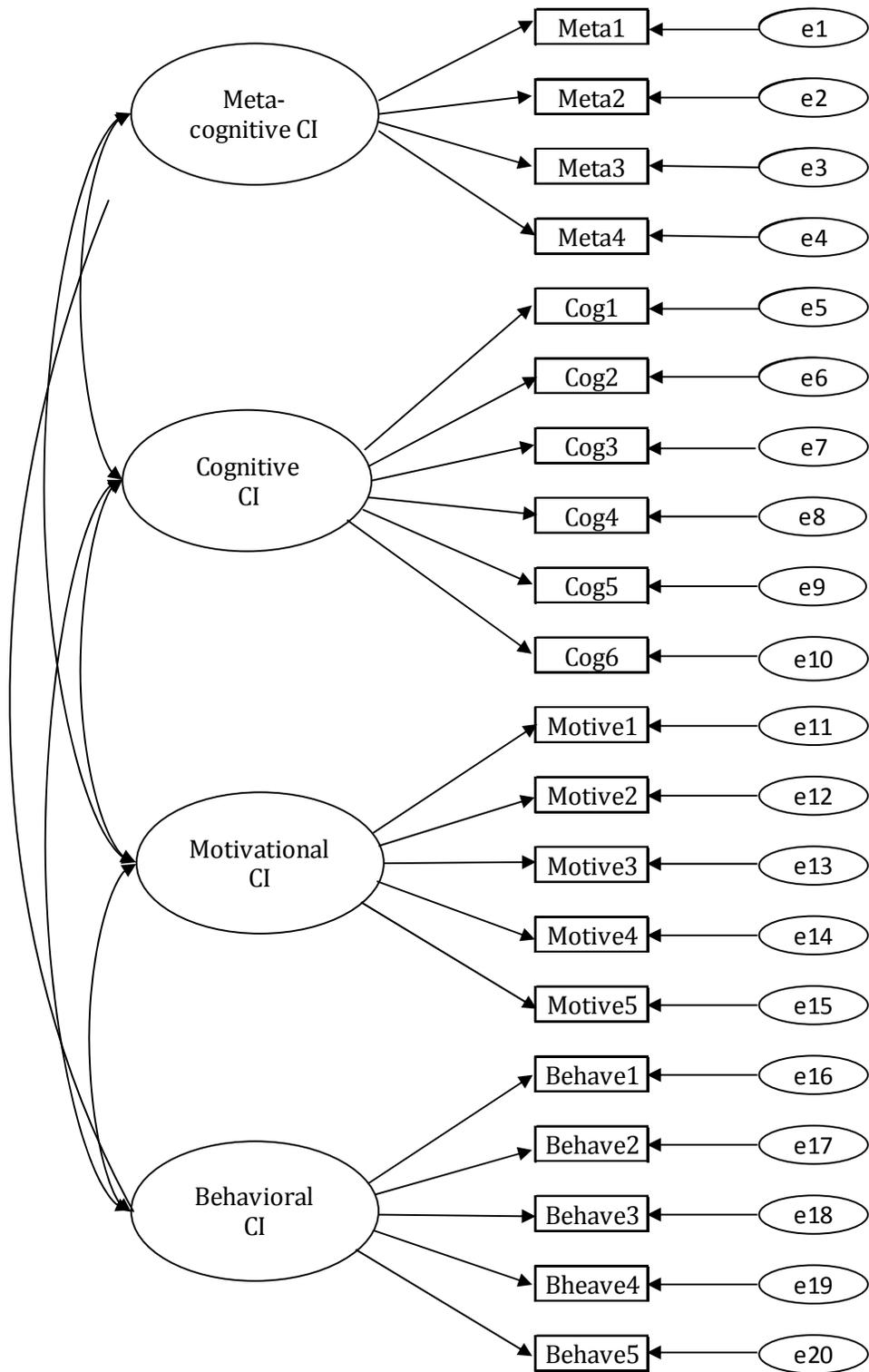Figure 2. Three-factor model of CI.

Figure 3. Four-factor model of CI.

Table 5

Fit Indices for CFA of Testing Model Structure

	TLI	CFI	RMSEA	*p* close
Study 2				
One-factor model	.64	.71	.10	.00
Three-factor model	.76	.81	.08	.00
Four-factor model	.85	.88	.06	.00
Study 3				
One-factor model	.70	.73	.11	.00
Three-factor model	.82	.85	.08	.00
Four-factor model	.88	.90	.07	.00

Notes. For Study 2, *N* = 365 and for Study 3, *N*= 372. TLI = Tucker–Lewis index; CFI = comparative fit index; RMSEA = root-mean-square error of approximation; *p* close = *p* value of test for close fit.

In both studies, the four-factor structure of the model is a better fit to the data than the corresponding one-factor structure or three-factor structure. For the student sample (Study 2), the TLI and CFI indicators are closer to 1 for the four-factor model than the one-factors and three-factor models, at values of .85 and .88, respectively. While neither of these values in greater than .9, which is an overall indicator of good fit, they are greater than their one-factor and three-factor model counterparts. RMSEA for the models indicate good fit overall as the values are .1 or less, however the lower value for the four-factor structure (.06) is preferable to the higher three-factor model value (.08) and the one-factor counterpart (.10). Lastly, the *p*-close value for all models is at .00, which indicates a poor fit. Thus, while all three models demonstrate need for improvement, the four-factor model emerges as a better fit to the data overall in Study 2.

The results for Study 3 using data collected from adult workers are similar to that of the aforementioned Study 2. For the one-factor and three-factor models, TLI is .70 and

.82, and CFI is .73 and .85, respectively. These models are lower than the TLI (.88) and CFI (.90) for the four-factor model showing that the four-factor model was a better fit. Again, the RMSEA values for all models are acceptable; however, the value for the four-factor model (.07) is preferable to the value for the one-factor model (.11) and three-factor model (.08). Finally, the p-close value for the three models is at .00, which indicates poor fit. Based on these results, the data support H1 for Studies 2 and 3, the four-factor structure of CI fits the data, especially when compared to the one-factor and three-factor structures.

Correlations and regressions. Hypotheses 2 to 11 propose that several key variables will be related CI and are tested via correlation and regression analyses. Study 2 correlation results are presented in Table 6 and regression results in Table 7. For personality, results from the student sample indicate that CI is positively and significantly related to extraversion ($r = .20$), emotional stability ($r = .24$), conscientiousness ($r = .14$) and openness to experience ($r = .19$). CI is also positively correlated to agreeableness ($r = .08$), however this value falls below levels of significance. Similarly, linear regressions, after controlling for age, gender and formal cultural training, demonstrate that extraversion ($\beta = .195$, $p < .01$), emotional stability ($\beta = .241$, $p < .01$), conscientiousness ($\beta = .109$, $p < .05$), and openness to experience ($\beta = .168$, $p < .01$) are significant predictors of CI. Thus, data from Study 2 support the positive, significant relationships proposed in H2 (CI-extraversion), H3 (CI-emotional stability), H4 (CI-conscientiousness), and H6 (CI-openness); however, the data fail to support H5 (CI-agreeableness).

H7 proposed that core self-evaluation would positively related to CI, and

correlation analysis ($r = .15$) and regression analysis ($\beta = .139$, $p < .01$) are supportive of

the hypothesized relationship. Similarly, results support the hypothesized relationships

between CI and social self-efficacy *(r = .33; β = .326, p < .01; H8)*, self-monitoring *(r =*

.21; β = .206, p < .01; H9), emotional intelligence *(r = .15; β = .206, p < .01; H10)*, and

cross-cultural experience*(r = .25; β = .115, p < .05; H11)*.

ultural Intelligence, Correlates and Outcomes (Study 2)

	1	2	3	4	5	6	7	8	9	10	11	12	1:
	(.87)												
	.20**	(.55)											
	.24**	.23**	(.56)										
	.14*	.14**	.14**	(.31)									
	.08	.17**	.23**	.12*	(.16)								
	.19**	.09	.00	-.03	.06	(.18)							
	.15**	.14**	.49**	.33**	.30**	.00	(.84)						
	.33**	.51**	.38**	.25**	.32**	.10	.40**	(.65)					
	.21**	.41**	.18**	.025	.02	.27**	.09	.28**	(.71)				
	.22**	.08	.34**	.34**	.32**	.07	.57**	.33**	.12*	(.90)			
	.15**	.01	.04	.06	.01	-.06	.08	.09	.06	.04	-		
	.25**	.16**	.12*	.32**	.19**	-.02	.28**	.32**	.11*	.34**	.05	(.72)	

Table 7

Summary of Simple Regressions for CI Predictors (Study 2)

	B	SE(B)	β	t	Sig.
Extraversion	.116	.03	.195	3.859	.00
Emotional stability	.139	.03	.241	4.753	.00
Conscientiousness	.077	.04	.109	2.071	.04
Agreeableness	.064	.04	.090	1.750	.08
Openness to experience	.107	.03	.168	3.264	.00
Core self-evaluation	.130	.05	.139	2.726	.01
Social self-efficacy	.280	.04	.326	6.657	.00
Self-monitoring	.219	.054	.206	4.077	.00
Emotional intelligence	.190	.05	.206	4.080	.00
Cross-cultural experience	.001	.00	.115	2.213	.03

Notes. $N = 365$. Cross-cultural experiences = months lived or traveled outside home country. Controls = age, gender, formal cultural training.

For Study 3, adult worker data were also tested using correlation and regressions analyses and similar results emerged, as can be seen in Table 8 and Table 9. Hypotheses 2 through 6 predicted positive relationships between personality and CI, some of which were supported by the data. Extraversion *(r = .37; β = .335, p < .01; H2)*, emotional stability *(r = .25; β = .283, p < .01; H3)*, and agreeableness *(r = .19; β = .204, p < .01; H5)* were all found to be positively related to and predictive of CI. Hypothesis 4 was not supported by the data, as conscientiousness was not significantly correlated to CI *(r = .09, p > .05)*, and Hypothesis 6 was partially supported by the data as openness to experience is significantly related to, but not predictive of CI *(r = .10; β = .095, p > .05)*.

Results from Study 3 did not find full support for H7, which proposed a positive relationship between CI and core self-evaluation *(r = .09, p < .05)*. However, results did support the hypothesized relationships between CI and social self-efficacy *(r = .38; β =*

.376, $p < .01$; H8), self-monitoring ($r = .40$; $\beta = .360$, $p < .01$; H9), emotional intelligence ($r = .30$; $\beta = .308$, $p < .01$; H10), and cross-cultural experience($r = .16$; $\beta = .164$, $p < .05$; H11).

Table 9

Summary of Simple Regressions for CI Predictors (Study 3)

Cultural Intelligence, Correlates and Outcomes (Study 3)

	1	2	3	4	5	6	7	8	9	10	11	12
	(.90)											
	.37**	(.71)										
	.25**	.38**	(.72)									
	.09	.30**	.38**	(.53)								
	.19**	.28**	.38**	.27**	(.48)							
	.10*	.05	.07	.15**	.09	(.32)						
	.09	.36**	.59**	.53**	.31**	.09	(.88)					
	.38**	.66**	.48**	.31**	.37**	.07	.53**	(.75)				
	.40**	.42**	.11*	.04	-.03	.17**	.10	.39**	(.77)			
	.30**	.27**	.50**	.47**	.36**	.12*	.61**	.44**	.10	(.90)		
	.16**	-.02	.07	-.05	.07	.00	.06	-.02	.04	.04	-	

Summary of Simple Regressions for CI Predictors (Study 3)

	B	SE(B)	β	t	Sig.
Extraversion	1.81	.03	.335	7.034	.00
Emotional stability	1.61	.03	.283	5.673	.00
Conscientiousness	.082	.04	.114	2.251	.03
Agreeableness	.131	.03	.204	4.127	.00
Openness to experience	.062	.033	.095	1.861	.06
Core self-evaluation	.100	.04	.117	2.297	.02
Social self-efficacy	.295	.037	.376	8.013	.00
Self-monitoring	.385	.051	.360	7.485	.00
Emotional intelligence	.311	.048	.308	6.411	.00

	B	SE(B)	β	t	Sig.
Cross-cultural experience	.004	.001	.164	3.217	.00

Several relationships were also proposed between CI and outcomes variables. In addition to the correlation found in the presented matrices, the regression results for these analyses can be found in Table 10 for Study 2 and Table 11 for Study 3. Hypothesis 12 (H12) proposed that CI would predict overall performance and Hypothesis 13 (H13) proposed that CI would be predictive of contextual performance. The student data from Study 2 supported these hypotheses as CI significantly predicted overall performance (r = .25; β = .242, p < .01; H12) and contextual performance (r = .34; β = .332, p < .01; H13). Data and results from Study 3 also found support fort H12, as CI emerged as a significant predictor of overall performance (r = .29; β = .297, p < .01). Similarly, the predicted relationship between CI and contextual performance (r = .45; β = .465, p < .01; H13) was supported by the data.

