ASSESSING CROSS-CULTURAL COMPETENCE: EVALUATING THE PSYCHOMETRIC PROPERTIES

AND THE NOMOLOGICAL NETWORK OF A MODIFIED VERSION

OF THE CULTURAL INTELLIGENCE SCALE

By

Kayitesi J. Wilt

Brian J. O'Leary
Associate Professor of Psychology
(Chair)

Michael D. Biderman
Professor of Psychology
(Committee Member)

Amye R. Warren
UC Foundation Professor of Psychology
(Committee Member)

ASSESSING CROSS-CULTURAL COMPETENCE: EVALUATING THE PSYCHOMETRIC PROPERTIES

AND THE NOMOLOGICAL NETWORK OF A MODIFIED VERSION

OF THE CULTURAL INTELLIGENCE SCALE

By

Kayitesi J. Wilt

A Thesis Submitted to the Faculty of the University of
Tennessee at Chattanooga in Partial
Fulfillment of the Requirements of the Degree
of Master of Science: Psychology

The University of Tennessee at Chattanooga
Chattanooga, Tennessee

May 2017

ABSTRACT

Effectively interacting with individuals in or from an unfamiliar culture requires cross-cultural

competence and adaptability. The Cultural Intelligence Scale (Ang et al., 2007) is designed to measure an

individual's ability to adapt in a culturally unfamiliar environment. Studies using the CQS have mixed

results regarding its dimensionality, construct validity, and its distinctness from other intelligences.

Additionally, the phrasing of some of the items in the CQS require respondents to have been to a foreign

culture to be able to answer. To address these critiques, I modified the CQS to accommodate individuals

who have never been to a foreign culture. I then explored the nomological network of the modified CQS

by examining its correlation with scales that measure emotional intelligence, social intelligence, and

personality. Results of this study provide evidence of the uniqueness of the CQS from other similar

constructs and confirm Ang et al.'s four-factor model.

ACKNOWLEDGMENTS

I would like to thank Dr. Michael Biderman, my thesis advisor and committee member, for his patience and unwavering support throughout this thesis process. I am so appreciative of his guidance and his push for me to "hang in there, kiddo." I would also like to thank Dr. Amye Warren for her kindness and helpful feedback, Dr. Brian O'Leary for his encouragement and comedic relief, and Dr. Christopher Cunningham for his advice and efforts to push me to the finish line. Finally, I owe a debt of gratitude to Dr. David Ross, who had confidence in me from the beginning and went out of his way to set me up for success. These individuals were instrumental in my success here at UTC and I am immensely grateful for their roles in not only my thesis but in my whole graduate school experience.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF ABBREVIATIONS

AES, Assessing emotions scale

BEH, Behavioral

BFI, Big Five Inventory

CQ, Cultural intelligence

CQS, Cultural intelligence scale

COG, Cognitive

MC, Metacognitive

mCQS, Modified cultural intelligence scale

MOT, Motivational

TSIS, Tromsø social intelligence scale

SA, Social awareness

SP, Social information processing

SS, Social skills

LIST OF SYMBOLS

α, Cronbach's Alpha

β, Beta weight

N, Number

M, Mean

SD, Standard deviation

p, Significance statistic

F, F-statistic

t, T-statistic

CHAPTER I

INTRODUCTION

The rise of globalization brings with it the need for workers to be cross-culturally competent so that business interactions in unfamiliar cultures are effective and failed overseas assignments and intercultural miscommunications are minimized. Understanding how to effectively communicate and interact with individuals from different cultures is important for anyone employed in a culturally diverse organization. Although social intelligence, emotional intelligence, and general personality characteristics such as the Big Five all have an impact on the ability to adapt to new situations, measures specific to cross-cultural situations may be needed to provide additional information on the suitability of applicants and employees. To that end, Ang and colleagues (2007) developed the Cultural Intelligence Scale (CQS) as a way to more specifically predict an individual's ability to adapt in a foreign culture.

Though the CQS has been used extensively in the cross-cultural literature, it has its share of criticism. Studies using the scale have had mixed results regarding its dimensionality, construct validity, and its distinctness from other intelligences, such as social and emotional intelligence (Bücker, Furrer, & Lin, 2015; Ward, Fischer, Lam, & Hall, 2009). Additionally, the CQS includes questions for which a participant would need to have had overseas experience to be able to answer honestly (Bücker et al., 2015). For this reason, the CQS as it is currently written might be improved as an instrument to predict the cross-cultural adaptability of an individual who has never been to a foreign country. For example, in some circumstances employers may want to predict how well employees who have never been overseas will adapt on an overseas assignment. A modified version of the CQS that takes these circumstances into account may improve its value to an organization.

The purpose of the present study, therefore, is to develop a modified version of the CQS and to compare its psychometric properties to those of the original CQS. The study also investigates the nomological network of the revised CQS by examining its correlation with scales that measure emotional intelligence, social intelligence, and personality. This paper begins with an overview of culture intelligence and the CQS, followed by an overview of emotional and social intelligence. It concludes with a discussion of the findings and suggestions for future research.

CHAPTER II

LITERATURE REVIEW

Cultural Intelligence

Ang et al. (2007) introduced the concept of Cultural Intelligence (CQ) because existing research on why some individuals were more effective overseas than others was "sparse and unsystematic" (p. 336). After determining that already established intelligence dimensions (e.g., general, social, and emotional) do not consider cross-cultural interactions, Earley and Ang (2003) introduced the concept of Cultural Intelligence (CQ), which they defined as "an individual's capability to function and manage effectively in culturally diverse settings" (Ang et al., 2007, p.336).

CQ includes four intelligence dimensions: metacognitive (α = .76), cognitive (α = .84), motivational (α = .76), and behavioral (α = .83; Ang et al., 2007). The metacognitive CQ dimension refers to an individual's judgment of his or her thought process as well as judgment of the thought processes of others (Earley & Ang, 2003). The cognitive CQ dimension deals with knowledge of cultural norms and practices based on personal or learned experience (Ang et al., 2007). Motivational CQ refers to the energy directed toward learning how to function effectively in an environment that is culturally different from one's own (Van Dyne et al., 2012). Finally, behavioral CQ refers to an individual's capability of using appropriate observable actions during interactions with people from a different culture (Ang et al., 2007).