Cultural adaption, another outcome variable, was also hypothesized to be predicted by CI (Hypothesis 17). In Table 10 for Study 2, CI was found to be significantly related to and a predictor of cultural adaption (r = .30; β = .293, p < .01). The same finding holds true for Study 3 (Table 11), where CI was also found to be an even stronger predictor of cultural adaption (r = .39; β = .382, p < .01) in the worker sample.

Table 10

Summary of Simple Regressions for CI Outcomes (Study 2)

	B	SE(B)	β	t	Sig.
Overall performance	.288	.06	.242	4.591	.00

	B	SE(B)	β	t	Sig.
Contextual performance	.584	.09	.332	6.549	.00
Cultural adaptation	.310	.06	.293	5.634	.00

Notes. *N* = 365. Controls = age, gender, formal cultural training.

Table 11

Summary of Simple Regressions for CI Outcomes (Study 3)

	B	SE(B)	β	t	Sig.
Overall performance	.296	.05	.297	5.931	.00
Contextual performance	.724	.07	.465	9.765	.00
Cultural adaptation	.374	.05	.382	7.751	.00

Notes. *N* = 372. Controls = age, gender, formal cultural training.

Incremental validity. The final set of hypotheses proposed in the presentation concern the ability of CI to predict outcome variables beyond other commonly used predictors. Specifically, the hypothesis is that CI will have overall performance and contextual performance above and personality variables conscientiousness and extraversion, and cross-cultural experience (H16). To establish, incremental validity, first it must be demonstrated that personality (H14) and cross-cultural interaction are predictors of both performance outcomes using regression analysis. Next, to establish incremental validity, the change in variance explained by the regression model after adding CI to the model is examined.

As can be seen in Table 12, CI is found to explain incremental variance in the prediction of both performance outcomes for Study 2. For overall performance, the increase in variance explained, ΔR^2, was .034 ($p < .01$), indicating that CI predicts overall performance beyond personality. While cross-cultural interaction was entered into the model, but was not found to be a significant predictor of overall performance. CI also

predicts contextual performance beyond personality and cross-cultural interaction as the increase in variance explained, ΔR^2, was .075 ($p < .01$).

The same set of hypothesis was also tested in Study 3, and the results are presented in Table 13. For overall performance, the increase in variance explained, ΔR^2, was .057 ($p < .01$), indicating that CI predicts overall performance beyond conscientiousness. Additionally, extraversion and cross-cultural interaction were not found to be significant predictors of overall performance. For contextual performance, CI was found to be predictive of contextual performance beyond all three antecedents, extraversion, conscientiousness and cross-cultural interactions, as the increase in variance explained, ΔR^2, was .135 ($p < .01$). Thus, in both studies, only partial support for H14 through H16 was found the overall performance outcome, however full support was found for the contextual performance outcome.

Table 12

Incremental Validity of CI in Predicting Overall and Contextual Performance Beyond Personality and Cross-Cultural Interaction (Study 2)

	Overall performance		Contextual performance	
	Step 1	Step 2	Step 1	Step 2
	β	β	β	β
Extraversion	.12*	.08	.19**	.14**
Conscientiousness	.30**	.29**	.18**	.15**
Cross-cultural interaction	.03	.01	.12*	.09
Overall CI	-	.19**	-	.29**
R^2	.126	.160	.107	.182
ΔR^2		.034**		.075**

Notes. $N = 365$. Controls = age, gender, formal cultural training. $*p < .05$, $**p < .01$.

Table 13

Incremental Validity of CI in Predicting Overall and Contextual Performance Beyond Personality and Cross-Cultural Interaction (Study 3)

	Overall performance		Contextual performance	
	Step 1	Step 2	Step 1	Step 2
	β	β	β	β
Extraversion	.08	.00	.26**	.13**
Conscientiousness	.32**	.31	.21**	.20**
Cross-cultural interaction	.09	.05	.05	-.02
Overall CI	-	.25**	-	.40**
R^2	.423	.480	.402	.537
ΔR^2		.057**		.135**

Notes. $N = 365$. Controls = age, gender, formal cultural training. $*p < .05$, $**p < .01$.

Hypotheses 18 through 20 propose that CI will explain incremental variance in cultural adaption beyond personality and cross-cultural interaction. Specifically, openness to experience, emotional stability, and cross-cultural interaction will predict cultural adaption, but CI will add incremental validity in predicting cultural adaption beyond these variables. The results are presented in Table 14. For Study 2, the increase in variance explained, ΔR^2, was .059 ($p < .01$), indicating that CI predicts cultural adaptation beyond personality among students.

For Study 3, the increase in variance explained, ΔR^2, was .099 ($p < .01$), indicating that CI predicts cultural adaptation beyond personality among adult workers. In both studies, cross-cultural interaction failed to emerge as a predictor of cultural adaption prior to the introduction if CI into the model. Thus, the data fully support H18, which proposes that personality predicts cultural adaption and fail to support H19 and that cross-cultural interaction predicts cultural adaption in both studies. Lastly, the data partially support H20, which proposes that CI will explain increased variance in cultural adaptation beyond personality and cross-cultural interaction for Studies 2 and 3.

Table 14

Incremental Validity of CI in Cultural Adaptation Beyond Personality and Cross-Cultural Interaction

	Study 2		Study 3	
	Step 1	Step 2	Step 1	Step 2
	β	β	β	β
Openness to experience	.11*	.07	.18**	.16**
Emotional stability	.14**	.08	.25**	.16**
Cross-cultural interaction	.02	.01	.09	.04
Overall CI	-	.26**	-	.34**
R^2	.047	.106	.365	.464
ΔR^2		.059**		.099**

Notes. For Study 2, $N = 365$. For Study 3, $N = 372$. Controls = age, gender, formal cultural training. *$p < .05$, **$p < .01$.

Exploratory analyses. Based on theoretical reasoning and expected relationships, several additional analyses were run to add a level of complexity to the present design, as well as to introduce new direction to the CI literature. The following analyses and results are exploratory in nature and are not tied to any specific hypotheses within this dissertation. First, several additional regressions are presented from Studies 2 and 3. Then, several mediation analyses are presented based on theoretical reasoning.

While the aforementioned results examined the relationship between key correlates and CI individually, the following set of regressions examined how these correlates combined are related to CI, performance and adaptation. In the first analysis, all personality predictors (the Big Five) were included in a single regression equation. For the student sample, as can be seen in Table 15, after controlling for age, gender and formal cross-cultural training, extraversion (β = .128, $p < .01$), emotional stability (β = .201, $p < .01$) and openness to experience (β = .155, $p < .01$) emerged as significant

predictors of CI. When all predictors in the present design are included in the equation (Table 16), extraversion became insignificant. Here, emotional stability (β = .148, p < .01), openness to experience (β = .127, p < .01), social self-efficacy (β = .235, p < .01), emotional intelligence (β = .125, p < .05) and cross-cultural experience (β = .096, p < .05) emerged as significant predictors of CI.

Similar results are seen for Study 3 in Tables 17 and 18. With the exception of openness to experience which is not a significant predictor of CI in either equation, extraversion (β = .265, p < .01) and emotion stability (β = .166, p < .01) emerged as significant predictors of CI when only the Big Five were entered into the regression equation. When all relevant correlates were included in the analysis, extraversion was no longer significant (β = .096, p > .05). In addition to emotional stability remaining significant (β = .137, p < .05), core self-evaluation (β = -.283, p < .01), social self-efficacy (β = .164, p < .01), self-monitoring (β = .240, p < .01), emotional intelligence (β = .274, p < .01) and cross-cultural experience (β = .139, p < .05) emerged as significant predictors of CI.

Table 15

Summary of Personality Regressed Onto CI (Study 2)

	B	SE(B)	β	t	Sig.
Extraversion	.076	.03	.128	2.507	.01
Emotional stability	.116	.03	.201	3.869	.00
Conscientiousness	.051	.04	.072	1.416	.16
Agreeableness	.002	.04	.002	.046	.96
Openness to experience	.099	.03	.155	3.122	.00

Notes. N = 365. Controls = age, gender, formal cultural training.

Table 16

Summary of All Correlates Regressed Onto CI (Study 2)

	B	SE(B)	β	t	Sig.
Extraversion	.009	.04	.015	.256	.80
Emotional stability	.085	.03	.148	2.533	.01
Conscientiousness	.017	.04	.024	.455	.65
Agreeableness	-.035	.04	-.049	-.921	.36
Openness to experience	.081	.03	.127	2.507	.01
Core self-evaluation	-.099	.06	-.106	-1.620	.11
Social self-efficacy	.203	.06	.235	3.684	.00
Self-monitoring	.062	.06	.058	1.053	.24
Emotional intelligence	.115	.06	.125	2.046	.04
Cross-cultural experience	.001	.00	.096	1.970	.05

Notes. $N = 365$. Cross-cultural experience = months lived or traveled outside home country. Controls = age, gender, formal cultural training.

Table 17

Summary of Personality Regressed Onto CI (Study 3)

	B	SE(B)	β	t	Sig.
Extraversion	.143	.03	.265	5.110	.00
Emotional stability	.094	.03	.166	2.921	.00
Conscientiousness	-.041	.04	-.057	-1.084	.28
Agreeableness	.051	.03	.079	1.541	.12
Openness to experience	.043	.03	.067	1.387	.17

Notes. $N = 372$. Controls = age, gender, formal cultural training.

Table 18

Summary of All Correlated Regressed Onto CI (Study 3)

	B	SE(B)	β	t	Sig.
Extraversion	.052	.03	.096	1.607	.11
Emotional stability	.078	.03	.137	2.374	.02
Conscientiousness	-.015	.04	-.021	-.385	.70
Agreeableness	.033	.03	.052	1.056	.29
Openness to experience	.005	.03	.008	.176	.86
Core self-evaluation	-.243	.06	-.283	-4.375	.00
Social self-efficacy	.129	.05	.164	2.449	.01
Self-monitoring	.256	.06	.240	4.653	.00
Emotional intelligence	.277	.06	.274	4.766	.00
Cross-cultural experience	.003	.00	.139	3.171	.00

Notes. $N = 372$. Cross-cultural experience = months lived or traveled outside home country. Controls = age, gender, formal cultural training.

To understand the relationship better between these predictors, CI and key outcomes, further mediation relationships were explored. The antecedent variables selected for further analysis via mediation are those less prevalent in CI literature that demonstrated strong significant relationships with CI: emotional stability, social self-efficacy, self-monitoring, core self-evaluation, and emotional intelligence. Similarly, the majority of CI literature has focused on performance outcomes over adaptation outcomes. Thus, with the goal of offering unique contributions and the flexibility for exploratory investigations, the mediation analyses focused on these less studied variables.

Mediation analyses followed the methodology proposed by Baron and Kenny (1986) as described in Chapter 3. The results are show below as visualized models. For each of the models, the regression beta weights for each of the independent models, or direct paths, are shown in parentheses. The beta weights outside of the parentheses represent the results found for the multiple regression mediation models.

The first model tested CI as a mediator between emotional stability and cultural adaption. As can be seen in Figure 4, for Study 2, CI fully mediates the relationship between emotional stability and cultural adaption, as the beta-weight for emotional stability drops with the introduction of CI. Study 3 results shown in Figure 5 demonstrate that CI partially mediates the relationship between emotional stability and cultural adaption. Partial mediation is indicated by a drop in the strength of the beta-weight for the predictor, however the value remain significant.

The second model tested CI as a mediator between social self-efficacy and cultural adaptation. Study 2 results shown in Figure 6 demonstrates that CI partially mediates the relationship between social self-efficacy and cultural adaption. As can been seen in Figure 7, Study 3 results also show CI as a partial mediator of the social self-efficacy – cultural adaptation relationship.
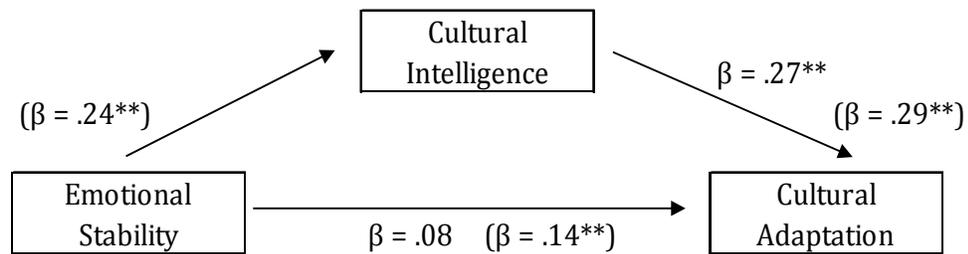
Figure 4. CI as mediator between emotional stability and cultural adaptation (Study 2).
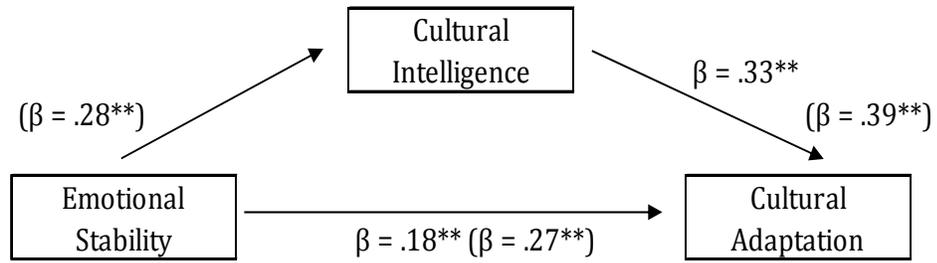
Figure 5. CI as mediator between emotional stability and cultural adaptation (Study 3).
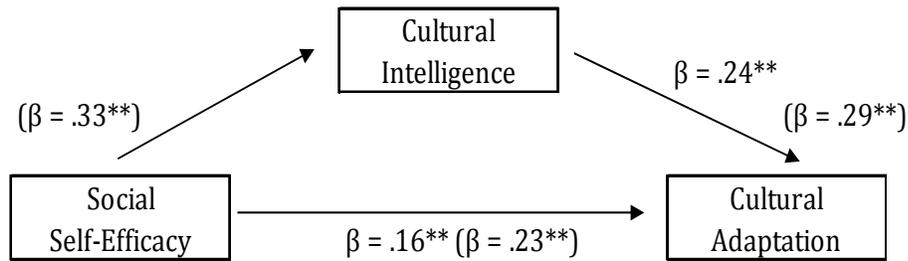

Figure 6. CI as mediator between social self-efficacy and cultural adaptation (Study 2).
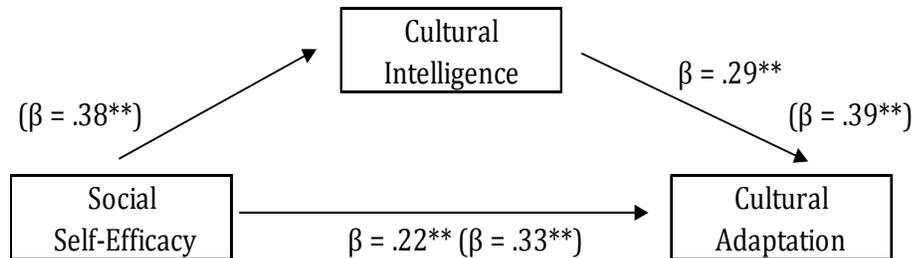

Figure 7. CI as mediator between social self-efficacy and cultural adaptation (Study 3).

The third model tested examined CI as a mediator between self-monitoring and cultural adaptation. As can be seen in Figure 8, for Study 2, CI fully mediates the relationship between self-monitoring and cultural adaption, as the beta-weight for self-monitoring drops to insignificance with the introduction of CI. Study 3 results shown in Figure 9 also demonstrate that CI fully mediates the relationship between self-monitoring and cultural adaption.
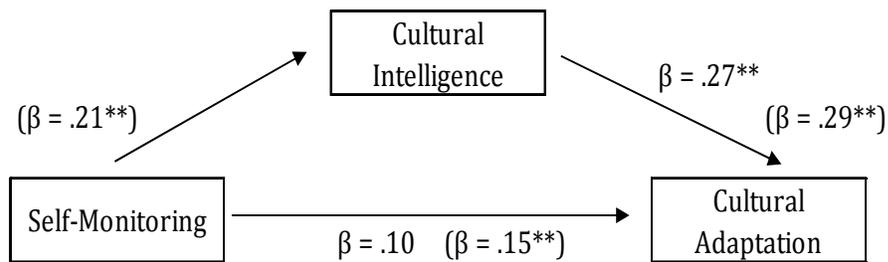
Figure 8. CI as mediator between social self-efficacy and cultural adaptation (Study 2).
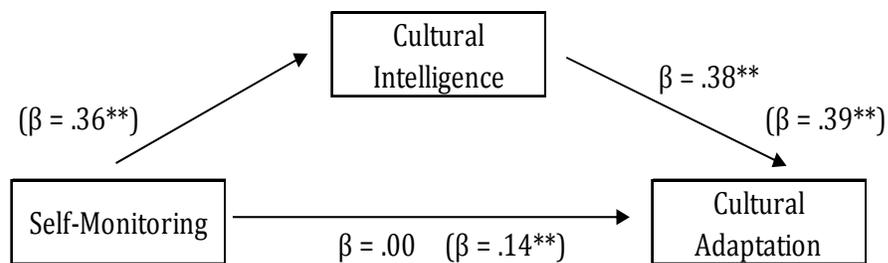

Figure 9. CI as mediator between social self-efficacy and cultural adaptation (Study 3).

The fourth model tested examined CI as a mediator between core self-evaluation and cultural adaptation. Results for Studies 2 and 3 are presented in Figures 10 and 11, respectively. The data from the student sample supported a partial mediation model in the strength of the predictive relationship between core self-evaluation and cultural adaption decreases with the introduction of CI to the model. Similar partial mediation results were found using worker data from Study 3.

In the final mediation model tested, CI was examined as a mediator between emotional intelligence and cultural adaptation. As can be seen in Figure 12, for Study 2, CI partially mediates the relationship between emotional intelligence and cultural adaption. Study 3 results shown in Figure 13 also demonstrate that CI partially mediates

the relationship between emotional intelligence and cultural adaption. For both models, the beta-weight for emotional intelligence in predicting cultural adaption drops decreases, when CI entered into the model, which remains significant.
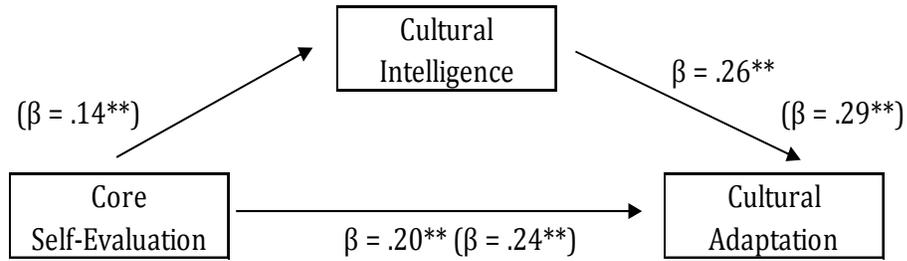
Figure 10. CI as mediator between core self-evaluation and cultural adaptation (Study 2).
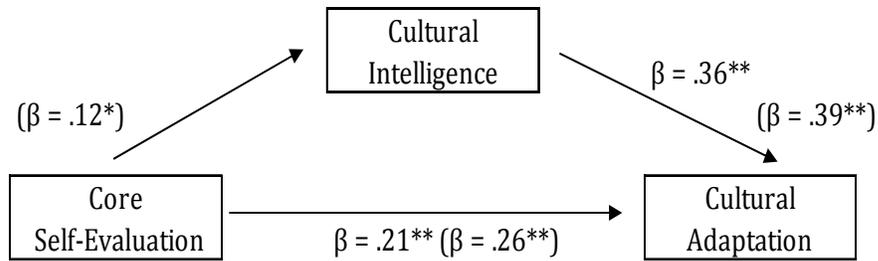
Figure 11. CI as mediator between core self-evaluation and cultural adaptation (Study 3).
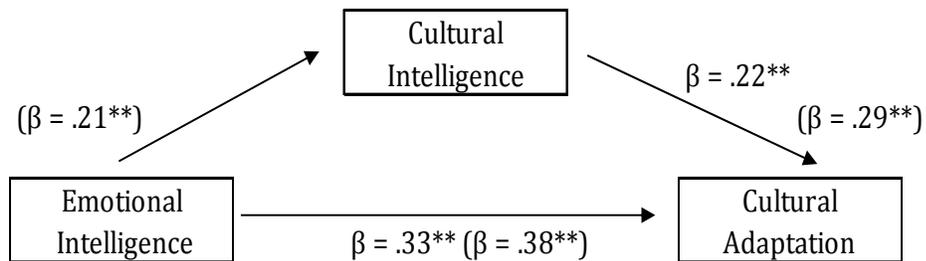
Figure 12. CI as mediator between emotional intelligence and cultural adaptation (Study 2).
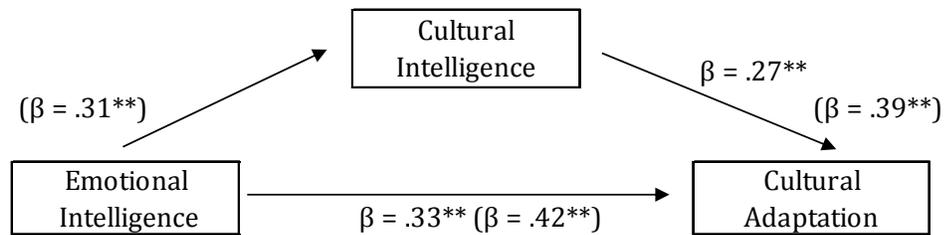
Figure 13. CI as mediator between emotional intelligence and cultural adaptation (Study 3).

Conclusion

In summary, results show that the four-factor model of CI best fits the data and is the more likely model over the three-factor model. Results show significant relationships between CI and key individual characteristics, and performance and cultural adaption outcomes. While meta-analysis results of correlates did not find support for the relationships between CI and targeted individual characteristics, they did support proposed relationships between CI and overall performance, contextual performance and cultural adaptation. Unlike meta-analysis results, the second and third study did find support between CI and specific correlates. These studies also found support for CI as a predictor of outcomes beyond personality. Lastly, several exploratory mediation models demonstrate that CI mediates the relationships between correlates, or antecedents, and outcomes.

CHAPTER V: DISCUSSION

This dissertation includes the examined nomological network of the newly proposed construct: cultural intelligence (CI). A thorough and comprehensive review of theory and literature was completed to hypothesize several relationships between CI and its relevant correlates and outcomes. CI correlates of interest included personality, core self-evaluation, social self-efficacy, self-monitoring, emotional intelligence, and cross-cultural experience. The outcomes of the present research focused on performance and cultural adaptation. The relationships between CI and these variables were quantitatively examined through a series of three studies. Study 1 was a meta-analysis of existing empirical research for summarizing existing results within the literature. Studies 2 and 3 used original data collected from student and adult working samples, respectively, to test the factor structure of CI and the proposed relationships. Results of these studies help clarify the construct validity of CI and its applicability to cross-cultural organizational settings.

Study 1. The first study in this dissertation used bare-bones meta-analytic techniques to summarize quantitatively the existing literature for CI. Specifically, the relationships between CI and personality, emotional intelligence, cross-cultural experience, performance and cultural adaptation were included.

For personality, the meta-analysis results from Study 1 did not find support for a positive relationship between any of the Big Five traits and CI as was predicted. While these results were not expected, they too were not surprising. As mentioned in Chapter 2, studies examining these relationships found mixed or inconclusive results. This wide range of effect sizes is a likely explanation for the current findings, which ranged from

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negative to positive, and thus included the null or zero value in the confidence interval. Worth noting though, each of the effect sizes for the personality-CI relationships were positive, suggesting that the reasoning proposed for these relationships is likely. Similar results emerged for the relationship between CI and emotional intelligence. While a positive effect size was expected and found, the confidence interval ranged from negative to positive, and included the null value. Again, results from previous studies varied greatly and likely influenced the results from this study. For personality and emotional intelligence, the results from the meta-analysis indicate that further exploration is essential to understand their relationships with CI better.

For cross-cultural experience and CI, the meta-analysis did find a positive relationship as predicted. Thus, these findings indicate that the more time people spend engaging in cross-cultural interactions, the higher their CI. This rationale aligns with the literature relating to the ability to develop CI over time.

Finally, the relationships between CI and outcome variables, performance and adaptation, were assessed via meta-analysis. For performance, a significant and moderate positive effect size emerged as predicted, meaning the confidence interval did not include the null value. This finding shows that at CI increases, so does overall performance. As with meta-analysis techniques, the operationalization of performance varies from study to study; thus, these results provide only a higher-level understanding of the CI-performance relationship. Similarly and as predicted, a significant and moderate positive relationship was found for CI and adaptation. Just as with performance, adaptation measures varied from study to study limiting the specific conclusions that can be made. However, it can

be concluded that as one's level of CI increase, so does the ability to adapt to cross-cultural environments and perform effectively.