Development of the Cultural Intelligence Scale

To measure CQ, Ang, Van Dyne, Koh, & Ng (2004) tested and validated CQ's four-factor model to develop the Cultural Intelligence Scale (CQS). Using confirmatory factor analysis (CFA), Ang et al. tested

the initial factor structure validity (which consisted of 40 items; 10 in each dimension) with a sample of 576 undergraduate students from Singapore. They then removed the items with undesirable psychometric properties, resulting in a final CQS consisting of 20 items: four in the metacognitive dimension, six in the cognitive dimension, five in the motivational dimension, and five in the behavioral dimension. Ang et al. (2007) claimed that the results of the CFA showed good model fit (χ^2 (164df) = 822.26, NNFI = 0.91, CFI = 0.92, SRMR = 0.06, and RMSEA = 0.08 ($p < 0.05$)). They then analyzed the CQS across samples (a separate sample of 447 Singapore undergrads), time (204 of the previous Singapore undergrads completed it twice, separated by four months), and countries (a sample of 337 U.S. undergrads) and found support for the four-factor model in every study (Ang et al., 2007).

The CQS and Personality

Ang et al. (2006) acknowledged that personality traits, such as the Big Five, can predict overseas success. They differentiated cultural intelligence from personality traits by noting that cultural intelligence is a state-like individual difference (malleable) as opposed to a trait-like individual difference (stable across time and context). Ang et al. posited that, despite this distinction, personality characteristics can also predict CQ. Because of this, they wanted to assess the discriminant validity of a Big Five personality scale with the CQS. Using an initial sample of business students, Ang et al. administered the CQS and the Personal Characteristics Inventory (PCI) on two separate occasions (separated by six weeks). The CFA confirmed the distinction between the CQ and the Big Five dimensions by revealing good fit for the nine-factor model (four for CQ and five for the PCI; Ang et al., 2006).

4

Predictive Ability of the CQS

Several studies have indicated the predictive ability of the CQS (Ang et al., 2007; Groves, Feyerherm, & Gu, 2015). Ang et al. (2007) found that metacognitive and cognitive CQ predicted cultural judgment and decision making in samples of participants from the U.S. (β = 0.21, p < 0.01) and Singapore (β = 0.15, p < 0.05). In addition, motivational CQ (U.S.: β = 0.15, p < 0.05; Singapore: β = 0.13, p < 0.05) and behavioral CQ (U.S.: β = 0.17, p < 0.05; Singapore: β = 0.10, p < 0.05) predicted cultural adaptation, and metacognitive CQ (β = 0.30, p < 0.05) and behavioral CQ (β = 0.47, p < 0.001) predicted task performance, which involved a problem-solving simulation in a culturally diverse environment. Contrary to their hypotheses, Ang et al. (2007) did not find significant relationships of cognitive or motivational CQ with task performance.

Social Intelligence

Both social intelligence and cultural intelligence involve the ability to interact appropriately in social situations. However, Ang et al. (2007) noted that the two intelligence dimensions differ in that social intelligence is specific to an individual's culture whereas cultural intelligence transcends cultures. Social intelligence is the "ability to understand the feelings, thoughts, and behaviors of persons, including oneself, in interpersonal situations and to act appropriately upon that understanding" (Marlowe, 1986, p. 52). Of the various definitions that the literature on social intelligence proposes for the construct, I will use Silvera, Martinussen, and Dahl's (2001) based on their qualitative study: "the ability to understand other people and how they will react to different social situations" (p.314).

Social Intelligence Scale

Silvera et al.'s (2001) Tromsø Social Intelligence Scale (TSIS) assesses various aspects of social intelligence (including cognitive and behavioral aspects), is short in length (21 items), and is easy to

access and administer. According to Silvera et al., the three dimensions that make up the TSIS are social information processing (one's ability to understand and predict the feelings and wishes of others), social skills (one's ability to fit in and get along with others), and social awareness (one's ability to understand and predict the actions of others).

Emotional Intelligence

Salovey and Mayer (1990) defined emotional intelligence as "the ability to monitor one's own and others' feelings and emotions, to discriminate among them and to use this information to guide one's thinking and actions" (p.189). They posited that emotional intelligence involves the appraisal and expression of emotions, the regulation of emotions, and the utilization of emotions.

Assessing Emotions Scale

Salovey and Mayer's (1990) framework, one of the most frequently used frameworks in the emotional intelligence literature (McEnrue & Groves, 2006) formed the basis for the Schutte et al. (1998) Assessing Emotions Scale (AES) used in the present study. I used the AES for two reasons: 1) the AES was developed as a response to "a need for brief, validated measures of emotional intelligence that are based on a cohesive and comprehensive model of emotional intelligence" (Schutte et al., 1998, p. 169), so it is short, and 2) it is accessible in contrast to other more frequently used emotional intelligence scales, such as Bar-On's (2004) EQ-i and Mayer, Salovey, and Caruso's (2002) MSCEIT, which are either costly or more time consuming.

The Current Study

Replication

With any scale, replication is necessary for testing and supporting reliability and validity. Doing so allows researchers to more confidently use the measures in future research. Campbell and Fiske (1959) emphasized the importance of testing both convergent and discriminant validity when testing whether a scale measures what it claims to (i.e., testing the scale's construct validity). Thus, one of the purposes of the present study was to examine the convergent and discriminant validity of the CQS by replicating Ang et al.'s (2007) study using a slightly modified version (described below).

Modifications to the CQS

Some of the items of the original CQS contain phrasing that appear to make the items only applicable to individuals who have been to a different culture. For example, one of the items states "I enjoy living in cultures that are unfamiliar to me." An individual who has never been to an unfamiliar culture would not be able to provide an honest response without modifying the wording themselves. To address this issue, I reworded the appropriate items into the conditional tense. So, the item "I enjoy living in cultures that are unfamiliar to me," for example, was modified to "I *would* enjoy living in cultures that are unfamiliar to me." Respondents who have not been to an unfamiliar culture can more honestly respond to the item as a hypothetical situation, not feeling obliged to choose the middle response ("neither agree nor disagree") because the item does not apply to them. This modification still enables culturally-experienced respondents to answer.

Exploring the Nomological Network of the CQS

In addition to testing the psychometric properties of the revised CQS, the present study attempted to establish the nomological network of the revised CQS by examining the correlations

between the CQS measures and the social intelligence, emotional intelligence, and personality

measures. Specifically, I assessed the extent to which cultural intelligence could be predicted based on

social intelligence, emotional intelligence, and personality to confirm the uniqueness of the CQS (i.e.,

the distinctness of cultural intelligence from social intelligence, emotional intelligence, and personality).

CHAPTER III

METHODOLOGY

Participants

Demographics

The sample was comprised of 61% female participants and 39% male participants. The ages in

the sample ranged from 18 to 84 (M = 34, SD = 14.43) with 44% of the participants employed full-time,

26% employed part-time, 21% unemployed but students, and 9% unemployed and non-students.

Regarding the sample's ethnic diversity, 70% of the participants were white, 10% were Asian, 9% were

black, and 6% were Hispanic. Thirty-one percent of the sample had taken at least some college courses,

26% had achieved a bachelor's degree, and 13% had earned a master's degree. Although most the

participants in this sample were from the United States (83%), more than twenty countries were

represented. A little over 50% of the sample had been outside of their home country for at least two

weeks (at one time). About 25% of the sample had never been outside of their home country, but 39 %

had at least been on vacation in a foreign country.

Sample Size

There were 372 participants in the present study. Recommendations for the minimal sample

size acceptable for exploratory factor analysis (EFA) vary (de Winter∗, Dodou∗, & Wieringa, 2009;

Fabrigar, Wegener, MacCallum, & Strahan, 1999; Rouquette & Falissard, 2011). Generally, an acceptable

EFA sample size should have 300 participants at minimum, but this number needs to be larger

depending on the number of factors (Rouquette & Falissard, 2011). In the present study, EFA was only

9

used to assess the factor structure of the mCQS; Ang et al. (2006) found a four-factor structure, so I anticipated that the mCQS would produce four factors as well.

Participant Recruitment

To obtain a sample large and diverse enough for the requirements of the present study's analysis, participants were recruited several ways. One way was through the University of Tennessee at Chattanooga's Sona system. Sona (a research participation system) only allows enrolled students to participate, and these participants are often given credit for their participation. Of the 372 participants in the present study, 99 were recruited from Sona. The rest of the sample (273 participants) were recruited from either Amazon Mechanical Turk (mTurk) or snowball sampling. MTurk enables reaching a much wider range of individuals (Buhrmester, D. Gosling, & Kwang, 2011). Snowball sampling, or chain sampling, involved recruiting participants whom I knew to have more than two weeks of international experience and who could recruit others who have also had overseas experience.

<center>**Measures**</center>

Original Cultural Intelligence Scale

The Cultural Intelligence Scale (CQS) is a 20-item scale developed by Ang et al. (2007). The scale is divided into four subscales: meta-cognitive intelligence (MC), consisting of four items; cognitive intelligence (COG), consisting of six items; motivational intelligence (MOT), consisting of five items; and behavioral intelligence (BEH), also consisting of five items. The items were rated on a 7-point scale, from 1 (strongly disagree) to 7 (strongly agree). The full scale can be found in Appendix B.

Modified Cultural Intelligence Scale (mCQS)

So that the CQS items could be appropriately interpreted by respondents who have never been to an unfamiliar culture, I modified eleven items with an indicative mood to reflect a subjunctive mood. By rephrasing in this way, items reflected hypothetical situations rather than actual occurrences. All four items in the metacognitive dimension were modified to reflect the subjunctive mood (e.g., "I am…" was adjusted to say "I would"). None of the six items in the cognitive dimension were modified, as travel to an unfamiliar culture would not be necessary to respond to questions about their knowledge of other cultures. Two out of the five items in the motivational dimensions were adjusted; the others in this dimension did not need to be adjusted as they contained phrasing such as "I am confident that I can…" and "I am sure I can…," neither of which requires a respondent to have been to an unfamiliar culture to make an honest assessment. Finally, all five of the items in the behavioral dimension were adjusted as they all ask about behaviors of the respondent when in an unfamiliar culture. These items were modified to reflect a more hypothetical situation (e.g., "I change my verbal behavior…" was adjusted to say "I would change my verbal behavior…"). The full scale can be found in Appendix C.

Emotional Intelligence Scale

The Assessing Emotions Scale (AES) is a single-factor, 33-item scale developed by Schutte et al. (1998) using principal-components analysis (PCA). These 33 items represent Salovey and Mayer's (1990) model of emotional intelligence and have a Cronbach's alpha of 0.90 (Schutte et al., 1998). Items are rated on a 5-point scale, with 1 indicating "strongly disagree" and 5 indicating "strongly agree." Sample items include: "I am aware of the nonverbal messages other people send" and "I know why my emotions change." To maintain consistency with the other scales in the present study, I adjusted this scale to have 7 response options. The items on this scale can be found in Appendix D.

Social Intelligence Scale

The Tromsø Social Intelligence Scale (TSIS) is a 21-item scale developed by Silvera et al. (2001) to examine social intelligence. The scale is divided into three subscales consisting of seven items each: social information processing (SP), social skills (SS) and social awareness (SA). CFA of the data demonstrated acceptable relative fit (CFI = 0.99, RMSEA = 0.07) to the three-factor model (Silvera et al., 2001). Items on the TSIS are rated on a 7-point scale, where 1 indicates "Describes me extremely poorly" and 7 indicates "Describes me extremely well." An example of an item in the SP subscale is "I can predict how others will react to my behavior." An example of an item in the SS subscale is "I fit in easily in social situations." An example of an item in the SA subscale is "People often surprise me with the things they do (reverse scored)."

Big Five Inventory

The Big Five Inventory (BFI) is an instrument that assesses the Big Five personality dimensions of extroversion, agreeableness, conscientiousness, negative emotionality (reverse-scored in the current study to reflect "emotional stability"), and open-mindedness. Two versions of the BFI were used: John's (1990) version and Soto and John's (2016) BFI-2. The use of two versions of the BFI was due to a procedural error (explained further in the results section). The BFI-2 is the personality inventory used at the University of Tennessee at Chattanooga. Participants from the University had taken the BFI-2 using the Sona system as a pre-requisite to participating in other studies.

Criterion Measure

To get a criterion measure, I added an "Adaptability" item. This item asks the participant "Overall, how well do you think you adapt in a foreign or unfamiliar culture" with responses ranging from 1 ("not well at all") to 5 ("extremely well"). An additional item ("I've never been to a foreign or

12

unfamiliar culture") was included for those who had never been overseas. While the focus of the

present study is on validation of the mCQS and exploring its nomological network, I added this item to

get an idea of the respondents' thoughts on their ability to adapt in an unfamiliar culture and to

compare those responses to the mCQS responses.