Study 2 and Study 3. The second study of this dissertation included an examination of CI factor structure as well as a larger study of its nomological network. For this study, original data was collected from a U.S.-based university student sample via self-assessment in exchange for course credit. Beginning with the factor structure of CI, confirmatory factor analysis revealed the four-factor model of CI to be the best fit to the data. The other two models tested included a one-factor model and a three-factor model. In addition to testing factor-structure, correlations were run to test the relationships between each of the four subfactors of CI, found to be significant and high. The findings coincide with the theoretical and conceptual work by Earley and Ang (2003) along with Ang and van Dyne (2008), who proposed that CI is an aggregate construct composed of the following four interdependent factors: metacognitive CI, cognitive CI, motivational CI, and behavioral CI.

The third study of the presentation dissertation followed the same methodology and analyses as that of Study 2; however, data was collected from a sample of adult workers. As such, the purpose for this third study was two-fold: provide additional quantitative research for the study of CI overall and determine if the relationships found in a domestic and student sample (Study 2) generalize to an adult worker sample.

Similar to Study 2, the four-factor model of CI emerged as the best fit to the data over the one-factor model and the three-factor model when tested using confirmatory factor analysis. Again, intercorrelations between overall CI and its subfactors were examined and were found to be quite high. Results from Study 3 align with framework of

CI, which Earley and Ang (2003) and Ang and van Dyne (2008) proposed. In addition, these results confirm that the four-factor model generalizes as a best fit to across students to adult workers.

While the four-factor model of CI emerged as the best fit to the data for both Study 2 and Study 3, results showed that even for this factor structure, model fit was not ideal. After reviewing the intercorrelations between the four subfactors and the indices testing model fit, the results suggest that perhaps additional models of CI should be considered. Specifically, metacognitive CI appears to be highly related to each of the other three subfactors, as well as overall CI, suggesting two alternative models. A visual presentation of these alternative models can be seen in Figure 14. The first alternative model is one in which metacognitive CI underlies each of the other three subfactors: cognitive CI, motivational CI, and behavioral CI. These three subfactors then aggregate into overall CI. This model would explain the strong correlations seen between metacognitive CI and the three other subfactors. In the second alternative model, metacognitive CI would be directly linked to overall CI, and the three remaining subfactors would lead to another higher order factor which would then also link directly to CI. This model would explain strong relationships between metacognitive CI and overall CI, as well as the three other subfactors.
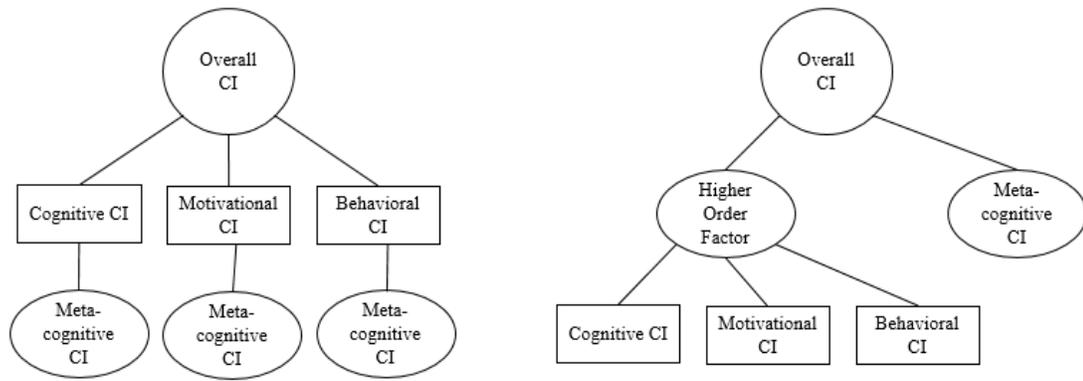
Figure 14. Two alternative CI models

After identifying which model best fit the data, correlations and regressions were run to test the direction and strength of relationships between CI and key variables thought to be related. For personality in Study 2, data from the student sample resulted in significant positive relationships between CI and extraversion, emotional stability, conscientiousness and openness to experience as expected. Considering that CI is an indicator of what people are apt to do and personality is an indicator of what people are likely to do, these results support the notion that those who are likely to be open-minded and willingly engage in social interactions, while also being calm, positive and careful, should be able to effectively navigate cross-cultural exchanges. While these results are misaligned with meta-analysis results from Study 1, they do align with the findings of several previous studies that found similar relationships (Ahmadi et al., 2011; Ang et al., 2007; Ang et al., 2006; Kim et al., 2008). Surprisingly, the data did not support the expected positive relationship between CI and agreeableness, suggesting that compliance and cooperation have no impact to one's ability to adapt effectively to varying cultural contexts. These results align with the findings of Ang and colleagues (2007) and

Rockstuhl and colleagues (2011), however, they do contradict several other works (Ang et al., 2006; Kim et al., 2008).

For the personality correlates of CI, results varied slightly for Study 3. Extraversion, emotional stability, agreeableness, and openness to experience had a positive relationship with CI, as expected; however, for conscientiousness, a positive, nonsignificant relationship existed. The differences between Studies 2 and 3 for personality correlates are a matter of significance, which may be explained by coefficient alpha reliability issues. For Study 2, reliabilities for the conscientiousness and agreeableness scales are far lower than desirable and are lower than those of Study 3. These reliability values and differences are likely to impacted correlation and regression results and are a possible explanation for the varying results between two samples.

Also examined were the relationship between CI and the three self-concept variables, as core self-evaluation, social self-efficacy, and self-monitoring are likely indicators of motivation to navigate cross-cultural interactions successfully. A positive and significant relationship, then, was expected between CI and each of these variables, and the correlation and regression results supported these expectations. Prior to this study, the relationship between CI and core self-evaluation, social self-efficacy and self-monitoring had not been studied despite theoretical foundations strongly suggesting they should be related. Findings from this study now provide evidence suggesting that people who make high appraisals of themselves and others are also more likely interact effectively with others from a cultural background different from their own. Similarly, existing now is the evidence, which is supportive of the relationship between the belief in one's ability to perform effectively in social interactions and the capability to do so in

cross-cultural interactions. Lastly, the findings also provide evidence of a positive relationship between self-control or self-preservation and CI such that people who are better able to control behavior and avoid inappropriate expressions are also more capable of effectively interacting with culturally diverse others.

For the self-concept correlates of CI, the results seen in Study 3 are parallel with those seen in Study 2. As expected, significant, positive relationships were found between CI and core self-evaluation, social self-efficacy and self-monitoring. In terms of tendencies and behaviors, these results suggest that capability to navigate cross-cultural interactions increases effectively as self-appraisal, belief in one's own ability to success and self-control increases. As mentioned, these self-concepts variables have not been studied in relation to CI. Thus, with the replication of results from Study 2 to Study3, increased evidence is supportive of the relationships between these key motivational drivers and CI.

The final two correlates in relation to CI, emotional intelligence and cross-cultural experience, also yielded significant, positive relationships as expected in Study 2. Many researchers (Ang et al., 2007; Ang et al., 2006; Kim et al., 2008; Lin et al., 2012; Ward et al., 2009) have already established a positive relationship between emotional intelligence and CI, and the results from Study 2 align with these findings. Similarly, cross-cultural experience as a correlate of CI is also well-studied, and the results from the present align with the majority of the literature (Ang et al., 2007; Ang et al., 2006; Imai & Gelfand, 2010; Kim et al., 2008; Lin, Chen, & Song, 2012; Rockstuhl et al., 2011; Ward et al., 2009).

For emotional intelligence and cross-cultural experience, the results found in Study 3 are the same as those found in Study 2: as emotional intelligence and cross-cultural experiences increase so do one's CI. As mentioned, these two variables have been thoroughly examined in the CI literature, and the results from this study corroborate with the majority of findings within the field.

The next set of variables studied in relation to CI was predicted to be outcomes and included overall performance, contextual performance and cultural adaptation. These three variables are often discussed as measures of success during cross-cultural exchanges and, therefore, were included in the present design. Beginning with overall performance, measured as an aggregate of task performance and contextual performance, CI was found to be a significant predicator. As follows, CI was also found to be a significant predictor of contextual performance. Next, the incremental validity of CI in predicting these outcomes was examined, and CI was found to predict the performance outcomes beyond traditional predictors (extraversion, conscientiousness, and cross-cultural experience). These results indicate that CI offers predictive value unique from traditional predictors of overall performance and contextual performance.

For cultural adaptation, which was measured as an aggregate of interaction adjustment and psychological well-being, CI was also found to be a significant predictor. The incremental validity result of CI for predicting cultural adaptation beyond openness to experience and emotional stability was examined as well, and CI was found to have significant predictive value.

For Study 3, CI was found to be a significant predictor of overall performance, contextual performance, and cultural adaptation. With regard to incremental validity, CI

was found to offer unique predictive value beyond conscientiousness for overall performance. For contextual performance, CI was found to offer unique predictive value beyond conscientiousness. Considering that overall performance was measured as an aggregate of contextual performance and task performance, these results suggest that extraversion's relationship with task performance may have altered the findings for the CI-overall performance incremental validity analysis. In addition, the differences between Studies 2 and 3 indicate that extraversion is a potential predictor of student task performance, but not for worker task performance. Regardless, CI does offer unique predictive value from common predictors for overall and contextual performance outcomes across both samples. Lastly, for cultural adaptation, CI was also found to be a significant predictor beyond openness to stability and emotional experience, just as with Study 2.

Exploratory Analyses

To examine CI relationships further in an exploratory manner, several additional regression and mediation analyses were run with the data collected from Studies 2 and 3. Considering that CI is a relatively new construct and its current literature base is limited, the goal for these analyses was to offer additional insights into relationships worth pursuing through research. The exploratory analyses also increased the rigor of the present research design.

The first set of exploratory analyses included regressions in which all correlates were regressed onto CI simultaneously. The purpose for these regressions was to understand how the variables related to CI collectively, as this is more representative of the actual environment. In other words, at any given point in time, all of these variables

are acting at once to influence CI and subsequent outcomes. When all Big Five personality variables were regressed onto CI simultaneously, extraversion, emotional stability, and openness to experience emerged as significant predictors with data collected from Study 2, and, with data collected from Study 3, extraversion and emotional stability emerged as significant predictors. These results suggest that of the Big Five, extraversion and emotional stability are most likely to influence one's level of CI.

As noted above, when all variables were regressed onto CI, openness to experience varied from significant in Study 2 to nonsignificant in Study 3. Additionally, the significance value varied greatly between the two studies. A similar results pattern emerged between Study 2 and Study 3 when only personality was regressed onto CI. These results are quite surprising, as it was expected that openness to experience would likely be a strong personality predictor of CI, if not the strongest. This unexpected outcome may be explained by the measure of openness to experience itself. The conceptualization of openness to experience

Next, all variables including the Big Five, the three self-concept variables, emotional intelligence, and cross-cultural experience were regressed onto CI simultaneously. Interestingly, for Study 2, the personality traits that emerged as significant predictors were emotional stability and openness to experience, and extraversion was no longer significant. Of the remaining variables, social self-efficacy, emotional intelligence, and cross-cultural experience (though quite low) were found to be significant. When the same regression equation was run with data from Study 3, differing results were found. For adult workers, emotional stability, core self-evaluation, social

self-efficacy, self-monitoring, emotional intelligence and cross-cultural experience were found to be significant predictors of CI.

Several reasons may be considered for why the general results from the two samples emerged. As discussed, the reliabilities for the scales varied quite a between Studies 2 and 3, with generally higher values found for Study 3. Students may not have had the same types of experiences or as many opportunities as adult workers to provide consistent responses to individual items, which may have affected the reliability of their data. Additionally, the key drivers for students' CI may in fact be different from the key drivers for adults' CI. As mentioned in Chapter 2, much of theoretical work for CI suggests that learning and motivation play a key role for its development. Until college or work, many students may not have had the opportunity or need to develop CI, while adults most likely have learned through a larger number and variety of experiences, especially related to the workplace. This pattern may explain why personality is a larger predictor for students than for adults, and why self-concepts (motivation) play larger roles for adults than for students. As the term exploratory implies, making clear conclusions is inappropriate without further evidence for these relationships.