Procedures

Survey Administration

The survey was administered via Qualtrics. Prior to taking the questionnaire, participants were

informed that their information and responses would be kept confidential. They were also informed that

should they decide to not complete the survey, they could do so without any penalty and their

responses would not be recorded. Participants took the 20-item mCQS, the 33-item AES, the 21-item

TSIS, either the 60-item or 44-item version of the BFI (this was due to a procedural error which is

discussed in the results section). Participants also responded to the 11 unmodified items from the

original CQS. Finally, they took a post-questionnaire demographic survey. The scales were administered

in differing orders to counterbalance possible order effects.

Analysis Overview

To evaluate the construct validity and the structure of the modified CQS, I performed an EFA.

According to Fabrigar et al. (1999), the purpose of EFA is to get "a more parsimonious conceptual

understanding of a set of measured variables by determining the number and nature of common factors

needed to account for the pattern of correlations among the measured variables" (p. 275). This analysis

allowed me to compare the factor structure of the modified CQS with that of the original Ang et al.

(2007) analysis to determine whether the modified CQS produced a four-factor solution. I then analyzed

the data using regression to assess whether the mCQS scores were predictable from combinations of

the BFI, AES, and TSIS dimension scores. This was to determine if the mCQS measures unique

characteristics or if it just measures the same characteristics as those found using some combination of

the BFI, AES, and TSIS.

CHAPTER IV

RESULTS

Scale Reliability

My analysis began with an assessment of the internal consistency of the AES, TSIS, and BFI scale

dimensions. All scales showed high reliability as measured by Cronbach's alpha (see Table 1).

Table 1

Reliabilities of the AES, TSIS, BFI-60, and BFI-44

Scale	Dimensions	Alpha
AES	AES	.924
TSIS	Social Information Processing	.857
	Social Skills	.827
	Social Awareness	.877
BFI-60	Extroversion	.746
	Agreeableness	.846
	Conscientiousness	.898
	Emotional Stability	.883
	Openness to Experience	.855
BFI-44	Extroversion	.868
	Agreeableness	.806
	Conscientiousness	.868
	Emotional Stability	.886
	Openness to Experience	.809

Factor Analysis

To examine the dimensionality of the mCQS, I performed an EFA. I factor analyzed the mCQS

items using Maximum Likelihood extraction with Promax (oblique) rotation. The analysis yielded four

factors, which explained 68.76% of the total variance. Loadings of items on the four factors were

identical to the items that defined the four factors of the CQS. Thus, this finding is in line with Ang et

al.'s (2006) findings of a four-factor CQS model. Each of the four dimensions of the mCQS showed high

reliability (MC = .869; COG = 891; MOT = .841; BEH = .914). Table 2 displays the factor loadings and

communalities.

Table 2

Factor Loadings and Communalities of the Modified Cultural Intelligence Scale Items

	Pattern Matrix				Communalities	
Scale Items	1	2	3	4	Initial	Extraction
Item 1 (MC)	.024	.019	.118	**.673**	.568	.580
Item 2 (MC)	.047	.114	-.114	**.766**	.634	.628
Item 3 (MC)	-.052	-.121	.037	**.980**	.703	.848
Item 4 (MC)	.050	.131	-.034	**.665**	.555	.556
Item 5 (COG)	**.795**	-.005	-.084	.015	.548	.595
Item 6 (COG)	**.829**	.003	-.021	-.071	.608	.658
Item 7 (COG)	**.793**	-.040	.026	.060	.631	.653
Item 8 (COG)	**.732**	-.050	.021	.062	.560	.552
Item 9 (COG)	**.703**	.023	.004	.034	.502	.516
Item 10 (COG)	**.679**	.077	.104	-.063	.515	.533
Item 11 (MOT)	-.144	.090	**.550**	.189	.496	.479
Item 12 (MOT)	.028	-.101	**.746**	.050	.536	.537
Item 13 (MOT)	.047	-.034	**.892**	-.045	.632	.755
Item 14 (MOT)	.015	.043	**.747**	-.113	.493	.519
Item 15 (MOT)	.030	.144	**.534**	.039	.441	.434

Item 16 (BEH)	.049	**.777**	.031	-.026	.621	.627
Item 17 (BEH)	.036	**.833**	-.041	-.004	.647	.670
Item 18 (BEH)	-.018	**.813**	.034	.046	.691	.735
Item 19 (BEH)	-.030	**.838**	-.018	.047	.685	.724
Item 20 (BEH)	-.040	**.827**	.020	-.017	.675	.672

Note. Factor loadings >.50 in the pattern matrix are in boldface.

The Kaiser-Meyer-Olkin measure of sampling adequacy (a test of how suitable data is for factor analysis) was .896, which is well above the recommended acceptable level of .6 (Kaiser, 1974), and Bartlett's Test of Sphericity was significant. This indicated that factor analysis was appropriate for the data.

Table 3 displays the internal consistency of the mCQS dimensions with those of the original CQS dimensions. It also displays the results of the correlations between the original and modified version.

Table 3

Comparison of the Modified CQS and the Original CQS

	Cronbach's Alpha		
Dimension	Original CQS	Modified CQS	Scale Correlation
Metacognitive	.904	.869	.678
Cognitive	.891	.891	1.000
Motivational	.835	.841	.954
Behavioral	.931	.914	.780

Note. There was no difference in the alphas for the cognitive dimension because no modifications were made to those items.

Regression of the mCQS onto the AES, TSIS, and BFI

Due to a procedural error, two different versions of the BFI were distributed to the sample: participants using UTC's Sona system (99 participants) took the 60-item version, while all other participants took the older 44-item version. Because of this error, I checked to see if the version of the BFI had a moderating effect on the relationship between the mCQS and the BFI dimensions. To do this, I dummy coded the two versions (BFI-2 = 1 and BFI-1 = 0) and then created five product terms, one for each of the five BFI dimensions multiplied by the dummy variable. I performed a regression analysis without the product terms followed by a regression analysis with the product terms to determine if the change in R^2 was significant. A significant change in R^2 would suggest that the scale version acted as a moderator. The results revealed no significant change in R^2 (all had p values below .05). Thus, the version of the BFI did not moderate the relationship between the mCQS and the BFI dimensions. Because of this determination, and for simplicity's sake, I will refer to the personality dimensions as if they were from the same scale, rather than referring to them according to their version.

Metacognitive CQ

The results of the multiple regression revealed that the dimensions of emotional intelligence, social intelligence, and personality explained a significant amount of variance in metacognitive cultural intelligence ($F(10,361) = 18.903$, $p < .05$, $R^2 = .34$, $R^2_{Adjusted} = .33$). The analysis also revealed that metacognitive cultural intelligence was significantly predicted by the AES ($β = .32$, $t(371) = 4.71$, $p < .05$), the social information processing dimension of the TSIS ($β = .21$, $t(371) = 3.72$, $p < .05$), and the personality dimensions of extroversion ($β = -.08$, $t(371) = -3.03$, $p < .05$), emotional stability ($β = -.19$, $t(371) = -2.82$, $p < .05$), and openness to experience ($β = .22$, $t(371) = 4.32$, $p < .05$).

Cognitive CQ

The dimensions of emotional intelligence, social intelligence, and personality explained a significant amount of variance in cognitive cultural intelligence ($F(10,361) = 9.77$, $p < .05$, $R^2 = .21$, $R^2_{Adjusted} = .19$). The analysis also revealed that cognitive cultural intelligence was significantly predicted by the social intelligence dimensions of social information processing ($\beta = .38$, $t(371) = 6.07$, $p < .05$) and social awareness ($\beta = -.22$, $t(371) = -3.72$, $p < .05$), and the personality dimensions of agreeableness ($\beta = -.18$, $t(371) = -2.32$, $p < .05$) and openness to experience ($\beta = .147$, $t(371) = 2.71$, $p < .05$).

Motivational CQ

The dimensions of emotional intelligence, social intelligence, and personality explained a significant amount of variance in motivational cultural intelligence ($F(10,361) = 12.67$, $p < .05$, $R^2 = .26$, $R^2_{Adjusted} = .24$). The analysis also revealed that motivational cultural intelligence was significantly predicted by emotional intelligence ($\beta = .21$, $t(371) = 2.91$, $p < .05$), social skills ($\beta = .25$, $t(371) = 3.41$, $p < .05$), and openness to experience ($\beta = .19$, $t(371) = 3.52$, $p < .05$).

Behavioral CQ

The results revealed that the dimensions of emotional intelligence, social intelligence, and personality explained a significant amount of variance in behavioral cultural intelligence ($F(10,361) = 9.78$, $p < .05$, $R^2 = .21$, $R^2_{Adjusted} = .19$). The analysis also revealed that behavioral cultural intelligence was significantly predicted by emotional intelligence ($\beta = .28$, $t(371) = 3.65$, $p < .05$), social information processing ($\beta = .22$, $t(371) = 3.46$, $p < .05$), and extroversion ($\beta = -.24$, $t(371) = -2.71$, $p < .05$).

Summary of Regression Results

The statistically significant relationships between the CQ dimensions and dimensions of the AES, TSIS, and BFI support CQ as a construct that is significantly related to social intelligence, emotional intelligence, and personality. Despite these significant results, less than 34% of the variance of each of the CQ dimensions was accounted for by these other constructs. In fact, all but the metacognitive scale had adjusted R^2s of less than .25, meaning less than 25% of variance was accounted for by variables in the AES, TSIS, and BFI. This suggests that the CQS dimensions exhibit overall discriminant validity. Taken together, these results support Ang et al.'s (2007) assertion that the CQS is similar yet distinct from emotional intelligence, social intelligence, and personality.

Adaptability Item and Cultural Intelligence

To assess the extent to which CQ correlates with self-perceived cross-cultural adaptability, I regressed the adaptability item ("Overall, how well do you think you adapt in a foreign or unfamiliar culture") onto the mCQS. If respondents had indicated that they had never been to a foreign culture, I did not include their scores in the analysis. The results of the regression revealed that the combination of the dimensions of the mCQS explained 39.8% of the change in the adaptability item. As individual predictors, only motivational CQ (β = .589) and cognitive CQ (β = .150) were significant predictors of the adaptability item. These results suggest that one's perception about their ability to adapt in an unfamiliar culture is significantly related to how much they know about a culture and how motivated they are to learn about a culture.

Relationship Between Length of Time Outside Home Country and CQ

To assess the relationship between CQ and the amount of time spent in a foreign culture, I performed an independent groups t-test, comparing the means of those that had been outside of their

home country for at least two weeks at a time with those that had not. The results revealed that CQ is

significantly higher for those who have been outside of their home country longer than two weeks at

one time. See Table 4 for a summary of these results.

Table 4

Independent Groups T-Test Comparing Length of Time in Foreign Culture to mCQS

	Group Means			
Dimension	Group 1	Group 2	t value	p value
MC	20.956	22.187	-2.442	< .05
COG	21.703	25.166	-3.790	< .05
MOT	24.242	27.364	-4.976	< .05
BEH	25.055	26.615	-2.183	< .05

Note. Group 1 = have been outside of home country for less than 2 weeks at one time.
Group 2 = have been outside of home country for 2 or more weeks at one time.

Comparison of CQ Version to Length of Time Outside Home Country

To assess whether participants who had not been to a foreign culture responded differently to

the mCQS than they did to the original CQS, I conducted a repeated measures analysis of variance using

general linear modeling. See Table 5 for the mean comparisons. The results of the analysis revealed

significant differences between the original and modified metacognitive CQ dimension ($F = 26.136$, $p <$

.05) and between the original and modified behavioral CQ ($F = 12.352$, $p < .05$) dimension. These results

provided evidence that there is a positive bias for the modified version.

Table 5

Comparison of Means between Scale Version and Length of Time Outside Home Country

		Original CQS		Modified CQS	
Time Outside Home Country	Dimension	*M*	*SD*	*M*	*SD*
Never	MC	20.0319	4.41516	21.3298	4.38813
	MOT	24.1064	5.11895	24.3936	5.24090
	BEH	24.0745	6.01117	25.2234	5.36447
Less Than 2 Weeks	MC	19.8681	4.35178	20.9560	4.14705
	MOT	24.4505	4.99836	24.2418	5.19260
	BEH	24.5385	6.06320	25.0549	5.59039
2 or More Weeks	MC	21.7754	3.93534	22.1872	3.84264
	MOT	27.1979	4.73700	27.3636	4.76506
	BEH	26.0802	5.62913	26.6150	5.59199

CHAPTER V

DISCUSSION

The results of the present study confirm Ang et al.'s (2006) four-factor model of cultural intelligence and support their assertion that the CQ construct is related yet distinct from other intelligences and personality dimensions. These results thus provide further understanding of the nomological network of the cultural intelligence construct.

Comparison of Modified CQS and Original CQS

Both versions of the CQS showed high reliability. Results of the correlation analysis between the two versions revealed high correlations (i.e., above .7) for all dimensions except the metacognitive dimensions. The correlation of these dimensions was .678—lower than would be expected for dimensions intended to measure the same thing. One possible explanation for this could be in the phrasing; perhaps the use of the word "would" when trying to capture metacognitive processes made the item less clear. Thoroughly assessing and validating the phrasing of the metacognitive items may help those items more closely measure what they are intended to.