As noted above, when all variables were regressed onto CI, openness to experience varied from significant in Study 2 to nonsignificant in Study 3. Additionally, the significance value varied greatly between the two studies. A similar results pattern emerged between Study 2 and Study 3 when only personality was regressed onto CI. These results are quite surprising, as it was expected that openness to experience would likely be a strong personality predictor of CI, if not the strongest. This unexpected outcome may be explained by the measure of openness to experience itself. The

conceptualization of openness to experience includes many subfacets, including active imagination (fantasy), aesthetic sensitivity, attentiveness to inner feelings, preference for variety, and intellectual curiosity (Costa & McCrea, 1992). The measure used to capture openness to experience in this dissertation consisted of two items, making it highly unlikely that the full construct was measured. Therefore, there is still a strong chance that if the complete constructs of openness to experience was captured, it would be a significant and strong predictor of CI.

The second set of exploratory analyses included a number of mediation analysis to understand the role of CI between antecedents and outcomes. Specifically, cultural adaptation was focused on as the outcome for these analyses because, of the three outcome variables, and was the one that was most generalizable and most objectively measured. The first relationship tested was CI as the mediator of the emotional stability-cultural adaptation relationship. Emotional stability was the only personality variable examined for mediation for being the only trait that found to be a significant predictor for both samples when all variables were included in the regression equation. Mediation analysis found that, for Study 2, the relationship between emotional stability and cultural adaptation becomes null with the presence of CI. However, for Study 3, CI was not found to be a mediator of this relationship. Again, the differences between the two samples may be reflecting an actual difference where students' CI and cultural adaptation are greatly influenced by personality and adult workers' CI and cultural adaptation are greatly influenced by self-concept and motivation.

The three remaining mediation models tested all focused on the self-concept predictors, as these variables have less presence in the CI literature currently. The first

model tested CI as a mediator of the social self-efficacy-cultural adaptation relationship, and for both datasets, partial mediation was found. Essentially, CI accounts for a part of the predictive nature of social self-efficacy, such that beliefs in one's own ability to succeed cross-culturally acts through CI to culturally adapt. For the relationship between self-monitoring and cultural adaptation, CI acts as a full mediator for both samples. In other words, CI fully accounts for the relationship between self-monitoring and cultural adaptation. One possible explanation is that self-monitors use their ability to recognize cultural differences and change their behaviors as means to avoid inappropriate behaviors, which enables them to successfully adapt to new cultures. Lastly, for both datasets, CI partially mediates the relationship between core self-evaluation and cultural adaption. Here, the possibility of making appraisals internally and externally can help one recognize when cultural differences are occurring and what those differences are, which then, with CI present can lead to more effective cultural adaptation.

Findings from the exploratory analyses offer key insight into CI relationships that have yet to be explored. These findings, coupled with those from the three studies included in this dissertation, expand the current research pool by confirming relationships already found and offering new relationships to explore. The following sections will discuss the practical implications of CI research for organizational settings.

Practical Implications

Cross-cultural engagements have become quite prevalent today, in domestic and international organizations. With improvements in transportation and technology, people are having more interactions with others from culturally diverse backgrounds. To adapt and perform effectively in multicultural environments, people and organizations require a

better understanding of the factors that influence these key outcomes. CI may be a key component to understanding how individuals function in cross-cultural contexts. Results of this dissertation provide insight into the role of CI, among a number of other individual difference characteristics, in shaping performance and adaptation. Current organizational practices often include the measurement of individual differences for a number of people-related processes including selection, succession planning, and training and development. By including the measurement of CI in these processes, organizations may gain talent for cross-cultural aptitude.

Evidence from this dissertation suggests that CI is in fact a characteristic unique from other commonly assessed characteristics such as personality, self-concept, emotional intelligence and experience. Thus, the evidence also suggests that the measurement of CI adds unique value beyond the measurement of these characteristics. While further research is still necessary, for selection practitioners, the practical implications may be promising. If additional research also finds support for the CI and performance relationships found in the present dissertation, practitioners may consider the assessment of CI when selecting for positions that require cross-cultural competency, as those individuals with higher CI are more likely to be successful in these roles.

Considering the high costs for recruitment, selection, and on-boarding, assessing candidates for CI and including some CI criteria for selection into the roles may be in the best interest of the organization. While individuals with lower CI levels may be successful in the role overall, chances for dissatisfaction and turnover are high if CI is low and cross-cultural competence is necessary for the role. This is especially true for global, virtual roles and expatriate assignments, which are becoming more commonplace

within organizations. Incumbents in these types of roles are engaging in cross-cultural interactions on a daily basis, and CI is likely to be a key predictor for performance and adaptation outcomes for these roles.

Similarly, for succession planning or workforce planning, as companies become increasingly culturally diverse, individuals in higher level roles will likely require some levels of cross-cultural competence. Many organizations consider psychological assessment results for succession planning, and by including CI measurements, organizations can ensure that their future managers and leaders are able to interact effectively with others from culturally diverse backgrounds. For long-term workforce planning, the measurement of CI can also identify if a gap does exist within a company's talent pool for this key competency. If in fact a gap does exist, organizations can design plans to fill the void. Again, the likely plans will consist of selecting for individuals who are high on CI, as discussed, or targeted development for the current talent pool, which will be discussed next.

In addition to selecting for people who are high in CI, organizations may also consider developing current employees' CI further. Reasons why a company may choose training and development over selection are many, and include a hold on hiring or no positions to fill, a limited budget, and a culture of development rather than hiring to name a few. Regardless of the reason, theorists such as Earley and Mosakowski (2004), as well as Earley and Peterson (2004) have suggested that CI can improve through targeted activities. If gaps for cultural competence occur within the talent pool or if cross-cultural performance is low, organizations should consider offering CI training. Evidence from this dissertation provides key insights for the development of CI training. First, the

training should target all four subfactors of CI, as they are highly interdependent. Thus, simply providing an overview of cultural differences is not enough, but rather the appropriate behavioral responses should also be included and practiced. Second, motivation to behave differently and succeed is large component of CI, and those with low self-appraisal, self-efficacy, or self-control may require additional training. In other words, people who are positively motivated and succeed are likely to experience high CI because of training. Lastly, these people are also more likely to apply CI learning on the job, thus, organizations may want to consider these self-concept and motivation components prior to deploying a training program.

Limitations

While this dissertation includes practical implications for the use of CI measurement in organizational settings, it also has several limitations for consideration and discussion. The limitations will be presented in congruence with the specific studies below.

The first study in this dissertation included a meta-analysis of the existing CI literature, which inherently has limitations. First, while the researcher conducted a thorough and comprehensive review of the literature databases, relevant studies that meet all criteria were missed in the literature search. Several steps and precautions were taken to ensure that all studies were reviewed, however, no literature search can be guaranteed complete. Second, the researcher did have to make several decisions during the meta-analysis process, which increases the subjectivity of the results. These decisions included whether or not a study met all criteria and was appropriate for inclusion, if a construct measured did not perfectly align with the specific variable, how best it should be aligned,

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and, if multiple effect sizes were presented, how best to capture the data for analysis. A second researcher checked the process used to make each of these decisions to ensure that the best possible decisions were made. Lastly, due to the relatively new nature of CI, only a small number of studies were included in the meta-analysis. While enough studies were available to complete the analysis properly, a larger number is ideal.

As the methods and analysis for the second and third studies were identical, the limitations will be presented concurrently. First, as with any type of self-assessment or survey research, the response data collected is subject to a number of possible errors and biases. These include socially desirable responding, inattentively responding, dishonesty, and inflation to name a few. For the present design, several attention check and reverse coded items were included in the assessments to help mitigate these concerns; however, no exact way is noticeable to control these errors.

Second, as mentioned, the coefficient alpha reliabilities for several scales from both studies were less than desirable. This is particularly true for the personality scales and the student sample. For the personality scales, the lower reliabilities are likely a result of two things: the errors and biases associated with self-assessment just described and the small number of items included for each scale. To reduce the number of items for the full assessment battery, a shorted version of the Big Five measure was used. While this may have saved time for the participants, it also likely reduced the reliabilities for these scales considerably. An ideal approach to measuring reliability for scales with small items number is to assess test–retest reliability. However, the design of the included studies did not allow for testing over several points in time to collect the data necessary for these analyses. Thus, alpha coefficients were the next best option, though not necessarily

appropriate. Despite the low reliabilities for the personality scales, all of the coefficient alpha reliabilities for the other measures and this sample were acceptable, if not excellent.

Reliabilities for the four subscales of CI were also lower than expected, with only the overall CI factor showing acceptable reliability. Considering only overall CI was examined my dissertation, these lower subscale reliabilities are not a large cause for concern. However, they do raise questions about the psychometrics properties of the CI assessment and model, suggesting that perhaps additional models and measures are needed for a more accurate assessment of CI within the research. Until a more consistent measure of CI is available, all studies in the field are likely subject to measurement error.

Third, the present design of the studies presented no ideal way to measure the performance and adaptation outcomes. Several variables were aggregated to measure both outcomes based on previous research, and these were measured using self-report. The outcome items were especially transparent and susceptible to socially desirable responding, as evidenced by higher than average outcome means. In addition, the manner in which outcomes were measured is not true to the manner in which they ae measured in practical settings. Thus, the generalizability of the results may be called into question. As a check for the student sample, a high correlation was found between GPA and self-rated performance; however, no such check was available for the adult worker sample.

Directions for Future Research

While this dissertation includes confirmatory and novel quantitative insight regarding the nomological network of CI, understanding and further research remain essential. Beginning with academic research, the limited number of studies available for inclusion in the meta-analysis suggests that more quantitative study of CI correlates and

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outcomes are needed. Only with continued empirical research can we have a clearer understanding of key CI relationships examined with advanced statistical techniques. Similarly, this dissertation has introduced the quantitative study of self-concept variables in relation to CI, and further research into the relationships specifically is needed. Beyond simple relationships, research is necessary to examine further the role of CI as a mediator and moderator between predictors and outcomes, which is limited in the current literature pool. Similarly, studies are needed to examine CI relationships at the subfactor level to assist in further clarifying the exact nature of these relationships.

In addition to the aforementioned academic research recommendations, several other research needs occur within the field having more practical implications. To date, performance and adaptation are the most commonly studied outcomes of CI. Research should be done to expand these to other relevant organizational outcomes, such as employee satisfaction and engagement. With regard to practical uses, evidence from this study demonstrated the predictive validity of CI for performance and adaptation. To use CI assessment for selection purposes, additional studies, preferably within organizational settings and tied to actual performance, should be conducted to identify the specific predictive power and for which types of roles, industries, and functions, among others. Furthermore, studies examining key organization-level business outcomes related to CI would also contribute to its practical uses.

Lastly, to date, only one measure of CI exists within the literature, which limits the conclusions that can be drawn. In addition, the measure follows a four-factor model, which only slightly beats the one-factor and three-factor models. Academics and research should consider developing additional scales of CI, according to the varying models, and

testing their characteristics to identify the best possible measure. Without these tests and comparisons, knowing how researchers are measuring CI as effectively as possible can be difficult. CI research has much to offer the fields of organizational psychology and cross-cultural psychology. However, research in the field is still only elementary and advancement is essential.

Conclusion

In today's organizational settings, people are engaging in cross-cultural interactions on a daily basis. As researchers and organizations continue to study the impact of international functioning on business operations, organizational psychologists, and practitioners should too continue to examine the people aspect of the business within the cross-cultural context. The study of cultural intelligence as an individual difference characteristic is a step in the right direction.

Three studies were conducted to advance the overall study of CI. First, a meta-analysis of the existing literature clearly identified two predictors of CI as well as two outcomes. Then, two studies using primary data were facilitative of examining the factor structure of CI, to determine its nomological network. Results from these two studies confirmed the relationships between CI and personality, emotional intelligence and cross-cultural experience, as well as its relationships with performance and cultural adaptation outcomes. CI was also found to offer incremental validity over these variables for predicting performance and adaptation. In addition and for the first time, several self-concept variables were found to be correlates of CI. In addition, several exploratory mediation analyses revealed full and partial mediation effects for CI. Lastly, implications and recommendations for future research are presented for academic and applied settings.

REFERENCES

Ahmadi, Y., Shahmohamadi, A., & Araghi, M. M. (2011). The study of effect socio-cultural factor on cultural intelligence. *International Journal of Humanities and Social Science, 12,* 161–168.

Allport, G. W., & Odbert, H. S. (1936). Trait names: A psycholexical study. *Psychological Monographs, 47,* 211.

Ames, C., & Archer, J. (1988). Achievement goals in the classroom: Students' learning strategies and motivation processes. *Journal of Educational Psychology, 80,* 260–267.

Ang, S., & van Dyne, L. (2008). Conceptualization of cultural intelligence: Definition, distinctiveness, and nomological network. In S. Ang & L. van Dyne (Eds.), *Handbook of cultural intelligence: Theory, measurement, and applications* (pp. 3–15). Armonk, NY: M. E. Sharpe.