CQ and Personality

One interesting finding was the significant negative relationship between metacognitive CQ and both extroversion and emotional stability. Ang et al.'s (2006) regression of the CQS dimensions onto the personality dimensions did not yield significant relationships between metacognitive CQ and either of

the aforementioned personality dimensions. For this reason, it would be important to take a closer look at the current study's data and analyses to attempt to find an explanation for the discrepancy.

Ang et al. (2006) hypothesized and found significant relationships between openness to experience and all four of the CQ dimensions. In the present study, openness to experience was significantly positively related to metacognitive CQ, cognitive CQ, and motivational CQ but not behavioral CQ. Although the correlation between openness to experience and behavioral CQ in Ang et al.'s (2006) analysis was the weakest correlation compared to those of the other three dimensions, the correlation was still significant. It was even weaker in the present study and was not significant. This finding along with the present study's findings regarding CQ's relationship with extroversion and emotional stability necessitate further investigation.

CQ and Emotional and Social Intelligence

The present study's finding that emotional intelligence is significantly positively related to one's metacognitive, motivational, and behavioral cultural intelligence while controlling for other variables was not surprising because all dimensions involve the ability to decode and demonstrate emotions appropriately. Likewise, the finding that the cognitive dimension was not significantly related to emotional intelligence made theoretical sense, as the cognitive dimension strictly reflects one's knowledge and not necessarily the application of that knowledge.

The findings concerning the relationship between social intelligence and cultural intelligence were not quite as straight forward. Social information processing, for example, was found to be significantly related to three out of the four CQ dimensions: metacognitive, cognitive, and behavioral. Social information processing concerns the ability to predict and understand the behaviors of others, so perhaps one of the reasons it is not significantly related to motivational intelligence is because it is more about information processing and less about motivation to react a certain way. Another logical finding

24

was that motivational CQ was significantly related to the TSIS's social skills dimension, which concerns one's ability to fit in and act appropriately in social situations.

One puzzling finding regarding social intelligence and cultural intelligence was that the social awareness dimension of social intelligence and the cognitive dimension of cultural intelligence were found to be significantly negatively related. Social awareness concerns the awareness of why interactions occur the way they do. Although it would be understandable if the two dimensions were found to be unrelated, the finding that they are significantly negatively related is difficult to explain. Further assessment of this relationship may be necessary.

CQ and Self-Perceived Adaptability

The combination of the CQ dimensions explained a significant amount of variance in one's perception of their overall cross-cultural adaptability. Individually, however, only the motivational CQ and cognitive CQ dimensions were significant predictors of the adaptability item. This finding suggests that the amount of knowledge one has about different cultures and the extent to which they are motivated to learn about different cultures will influence how well individuals think they will adapt in a foreign culture.

Limitations

Although the results of the present study added support for the use and structure of Ang et al.'s (2007) cultural intelligence scale, it is certainly not without its limitations. One clear limitation was the use of two different versions of the BFI. Although no moderating effect was discovered, this procedural error slightly compromised the integrity of the data. Additionally, whereas non-UTC participants were administered the present study's full questionnaire at one time, the survey that UTC participants took was segmented. This is because the BFI is a pre-requisite for anyone using UTC's Sona system. This

segmentation likely influenced the results depending on the length of time between when University participants took the BFI and when they took the rest of the questionnaire.

Another limitation in the present study is that there was no validated criterion used to assess the predictive ability of the CQS. Identifying (or confirming, based on previous studies) the CQS's predictive ability using other scales that measure cross-cultural adaptability would have made this replication study more valuable. I included an adaptability item in an effort to capture one's perception of his or her overall ability to adapt cross-culturally. However, a confident conclusion about the relationship between cross-cultural adaptability and cognitive or motivational cultural intelligence, for example, would require a more robust measurement of adaptability.

Future Studies

A valuable follow-up to the current study would be to examine whether the reason for being outside of one's home country has an effect on cultural intelligence. This would help explain the relationship of cross-cultural exposure to one's cultural intelligence. In addition, although the CQS and mCQS did not yield significant differences overall, it would be interesting to see if there was a significant interaction between the reason for being outside of one's home country and the version of the CQS.

As mentioned in the limitations, it would also be valuable to have a criterion. Although the study supported the structure and the nomological network of the CQS, an important follow-up analysis would be to assess the scale's ability to predict overseas job performance, stress level, and adjustment.

Another fruitful study would be to analyze the data for an overarching general factor that influences all the self-reports. A preliminary bifactor analysis of the data revealed that there is indeed evidence of an overarching factor. A closer examination of this general factor would be beneficial for the cultural intelligence literature as well as the literature on bifactor analyses in general.

Conclusion

The present study contributes to the cultural intelligence research in several ways. First, I found that changing the wording of the CQS to accommodate those without overseas experience does not produce a significant difference in responses versus the original version, but both versions still yield high reliability. Second, the results of the exploration of the nomological network of cultural intelligence supports the assertion that it is similar to, yet distinct from, social intelligence, emotional intelligence, and the big five personality traits. These findings support the use of Ang et al.'s cultural intelligence scale as a short but comprehensive measure of one's ability to adapt to the environment.

REFERENCES

Ang, S., Van Dyne, L., & Koh, C. (2006). Personality Correlates of the Four-Factor Model of Cultural Intelligence. *Group & Organization Management, 31*(1), 100-123.

Ang, S., Van Dyne, L., Koh, C., & Ng, K. (2004). *The measurement of cultural intelligence*.

Ang, S., Van Dyne, L., Koh, C., Ng, K. Y., Templer, 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*(3), 335-371.

Buhrmester, M., D. Gosling, S., & Kwang, T. (2011). Amazon's Mechanical Turk : A New Source of Inexpensive, Yet High-Quality, Data? *Perspectives on Psychological Science, 6*(1), 3-5.

Bücker, J., Furrer, O., & Lin, Y. (2015). Measuring cultural intelligence (CQ) : A new test of the CQ scale. *International Journal of Cross Cultural Management, 15*(3), 259-284.

Campbell, D. T., & Fiske, D. W. (1959). Convergent and discriminant validation by the multitrait-multimethod matrix. *Psychological bulletin, 56*(2), 81.

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

Fabrigar, L. R., Wegener, D. T., MacCallum, R. C., & Strahan, E. J. (1999). Evaluating the use of exploratory factor analysis in psychological research. *Psychological methods, 4*(3), 272.

Groves, K. S., Feyerherm, A., & Gu, M. (2015). Examining cultural intelligence and cross-cultural negotiation effectiveness. *Journal of Management Education, 39*(2), 209-243.

John, O. P. (Ed.) (1990). *The "Big Five" factor taxonomy: Dimensions of personality in the natural language and questionnaires*. New York: Guilford Press.

Kaiser, H. F. (1974). An index of factorial simplicity. *Psychometrika, 39*(1), 31-36.

Marlowe, H. A. (1986). Social intelligence: Evidence for multidimensionality and construct independence. *Journal Of Educational Psychology, 78*(1), 52-58.

McEnrue, M. P., & Groves, K. (2006). Choosing among tests of emotional intelligence: what is the evidence? *Human Resource Development Quarterly, 17*(1), 9-42.

Rouquette, A., & Falissard, B. (2011). Sample size requirements for the internal validation of psychiatric scales. *International Journal of Methods in Psychiatric Research, 20*(4), 235-249.

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

Schutte, N. S., Malouff, J. M., Hall, L. E., Haggerty, D. J., Cooper, J. T., Golden, C. J., & Dornheim, L. (1998). Development and validation of a measure of emotional intelligence. *Personality and Individual Differences, 25*(2), 167-177.

Silvera, D., Martinussen, M., & Dahl, T. I. (2001). The Tromsø Social Intelligence Scale, a self-report measure of social intelligence. *Scandinavian Journal of Psychology, 42*(4), 313-319.

Soto, C. J., & John, O. P. (2016). The Next Big Five Inventory (BFI-2): Developing and Assessing a Hierarchical Model With 15 Facets to Enhance Bandwidth, Fidelity, and Predictive Power. *Journal of personality and social psychology*, 1-27.

Van Dyne, L., Ang, S., Ng, K. Y., Rockstuhl, T., Tan, M. L., & Koh, C. (2012). Sub-Dimensions of the Four Factor Model of Cultural Intelligence: Expanding the Conceptualization and Measurement of Cultural Intelligence. *Social and Personality Psychology Compass, 6*(4), 295-313.

Ward, C., Fischer, R., Lam, F. S. Z., & Hall, L. (2009). The Convergent, Discriminant, and Incremental Validity of Scores on a Self-Report Measure of Cultural Intelligence. *Educational and Psychological Measurement, 69*(1), 85-105.

APPENDIX

A. IRB APPROVAL LETTER

MEMORANDUM

TO: Kayitesi Wilt   IRB # 17-015
           Dr. Michael Biderman

FROM: Lindsay Pardue, Director of Research Integrity
           Dr. Amy Doolittle, IRB Committee Chair

DATE: 2/10/2017

SUBJECT: IRB #17-015: Assessing Cross-Cultural Competence: Evaluating the Psychometric
           Properties and the Nomological Network of a Revised Version of the Cultural Intelligence
           Scale

The IRB Committee Chair has reviewed and approved your application and assigned you the IRB number
listed above. You must include the following approval statement on research materials seen by
participants and used in research reports:

> *The Institutional Review Board of the University of Tennessee at Chattanooga (FWA00004149) has
> approved this research project # 17-015.*

Since your project has been deemed exempt, there is no further action needed on this proposal unless
there is a significant change in the project that would require a new review. Changes that affect risk to
human subjects would necessitate a new application to the IRB committee immediately.

Please remember to contact the IRB Committee immediately and submit a new project proposal for
review if significant changes occur in your research design or in any instruments used in conducting the
study. You should also contact the IRB Committee immediately if you encounter any adverse effects
during your project that pose a risk to your subjects.

For any additional information, please consult our web page http://www.utc.edu/irb or email
instrb@utc.edu

Best wishes for a successful research project.

APPENDIX

B. THE ORIGINAL CULTURAL INTELLIGENCE SCALE (CQS)

The Original Cultural Intelligence Scale (CQS)

Read each statement and select the response that best describes your capabilities. Select the answer that BEST describes you AS YOU REALLY ARE (1 = strongly disagree; 7 = strongly agree)

CQ factor Questionnaire items

Metacognitive CQ
MC1 I am conscious of the cultural knowledge I use when interacting with people with different cultural backgrounds.
MC2 I adjust my cultural knowledge as I interact with people from a culture that is unfamiliar to me.
MC3 I am conscious of the cultural knowledge I apply to cross-cultural interactions.
MC4 I check the accuracy of my cultural knowledge as I interact with people from different cultures.

Cognitive CQ
COG1 I know the legal and economic systems of other cultures.
COG2 I know the rules (e.g., vocabulary, grammar) of other languages.
COG3 I know the cultural values and religious beliefs of other cultures.
COG4 I know the marriage systems of other cultures.
COG5 I know the arts and crafts of other cultures.
COG6 I know the rules for expressing nonverbal behaviors in other cultures.

Motivational CQ
MOT1 I enjoy interacting with people from different cultures.
MOT2 I am confident that I can socialize with locals in a culture that is unfamiliar to me.
MOT3 I am sure I can deal with the stresses of adjusting to a culture that is new to me.
MOT4 I enjoy living in cultures that are unfamiliar to me.
MOT5 I am confident that I can get accustomed to the shopping conditions in a different culture.

Behavioral CQ
BEH1 I change my verbal behavior (e.g., accent, tone) when a cross-cultural interaction requires it.
BEH2 I use pause and silence differently to suit different cross-cultural situations.
BEH3 I vary the rate of my speaking when a cross-cultural situation requires it.
BEH4 I change my nonverbal behavior when a cross-cultural situation requires it.
BEH5 I alter my facial expressions when a cross-cultural interaction requires it.

APPENDIX

C. THE MODIFIED CULTURAL INTELLIGENCE SCALE (mCQS)

The Cultural Intelligence Scale (CQS) - **MODIFIED**

Read each statement and select the response that best describes your capabilities. Select the answer that BEST describes you AS YOU REALLY ARE (1 = strongly disagree; 7 = strongly agree)

CQ factor Questionnaire items

Metacognitive CQ
MC1 I would be conscious of the cultural knowledge I would use when interacting with people with different cultural backgrounds.
MC2 I would adjust my cultural knowledge when interacting with people from a culture unfamiliar to me.
MC3 I would be conscious of the cultural knowledge I would apply to cross-cultural interactions.
MC4 I would check the accuracy of my cultural knowledge when interacting with people from different cultures.