Ang, S., van Dyne, L., & Koh, C. (2006). Personality correlates of the four-factor model of cultural intelligence. *Group and Organization Management, 31,* 100–123.

Ang, S., van Dyne, L., Koh, C., Ng, K. Y., Templar, K. J., Tay, C., & Chandrasekar, N. A. (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.

Arthur, W., & Bennett, W. (1995). The international assignee: The relative importance of factors perceived to contribute to success. *Personnel Psychology, 48,* 99–114.

Aycan, Z. (1997). Acculturation of expatriate managers: A process model of adjustment and performance. In Z. Aycan (Ed.), *Expatriate management: Theory and Practice* (Vol. 4, pp. 1–40). Greenwich, CT: Elsevier Science/JAI Press.

Aycan, Z. (2000). Cross-cultural industrial and organizational psychology: Contributions, past developments and future directions. *Journal of Cross-Cultural Psychology, 31,* 110–128.

Bandura, A. (1969). Social learning theory of identificatory processes. In D. A. Goslin (Ed.), *Handbook of socialization theory and research* (pp. 213–262). Chicago, IL: Rand McNally.

Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioral change. *Psychological Review, 84,* 191–215.

Bandura, A. (1982). Self-efficacy mechanism in human agency. *American Psychologist, 37,* 122–147.

Bandura, A. (1994). Regulative function of perceived self-efficacy. In M. G. Rumsey, C. B. Walker, & J. H. Harris (Eds.), *Personal selection and classification* (pp. 261–271). Hillsdale, NJ: Erlbaum.

Bar-On, R. (1997). *The Bar-On Emotional Quotient Inventory™ (EQ-i™): A test of emotional intelligence*. Toronto, Canada: Multi-Health Systems.

Baron, R. M., & Kenny, D. A. (1986). The moderator–mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology, 51,* 1173.

Barrett, G. V., & Bass, B. M. (1976). Cross-cultural issues in industrial and organizational psychology. In M. D. Dunnette (Ed.), *Handbook of industrial and organizational psychology* (pp. 1639–1686). Chicago, IL: Rand McNally.

Barrick, M. R., & Mount, M. K. (1991). The big five personality dimensions and job performance: A meta-analysis. *Personnel Psychology, 44,* 1–26.

Bennett, M. J. (1993). The developmental model of intercultural sensitivity. (M. R. Paige, Ed.) *Defense*, 1–51. Intercultural Press.

Bennett, J. M., & Bennett, M. J. (2004). Intercultural sensitivity: An integrative approach to global and domestic diversity. In D. Landis & M. J. Bennett (Eds.), *Handbook of intercultural training* (pp. 147–165). Thousand Oaks, CA: SAGE.

Berry, J. W. (1980). Acculturation as varieties of adaptation. In A. M. Padilla (Ed.), *Acculturation: Theory, models and some new findings* (pp. 9–25). Boulder, CO: Westview.

Berry, J. W., & Sam, D. L. (1997). Acculturation and adaptation. In J. W. Berry, M. H. Segall, & Kagitcibasi, C. (Eds), *Handbook of cross-cultural psychology* (Vol. 3, pp. 291–325). Needham Heights, MA: Allen and Boyd.

Best, R. G., Stapleton, L. M., & Downey, R. G. (2005). Core self-evaluations and job burnout: The test of alternative models. *Journal of Occupational Health Psychology, 10,* 441–451.

Black, J. S., & Gregersen, H. B. (1991). When Yankee comes home: Factors related to expatriate and spouse repatriating adjustment. *International Business Studies*, 22, 671–694.

Black, J. S., Mendenhall, M., & Oddou, G. (1991). Toward a comprehensive model of international adjustment: An integration of multiple theoretical perspectives. *Academy of Management Review, 16,* 291–317.

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.

Block, N. (1995). On a confusion about the function of consciousness. *Behavioral and Brain Sciences, 18*, 227–47.

Bono, J. E., & Judge, T. A. (2003). Core self-evaluations: A review of the trait and its role in job satisfaction and job performance. *European Journal of Personality, 17,* S5–S18.

Borman, W. C., & Motowidlo, S. J. (1993). Expanding the criterion domain to include elements of contextual performance. In N. Schmitt & W. C. Borman (Eds.), *Personnel selection in organizations* (pp. 71–89). San Francisco, CA: Jossey-Bass.

Brewster, C. (1991). *The management of expatriates.* London: Kogan Page.

Brislin, R. W. (1981). *Cross-cultural encounters: Face-to-face interaction.* New York, NY: Pergamon Press.

Brislin, R., Worthley, R., & Macnab, B. (2006). Cultural intelligence: Understanding behaviors that serve people's goals. *Group and Organization Management, 31,* 40–55.

Buhrmester, M., Kwang, T., & Gosling, S. D. (2011). Amazon's Mechanical Turk: A new source of inexpensive, yet high-quality, data? *Perspectives on Psychological Science, 6,* 3–5.

Caligiuri, P. M. (1997). Assessing expatriate success: Beyond just "being there." In Z. Aycan (Ed.), *Expatriate management: Theory and Practice* (pp. 117–140). Greenwich, CT: JAI Press.

Caligiuru, P. M. (2000). The Big Five personality characteristics as predictors of expatriate's desire to terminate the assignment and supervisor-rated performance. *Personnel Psychology, 53,* 67–88.

Campbell, J. P. (1990). Modeling the performance prediction problem in industrial and organizational psychology. In M. D. Dunnette & L. M. Hough (Eds.), *Handbook of industrial and organizational psychology* (pp. 687–732). Palo Alto, CA: Consulting Psychologists Press.

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.

Conversi, D. (2010). The limits of cultural globalization? *Journal of Critical Globalisation Studies, 1,* 36–59.

Costa, P. T., & 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.

Cox, T. H., & Blake. S. (1991). Managing cultural diversity: Implications for organizational competitiveness. *The Executive, 5,* 45–56.

Cronbach, L. J., & Meehl, P. E. (1955). Construct validity in psychological tests. *Psychological Bulletin, 52,* 281–302.

Crowne, K. A. (2008). What leads to cultural intelligence? *Business Horizons, 51,* 391–399.

Dalton, M., & Wilson, M. (2000). The relationship of the five-factor model of personality to job performance for a group of Middle Eastern expatriate managers. *Journal of Cross-Cultural Psychology, 31,* 250–258.

Douglas, S. P., & Wind, Y. (1987). The myth of globalization. *Columbia Journal of World Business, 22,* 19–29.

Drasgow, F. (2003). Intelligence and the workplace. In I. B. Weiner (Ed.), *Handbook of psychology* (Vol. 12, pp. 107–130). New York, NY: Wiley.

Drenth, P. J., & Groenendijk, B. (1984). Work and organizational psychology in cross-cultural perspective. In P. J. D. Drenth, H. Thierry, P. J. Willems, & C. J. De Wolff (Eds.), *Handbook of work and organizational psychology* (Vol. 2, pp. 1197–1230). New York, NY: Wiley.

Duval, S., & Wicklund, R. A. (1972). A theory of objective self-awareness. New York: Academic Press.

Earley, P. C., & Ang, S. (2003). *Cultural intelligence: Individual interactions across cultures.* Stanford, CA: Stanford University Press.

Earley, P. C., Ang, S., & Tan, J. (2006). *CQ: Developing cultural intelligence at work.* Stanford, CA: Stanford Business Books.

Earley, P. C., & Mosakowski, E. (2004). Cultural intelligence. *Harvard Business Review, 82,* 139–146.

Earley, P. C., & Peterson, R. S. (2004). The elusive cultural chameleon: Cultural intelligence as new approach to intercultural training for the global manager. *Academy of Management Learning and Education, 3,* 100–115.

Ekman, P., & Friesen, W. V. (1969). The repertoire of nonverbal behavior categories, origins, usage and coding. *Semiotica, 1,* 49–98.

Engelberg, E. & Sjöberg, L. (2004). Internet use, social skills and adjustment. *CyberPsychology & Behavior, 7,* 41–47.

Erez, A., & Judge, T. A. (2001). Relationship of core self-evaluations to goal setting, motivation, and performance. *Journal of Applied Psychology, 86,* 1270–1279.

Eysenck, H. (1990). Biological dimensions of personality. In L. A. Pervin (Ed.), *Handbook of personality: Theory and research* (pp. 244–276). New York, NY: Guilford Press.

Fearon, J. D. (2003). Ethnic and cultural diversity by country. *Journal of Economic Growth, 8,* 195–222.

Fiske, D. W. (1949). Consistency of the factorial structures of personality ratings from different sources. *Journal of Abnormal Social Psychology, 44,* 329–344.

Ford, M. E., & Tiask, M. S. (1983). A further search for social intelligence. *Journal of Educational Psychology, 75,* 196–206.

Freud, S. (1959). Analysis terminable and interminable. In E. Jones (Ed.) & J. Riviere (Trans.) *Collected Papers* (Vol. 5, pp. 316–357). New York, NY: Basic Books.

Galton, F. (1884). Measurement of character. *Fortnightly Review, 36,* 179–185.

Gardner, H. (1983). *Frames of mind: The theory of multiple intelligences.* New York, NY: Basic Books.

Gardner, H. (1999). *Intelligence reframed: Multiple intelligences for the 21st century.* New York, NY: Basic Books.

Gelfand, M. J., Erez, M., & Aycan, Z. (2007). Cross-cultural organizational behavior. *Annual Review of Psychology, 58,* 479–514.

Gelfand. M. J., Lyons, S. L., & Lun, J. (2011). Toward a psychological science of globalization. *Journal of Social Issues, 67,* 841–853.

Goldberg, L. R. (1990). An alternative description of personality: The Big-Five factor structure. *Journal of Personality and Social Psychology, 59,* 1216–1229.

Goldberg, D. P., & Williams, P. (1998). *A user's guide to the General Health Questionnaire*. Windsor, United Kingdom: NFER–Nelson.

Goleman, D. (2006). *Emotional Intelligence.* New York, NY: Bantam Books.

Harrison, J. K., Chadwick, M., & Scales, M. (1996). The relationship between cross-cultural adjustment and the personality variables of self-efficacy and self-monitoring. *International Journal of Intercultural Relations, 20,* 167–188.

Hazuda, H. P., Stern, M. P., & Hoffner, S. M. (1988). Acculturation and assimilation among Mexican Americans: Sales and population-based data. *Social Science Quarterly, 69,* 687–706.

Hirst, P. Q., & Thompson, G. (1999). *Globalization in question: The international economy and the possibilities of governance.* Cambridge, United Kingdom: Polity Press.

Hofstede, G. (1991). *Cultures and organizations: Software of the mind.* New York, NY: McGraw Hill.

Hough, L. M., & Furnham, A. (2003). Use of personality variables in work settings. In I. B. Weiner (Ed.), *Handbook of psychology* (Vol. 12, pp. 131–169). New York, NY: Wiley.

Hunter, J. E., & Hunter, R. F. (1984). Validity and utility of alternative predictors of job performance. *Psychological Bulletin, 96,* 72–98.

Hunter, J. E., & Schmidt, F. L. (1998). The validity and utility of selection methods in personnel psychology: Practical and theoretical implications of 85 years of research findings. *Psychological Bulletin, 124,* 262–274.

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

Imai, L., & Gelfand, M. J. (2010). The culturally intelligent negotiator: The impact of cultural intelligence (CQ) on negotiation sequences and outcomes. *Organizational Behavior and Human Decision* Processes*, 112,* 83–98.

Janis, I. L., & Mann, L. (1977). *Decision making: A psychological analysis of conflict, choice and commitment.* New York, NY: Macmillan.

Johnson, E. C., Kristof-Brown, A. L., van Vianen, A. E., de Pater, I. E., & Klein, M. R. (2003). Expatriate social ties: Personality antecedents and consequences for adjustment. *International Journal of Selection and Assessment, 11,* 277–288.

Johnson, J. P., Lenartowicz, T., & Apud, S. (2006). Cross-cultural competence in international business: Toward a definition and a model. *Journal of International Business Studies, 37,* 525–543.

Judge, T. A., & Bono, J. E. (2001). Relationship of core self-evaluations traits—self-esteem, generalized self-efficacy, locus of control, and emotional stability—with job satisfaction and job performance: A meta-analysis. *Journal of Applied Psychology, 86,* 80–92.

Judge, T. A., Erez, A., Bono, J. E., & Thoresen, C. J. (2003). The core self-evaluations scale (CSES): Development of a measure. *Personnel Psychology, 56,* 303–331.

Judge, T. A., Locke, E. A., & Durham, C. C. (1997). The dispositional causes of job satisfaction: A core evaluations approach. *Research in Organizational Behavior, 19,* 151–188.

Judge, T. A., Martocchio, J. J., & Thoresen, C. J. (1997). Five-factor model of personality and employee absence. *Journal of Applied Psychology, 82,* 745–755.

Judge, T. A., Thoresen, C. J., Bono, J. E., & Patton, G. K. (2001). The job satisfaction–job performance relationship: A qualitative and quantitative review. *Psychological Bulletin, 127,* 376–407.

Kolb, D. A. (1984). *Experiential learning: Experience as the source of learning and development.* Englewood Cliffs, NJ: Prentice-Hall.

Kim, K., Kirkman, B. L., & Chen, G. (2008). Cultural intelligence and international assignment effectiveness: A conceptual model and preliminary findings. In S. Ang & L. van Dyne (Eds.), *Handbook of cultural intelligence: Theory, measurement, and applications* (pp. 71–80). Armonk, NY: M. E. Sharpe.

Kumar, N., Rose, R. C., & Subramaniam (2008). The bond between intelligences: Cultural, emotional, and social. *Performance Improvement*, *47*, 42–48.

Law, K. S., Wong, C. S., & Song, L. J. (2004). The construct and criterion validity of emotional intelligence and its potential utility for management studies. *Journal of Applied Psychology, 89,* 483–496.

Lazarus, R. S., & Folkman, S. (1984). *Stress, appraisal, and coping*. New York, NY: Springer.

Lee, Y., & Sukoco, B. M. (2010). The effects of cultural intelligence on expatriate performance: The moderating effects of international experience. *International Journal of Human Resource Management, 21,* 963–981.

Lennox, R., & Wolfe, R. (1984). Revision of the self-monitoring scale. *Journal of Personality and Social Psychology*, *46*, 1349–1364.

Lin, Y., Chen, A. S., & Song, Y. (2012). Does your intelligence help to survive in a foreign jungle? The effects of cultural intelligence and emotional intelligence on cross-cultural adjustment. *International Journal of Intercultural Relations, In press.*

MacNab, B., Brislin, R., & Worthley, R. (2012). Experiential cultural intelligence development: Context and individual attributes. *International Journal of Human Resource Management, 23,* 1320–1341.

Markel, K. S., & Frone, M. R. (1998). Job characteristics, work-school conflict, and school outcomes among adolescents: Testing a structural model. *Journal of Applied Psychology, 83*, 277–287.

Markus, H. R., & Kitayama, S. (1991). Culture and the self: Implication for cognition, emotion, and motivation. *Psychological Review, 98,* 224–253.

Marlowe, H. A. (1986). Social intelligence: Evidence for multidimensionality and construct independence. *Journal of Educational Psychology, 78,* 52–58.

Matamala, A., Sawhney, E., Drew, E., Thomas, J. & Viswesvaran, C. (2012, August). *Worthwhile or worthless? A meta-analysis of diversity training effectiveness.* Paper presented at the annual Academy of Management Conference, Boston, MA.

Mayer, J. D., & Salovey, P. (1997). What is emotional intelligence? In P. Salovey & D. S. Sluyter (Eds.), *Emotional development and emotional intelligence: Implications for educators* (pp. 3–31). New York, NY: Basic Books.

Mayer, J. D., Salovey, P., & Caruso, D. (2000). Models of emotional intelligence. In R. J. Sternberg (Ed.), *The handbook of intelligence* (pp. 396–420). New York, NY: Cambridge University Press.

McCauley, C., Wright, M., & Harris, M. E. (2000). Diversity workshops on campus: A survey of current practices at U.S. colleges and universities. *The College Student Journal, 34,* 100–114.

McCrae, R. R., & Costa, P. T. (1987). Validation of the five-factor model of personality across instruments and observers. *Journal of Personality and Social Psychology*, *52*, 81–90.

Mol, S., Born, M., Willemsen, M., & van der Molen, H. (2005). Predicting expatriate job performance for selection purposes—A quantitative review. *Journal of Cross-Cultural Psychology, 36*, 590−620.

Moss, F. A., & Hunt, T. (1927). Are you socially intelligent? *Scientific American, 137,* 108–110.

Motowidlo, S. J. (2003). Job Performance. In I. B. Weiner (Ed.), *Handbook of psychology* (Vol. 12, pp. 39–53). New York, NY: Wiley.

Motowidlo, S. J., Borman, W. C., & Schmit, M. J. (1997). A theory of individual differences in task and contextual performance. *Human Performance, 10,* 71–83.

Ng, K. Y., & Earley, P. C. (2006). Culture and Intelligence: Old constructs, new frontiers. *Group and Organization Management, 31,* 4.

Ng, K. Y., van Dyne, L., & Ang, S. (2009). From experience to experiential learning: Cultural intelligence as a learning capability for global leader development. *Academy of Management of Management Learning and Education, 8,* 511–526.

Oliver, J., Donahue, R., & Kentle, R. L. (1991). *The Big Five inventory.* Berkley, CA: University of California.

Ones, D. S., & Viswesvaran, C. (1997). Personality determinants in the prediction of aspects of expatriate job success. In Z. Aycan (Ed.), *Expatriate management: Theory and research* (Vol. 4, pp. 63–92). Greenwich, CT: Elsevier Science/JAI Press.

Oodlers, T., Chernysheko, O. S., & Stark, S. (2008). Cultural intelligence as a mediator of relationships between openness to experience and adaptive performance. In S. Ang & L. van Dyne (Eds.), *Handbook of cultural intelligence: Theory, measurement, and applications* (pp. 145–158). Armonk, NY: M. E. Sharpe.

Paige, R. M. (2004). Instrumentation in intercultural training. In D. Landis, J. M. Bennett, & M. J. Bennett (Eds.), *Handbook of intercultural training* (3rd ed., pp. 85–128). Thousand Oaks, CA: SAGE.

Palthe, J. (2004). The relative importance of antecedents to cross-cultural adjustment: Implications for managing a global workforce. *International Journal of Intercultural Relations, 28,* 37–59.

Paolacci, G., Chandler, J., & Ipeirotis, P. G. (2010). Running experiments on Amazon Mechanical Turk. *Judgment and Decision Making, 5*, 411–419.

Piaget, J. (1972). *The principles of genetic epistemology.* New York, NY: Basic Books.

Podsakoff , P. M., & MacKenzie , S. B. (1994). Organizational citizenship behaviors and sales unit effectiveness. *Journal of Marketing Research, 31*, 351–363.

Porter, G., & Tansky, J. W. (1996). Learning orientation of employees: Moving toward organization-based assessment. *Human Resource Development Quarterly, 7,* 165–178.

Rammstedt, B., & John, O. P. (2007). Measuring personality in one minute or less: A 10-item short version of the Big Five inventory in English and German. *Journal of Research in Personality, 41,* 203–212.

Riggio, R. E. (1986). Assessment of basic social skills. *Journal of Personality and Social Psychology, 51,* 649–660.

Ritzer, G. (2011). *Globalization: The essentials.* Hoboken, NJ: Wiley-Blackwell.

Rockstuhl, T., Seiler, S., Ang, S., van Dyne, L., and Annen, H. (2011), Beyond general intelligence (IQ) and emotional intelligence (EQ): The role of cultural intelligence (CQ) on cross-border leadership effectiveness in a globalized world. *Journal of Social Issues, 67,* 825–840.

Rose, C., Ramalu, R. S., Uli, S., & Kumar, L. N. (2010). Expatriate performance in international assignments: The role of cultural intelligence as dynamic intercultural competency. *International Journal of Business and Management, 5,* 76–85.

Rosenberg, M. (1965). *Society and the adolescent self-image.* Princeton, NJ: Princeton University Press.

Rosenthal, R. (1991). *Meta-analytic procedures for social research.* Newbury Park, CA: SAGE.

Rotter, J. B. (1966). Generalized expectancies for internal versus external control of reinforcement. *Psychological Monographs, 80,* 609.

Sackett, P. R., & Lievens, F. (2008). Personnel selection. *Annual Review of Psychology, 59,* 419–450.

Salas-Lopez, D., Holmes, L., Mouzon, D. M., & Soto-Greene, M. (2007). Cultural competency in New Jersey: Evolution from planning to law. *Journal of Healthcare for the Poor and Underserved, 18,* 35–43.

Salovey, P., & Mayer, J. D. (1990). Emotional intelligence. *Imagination, Cognition, and Personality, 9,* 185–211.

Searle, W. & Ward, C. (1990) The prediction of psychological and sociocultural adjustment during cross-cultural transitions. *International Journal of Intercultural Relations, 14,* 449–464.

Shaffer, M. A., & Miller, G. (2008) Cultural Intelligence: A Key Success Factor for Expatriates. In Ang, S. and van Dyne, L. (Eds.) *Handbook of cultural intelligence* (pp. 107–125). New York: M. E. Sharpe.

Sherer, M., Maddux, J. E., Mercadante, B., Prentice-Dunn, S., Jacobs, B., & Rogers, R. W. (1982). The self-efficacy scale: Construction and validation. *Psychological Reports, 51,* 663–671.

Snyder, M. (1974). Self-monitoring of expressive behavior. *Journal of Personality and Social Psychology, 30,* 526–537.

Snyder, M. (1979). Self-monitoring processes. *Advances in Experimental and Social Psychology, 12,* 85–128.

Snyder, M., & Gangestad, S. (1986). On the nature of self-monitoring: Matters of assessment, matters of validity. *Journal of Personality and Social Psychology, 51,* 125–139.

Spearman, C. (1904). General intelligence: Objectively determined and measured. *American Journal of Psychology, 15,* 201–292.

Steger, M. B. (2009). *Globalization: A very short introduction.* New York, NY: Oxford University Press.

Sternberg, R. J. (1977). *Intelligence, information processing and* analogical reasoning. Hillside, NJ: Erlbaum.

Sternberg, R. J. (1990). *Metaphors of mind: Conceptions of the nature of intelligence.* New York, NY: Cambridge University Press.

Sternberg, R. J. (2000). The concept of intelligence. In R. J. Sternberg (Ed.), *Handbook of intelligence* (pp. 3–15). New York, NY: Cambridge University Press.

Sternberg, R. J., & Detterman, D. K. (Eds.). (1986). *What is intelligence?* Norwood, NJ: Ablex.

Tajfel, H. H. (1982). *Social identity and intergroup relations.* Cambridge, United Kingdom: Cambridge University Press.

Tajfel, H. H., & Turner, J. C. (1986). The social identity theory of intergroup behavior. In S. Worchel & W. G. Austin (Eds.), *Psychology of Intergroup Relations* (pp. 7–24). Chicago, IL: Nelson-Hall.

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.

Thomas, D. C. (2006). Domain and development of cultural intelligence: The importance of mindfulness. *Group and Organization Management, 31,* 78–99.

Thomas, D. C., Elron, E., Stahl, G., Ekelund, B. Z., Ravlin, E. C., & Lazarova, M. B. (2008). Cultural intelligence: Domain and assessment. *International Journal of Cross Cultural Management, 8,* 123–143.

Thomas, D. C., & Inkson, K. (2003). *Cultural intelligence: Living and working globally.* San Francisco, CA: Berrett-Koehler.

Thomas, D. C., & Inkson, K. (2005). People skills for a global workplace. *Consulting to Management, 16,* 5–10.

Thorndike, E. L. (1920). Intelligence and its uses. *Harper's Magazine, 140,* 227–235.

Thurstone, L. L. (1938). *Primary Mental Abilities.* Chicago, IL: Chicago University Press.

Triandis, H. C. (1989). The self and social behavior in differing cultural contexts. *Psychological Review, 96,* 506–520.

Triandis, H. C. (2004). *Culture and social behavior.* New York: McGraw-Hill.

Triandis, H. C. (2006). Cultural intelligence in organizations. *Group and Organization Management, 31,* 20–26.

Tung, R. L. (1981). Selection and training of personnel for overseas assignments. *Columbia Journal of World Business, 16,* 68–78.

Tupes, E. C., & Christal, R. E. (1961). Recurrent personality factors based on trait ratings (ASD-TR-61-97). Lackland Air Force Base, TX: Aeronautical Systems Division, Personnel Laboratory.

Turner, J. C. (1987). *Rediscovering the social group: A self-categorization theory.* Oxford, England: Basil Blackwell.

Van der Zee, K. I. and van Oudenhoven, J. P. (2000). The multicultural personality questionnaire: A multidimensional instrument of multicultural effectiveness. *European Journal of Personality, 14,* 291–309.

Van Dyne, L., Ang, S., & Koh, C. (2008). Development and validation of the CQS: The cultural intelligence scale. In S. Ang & L. van Dyne (Eds.), *Handbook of cultural intelligence: Theory, measurement, and applications* (pp. 16–39). Armonk, NY: M. E. Sharpe.

Van Dyne, L., & LePine, J. A. (1998). Helping and voice extra-role behaviors: Evidence of construct and predictive validity. *Academy of Management Journal, 41,* 108–119.

Van Rooy, D. L., Alonso, A., & Viswesvaran, C. (2004). Group differences in emotional intelligence test scores: Theoretical and practical implications. *Personality and Individual Differences, 38*, 689–700.

Van Rooy, D., & Viswesvaran, C. (2004). Emotional intelligence: A meta-analytic investigation of predictive validity and nomological net. *Journal of Vocational Behavior, 65*, 71–95

Van Rooy, D. L., Viswesvaran, C., & Pluta, P. E. (2005). An evaluation of construct validity: What is this thing called emotional intelligence? *Human Performance, 18,* 445–462

Van Rooy, D. L., Whitman, D. S., Viswesvaran, C. (2010). Emotional intelligence: Additional questions still unanswered. *Industrial and Organizational Psychology, 3,* 149–153.

Vernon, P. E. (1933). Some characteristics of the good judge of personality. *Journal of Social Psychology, 4,* 42–57.

Viswesvaran, C., & Ones, D. S. (2000). Perspectives on models of job performance. *International Journal of Selection and Assessment, 8*, 216–227.

Viswesvaran, C., & Ones, D. S. (2004). Importance of perceived personnel selection system fairness determinants: Relations with demographic, personality and job characteristics. *International Journal of Selection and Assessment, 12*, 172–186.

Viswesvaran, C., Schmidt, F. L., & Ones, D. S. (2005). Is there a general factor in ratings of job performance? A meta-analytic framework for disentangling substantive and error influences. *Journal of Applied Psychology, 90,* 108–131.

Ward, C., & Fischer, R. (2008). Personality, cultural intelligence and cross-cultural adaptation: A test of the mediation hypothesis. In S. Ang & L. van Dyne (Eds.), *Handbook of cultural intelligence: Theory, measurement, and applications* (pp. 159–175). Armonk, NY: M. E. Sharpe.

Ward, C., Fischer, R., Lam, F. S., & Hall, L. (2009). The convergent, discriminant, and incremental validity of scores on a self-report measure of cultural intelligence. *Educational and Psychological Measurement, 69*, 85–105.

Ward, C., Wilson, J., & Fischer, R. (2011). Assessing the predictive validity of cultural intelligence over time. *Personality and Individual Differences, 51,* 138–142.

Wicker, A. W. (1969). Attitudes versus actions: The relationship of verbal and overt behavioral responses to attitude objects. *Journal of Social Issues*, *25*, 41–7.

Whitman, D. S., van Rooy, D. L., Viswesvaran, C., & Alonso, A. (2008). The susceptibility of a mixed model measure of emotional intelligence to faking: A Solomon four-group design. *Psychology Science*, *50,* 44–63.

Wong, C., & Law, K. S. (2002). The effects of leader and follower emotional intelligence on performance and attitude: An exploratory study. *The Leadership Quarterly, 13,* 243–274.

Yoo, S. H., Matsumoto, D., & LeRoux, J. A. (2006). The influence of emotion recognition and emotion regulation on intercultural adjustment. *International Journal of Intercultural Relations, 30*, 345–363.

Appendix 1

Cultural Intelligence Scale

1. I am conscious of the cultural knowledge I use when interacting with people from other cultural backgrounds
2. I know the legal and economic systems of other cultures
3. I enjoy interacting with people from other cultures
4. I change my verbal behavior (e.g., accent, tone) when a cross-cultural interaction requires it
5. I adjust my cultural knowledge as I interact with people from a culture that is unfamiliar to me
6. I know the rules (e.g., vocabulary, grammar) of other languages
7. I am confident that I can socialize with locals in a culture that is unfamiliar to me
8. I use pause and silence differently to suit cross-cultural situations
9. I am conscious of the cultural knowledge I apply to cross-cultural interactions
10. I know the cultural values and religious beliefs of other cultures
11. I am sure I can deal with stresses of adjusting to a culture that is new to me
12. I vary the rate of my speaking when a cross-cultural situation requires it
13. I check the accuracy of my cultural knowledge as I interact with people from other cultures
14. I know the marriage systems of other cultures
15. I enjoy living in cultures that are unfamiliar to me
16. I change my nonverbal behavior when a cross-cultural situation requires it
17. I know the arts and crafts of other cultures
18. I am confident that I can get accustomed to the shopping conditions of another culture
19. I alter my facial expressions when a cross-cultural interaction requires it
20. I know the rules for expressing nonverbal behaviors in other cultures

Big Five Inventory – 10

How well do the following statements describe your personality? I see myself as someone who...

1. ...is reserved
2. ...is generally trusting
3. ...tends to be lazy
4. ...is relaxed, handles stress well
5. ...has few artistic interests
6. ...is outgoing, sociable
7. ...tends to find fault with others
8. ...does a thorough job
9. ...gets nervous easily
10. ...has an active imagination

Core Self-Evaluation Scale

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1. I am confident I get the success I deserve in life
2. Sometimes I feel depressed
3. When I try, I generally succeed
4. Sometimes when I fail, I feel worthless
5. I complete tasks successfully
6. Sometimes, I do not feel in control of my work
7. Overall, I am satisfied with myself
8. I am filled with doubts about my competence
9. I determine what will happen in my life
10. I do not feel in control of my success in my career
11. I am capable of coping with most of my problems
12. Things look pretty bleak and hopeless to me at times

Social Self-Efficacy Scale

1. Making new friends is difficult for me
2. If I see someone I'd like to meet from another culture, I go to that person instead of waiting for him or her to come to me
3. If I meet someone interesting with a cultural background different from mine who is hard to make friends with, I'll soon stop trying to make friends with that person
4. When I'm trying to become friends with someone from another culture who seems uninterested at first, I don't give up easily
5. I do not handle myself well in social gatherings
6. I have my friends through my personal abilities at making friends

Self-Monitoring Scale

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1. I find it hard to imitate the behavior of other people
2. At parties and social gatherings, I do not attempt to do or say things that others will like
3. I can only argue for ideas which I already believe
4. I can make impromptu speeches even on topics about which I have almost no information
5. I guess I put on a show to impress or entertain others
6. I would probably make a good actor
7. In a group of people I am rarely the center of attention
8. In situations with other people, I often act like a different person
9. I am not particularly good at making other people like me
10. I'm not always the person I appear to be
11. I would not change my opinions (or the way I do things) to please someone or win their favor
12. I have considered being an entertainer
13. I have never been good at games like charades or impromptu acting
14. I have trouble changing my behavior to suit people and situations
15. At parties, I let others keep the jokes and stories going
16. I feel a bit awkward in public and do not show up quite as well as I should
17. I can look anyone in the eye and tell a lie with a straight face (if for a right end)
18. I may deceive people by being friendly when I really dislike them

Wong and Law Emotional Intelligence Scale

1. I have a good sense of why I have certain feelings most of the time
2. I always know my friends' emotions from their behavior
3. I always set goals for myself and then try my best to achieve them
4. I am able to control my temper and handle difficulties rationally
5. I have a good understanding of my own emotions
6. I am a good observer of others' emotions
7. I always tell myself I am a competent person
8. I am quite capable of controlling my own emotions
9. I really understand what I feel
10. I am sensitive to the feelings and emotions of others
11. For this question, please select "somewhat like me"
12. I am a self-motivated person
13. I can always calm down quickly when I am angry
14. I always know whether or not I am happy
15. I have a good understanding of the emotions of people around me
16. I would always encourage myself to try my best
17. I have good control of my own emotions

Cross-Cultural Experience Items (Study 2)

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1. How many months have you lived or traveled outside of the United States?

Cross-Cultural Experience Items (Study 3)

1. How many months have you lived or traveled outside of the United States?

Job Performance Items (Study 2)

Task Performance: During the past school year, how often have you done each of the following things?

1. Put forth a high level of effort in class
2. Tried to do your best on all assignments
3. Completed all assignments on time
4. Performed all school work that was expected of you

Contextual Performance: During the past school year, how often have you done each of the following things?

1. I attend and actively participate in school meetings
2. I take steps to try and prevent problems with other students in my class
3. I willingly take time to help my classmates when they need it
4. I attend school functions that are not required but help with school spirit

Job Performance Items (Study 3)

Task Performance: During the past year, how often have you done each of the following things at work?

1. Fulfill the responsibilities specified in my job description
2. Perform the tasks that are expected as a part of my job
3. Meet performance expectations
4. Adequately completes job responsibilities

Contextual Performance: During the past year, how often have you done each of the following things at work?

1. Volunteer to do things for my work group
2. Help others in my work group learn about the work
3. Get involved to benefit my work group
4. Assist others in my work group with their work for the benefit of the group

Cultural Adaptation Items

Interaction Adjustment: How well adjusted (comfortable) are you when....

1. Interacting with culturally diverse people on a day-to-day basis?
2. Socializing with culturally diverse people?
3. Getting along with people from other cultural backgrounds?

Psychological Well-Being: Below are lists of statements regarding well-being when working with others from a cultural background different from your own. Please rate yourself against each statement according to the answer scale provided.

1. Able to concentrate on whatever you're doing despite cultural differences
2. Feel that you are useful or are making useful contributions despite cultural differences
3. Feel that you are capable of making decisions despite cultural differences
4. Able to face up to your responsibilities when working with culturally diverse others

Demographic Items (Study 2)

1. What is your age?
2. What is your gender?
   a. Male
   b. Female
3. Where do you currently live?
   a. United States
   b. Canada
   c. Europe
   d. Middle East
   e. Asia
   f. Africa
   g. Central or South America
   h. Australia or New Zealand
4. What is your ethnicity?
   a. White or Caucasian
   b. Black or African American
   c. Hispanic or Latino
   d. Native American or American Indian
   e. Asian or Pacific Islander
   f. Other
5. What is your current class standing?
   a. 0-30 credits (Freshman)
   b. 31-60 credits (Sophomore)
   c. 61-90 credits (Junior)
   d. 91+ credits (Senior)
6. What is your current GPA?
7. How many hours do you work per week?
8. What percentage of your social relations (e.g., friends, family, peers, coworkers) has a cultural background different from your own?
   a. 0-25%
   b. 26-50%
   c. 51-75%
   d. 76-100%
9. Have you ever taken a class about a different culture or received any formal training about culture?

      a. Yes

      b. No

10. Have you ever participated in an international study abroad assignment or international work assignment?

      a. Yes

      b. No

Demographic Items (Study 3)

1. What is your age?
2. What is your gender?
    a. Male
    b. Female
3. Where do you currently live?
    a. United States
    b. Canada
    c. Europe
    d. Middle East
    e. Asia
    f. Africa
    g. Central or South America
    h. Australia or New Zealand
4. What is your ethnicity?
    a. White or Caucasian
    b. Black or African American
    c. Hispanic or Latino
    d. Native American or American Indian
    e. Asian or Pacific Islander
    f. Other
5. How many hours do you work per week?
6. How long have you been working for your current employer?
    a. Less than 1 year
    b. 1 to 3 years
    c. 3 to 5 years
    d. Over 5 years
7. What type of position do you hold at work?
    a. Nonmanagement Level
    b. Management Level
8. What percentage of your social relations (e.g., friends, family, peers, coworkers) has a cultural background different from your own?
    a. 0-25%
    b. 26-50%
    c. 51-75%
    d. 76-100%

9. Have you ever taken a class about a different culture or received any formal training about culture?
    a. Yes
    b. No
10. Have you ever participated in an international study abroad assignment or international work assignment?
    a. Yes
    b. No

VITA

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PUBLICATIONS AND PRESENTATIONS

Sawhney, E., Michel, J. S., & Mitchelson, J. K. (2010). Where has all the parsimony gone? Revisiting the original work-family conflict model via meta-analytic structural equation modeling. In C. L. Goossens (Ed.), *Family life: Roles, bonds, and impact.* (pp. 75–97). Hauppauge, NY: Nova Science.

Michel, J. S., Pace, V. L., Edun, A., Sawhney, E., & Thomas, J. (2014). Development and validation of an explicit aggressive beliefs and attitudes scale. *Journal of Personality Assessment, 96*(3), 327–338.

Michel, J. S., Edun, A., Pace, V., Sawhney, E., & Thomas, J. (2012, August). *The development and validation of an explicit justification of aggression scale.* Paper presented at the annual meeting of the Academy of Management, Boston, MA.

Matamala, A., Sawhney, E., Drew, E., Thomas, J. & Viswesvaran, C. (2012, August). *Worthwhile or worthless? A meta-analysis of diversity training effectiveness.* Paper presented at the annual meeting of the Academy of Management, Boston, MA.