Cognitive CQ
COG1 I know the legal and economic systems of other cultures.
COG2 I know the rules (e.g., vocabulary, grammar) of other languages.
COG3 I know the cultural values and religious beliefs of other cultures.
COG4 I know the marriage systems of other cultures.
COG5 I know the arts and crafts of other cultures.
COG6 I know the rules for expressing nonverbal behaviors in other cultures.

Motivational CQ
MOT1 I would enjoy interacting with people from different cultures.
MOT2 I am confident that I can socialize with locals in a culture that is unfamiliar to me.
MOT3 I am sure I can deal with the stresses of adjusting to a culture that is new to me.
MOT4 I would enjoy living in cultures that are unfamiliar to me.
MOT5 I am confident that I can get accustomed to the shopping conditions in a different culture.

Behavioral CQ
BEH1 I would change my verbal behavior (e.g., accent, tone) when a cross-cultural interaction requires it.
BEH2 I would use pause and silence differently to suit different cross-cultural situations.
BEH3 I would vary the rate of my speaking when a cross-cultural situation requires it.
BEH4 I would change my nonverbal behavior when a cross-cultural situation requires it.
BEH5 I would alter my facial expressions when a cross-cultural interaction requires it.

*Bolded items indicate that they have been modified.

APPENDIX

D. THE ASSESSING EMOTIONS SCALE

Items in the Assessing Emotions Scale

Instructions: Indicate the extent to which each item applies to you using the following scale:

1 = strongly disagree
2 = disagree
3 = neither disagree nor agree
4 = agree
5 = strongly agree

_____ 1. I know when to speak about my personal problems to others.
_____ 2. When I am faced with obstacles, I remember times I faced similar obstacles and overcame them.
_____ 3. I expect that I will do well on most things I try.
_____ 4. Other people find it easy to confide in me.
_____ 5. I find it hard to understand the nonverbal messages of other people.
_____ 6. Some of the major events of my life have led me to re-evaluate what is important and not important.
_____ 7. When my mood changes, I see new possibilities.
_____ 8. Emotions are some of the things that make my life worth living.
_____ 9. I am aware of my emotions as I experience them.
_____ 10. I expect good things to happen.
_____ 11. I like to share my emotions with others.
_____ 12. When I experience a positive emotion, I know how to make it last.
_____ 13. I arrange events others enjoy.
_____ 14. I seek out activities that make me happy.
_____ 15. I am aware of the nonverbal messages I send to others.
_____ 16. I present myself in a way that makes a good impression on others.
_____ 17. When I am in a positive mood, solving problems is easy for me.
_____ 18. By looking at their facial expressions, I recognize the emotions people are experiencing.
_____ 19. I know why my emotions change.
_____ 20. When I am in a positive mood, I am able to come up with new ideas.
_____ 21. I have control over my emotions.
_____ 22. I easily recognize my emotions as I experience them.
_____ 23. I motivate myself by imagining a good outcome to tasks I take on.
_____ 24. I compliment others when they have done something well.
_____ 25. I am aware of the nonverbal messages other people send.
_____ 26. When another person tells me about an important event in his or her life, I almost feel as though I have experienced this event myself.
_____ 27. When I feel a change in emotions, I tend to come up with new ideas.
_____ 28. When I am faced with a challenge, I give up because I believe I will fail.
_____ 29. I know what other people are feeling just by looking at them.
_____ 30. I help other people feel better when they are down.
_____ 31. I use good moods to help myself keep trying in the face of obstacles.
_____ 32. I can tell how people are feeling by listening to the tone of their voice.
_____ 33. It is difficult for me to understand why people feel the way they do.

Source: Schutte, N. S., Malouff, J. M., Hall, L. E., Haggerty, D. J., Cooper, J. T., Golden, C. J., & Dornheim, L. (1998). Development and validation of a measure of emotional intelligence. Personality and Individual Differences, 25, 167–177.

APPENDIX

E. THE TROMSØ SOCIAL INTELLIGENCE SCALE (TSIS)

The Tromsø Social Intelligence Scale (TSIS)

Factor 1: Social Information Processing (SP)

1. I can predict other peoples' behavior.
2. I know how my actions will make others feel.
3. I understand other peoples' feelings.
4. I understand others' wishes.
5. I can often understand what others are trying to accomplish without the need for them to say anything.
6. I can predict how others will react to my behavior.
7. I can often understand what others really mean through their expression, body language, etc.

Factor 2: Social Skills (SS)

1. I often feel uncertain around new people who I don't know.
2. I fit in easily in social situations.
3. I am good at entering new situations and meeting people for the first time.
4. I have a hard time getting along with other people.
5. It takes a long time for me to get to know others well.
6. I am good at getting on good terms with new people.
7. I frequently have problems finding good conversation topics.

Factor 3: Social Awareness (SA)

1. I often feel that it is difficult to understand others' choices.
2. People often surprise me with the things they do.
3. Other people become angry with me without me being able to explain why.
4. It seems as though people are often angry or irritated with me when I say what I think.
5. I find people unpredictable.
6. I have often hurt others without realizing it.
7. I am often surprised by others' reactions to what I do.

APPENDIX

F. THE BIG FIVE INVENTORY-2 (BFI-2)

The Big Five Inventory-2 (BFI-2)

I am someone who

1	__ Is outgoing, sociable	31	__ Is sometimes shy, introverted
2	__ Is compassionate, has a soft heart	32	__ Is helpful and unselfish with others
3	__ Tends to be disorganized	33	__ Keeps things neat and tidy
4	__ Is relaxed, handles stress well	34	__ Worries a lot
5	__ Has few artistic interests	35	__ Values art and beauty
6	__ Has an assertive personality	36	__ Finds it hard to influence people
7	__ Is respectful, treats others with respect	37	__ Is sometimes rude to others
8	__ Tends to be lazy	38	__ Is efficient, gets things done
9	__ Stays optimistic after experiencing a setback	39	__ Often feels sad
10	__ Is curious about many different things	40	__ Is complex, a deep thinker
11	__ Rarely feels excited or eager	41	__ Is full of energy
12	__ Tends to find fault with others	42	__ Is suspicious of others' intentions
13	__ Is dependable, steady	43	__ Is reliable, can always be counted on
14	__ Is moody, has up and down mood swings	44	__ Keeps their emotions under control
15	__ Is inventive, finds clever ways to do things	45	__ Has difficulty imagining things
16	__ Tends to be quiet	46	__ Is talkative
17	__ Feels little sympathy for others	47	__ Can be cold and uncaring
18	__ Is systematic, likes to keep things in order	48	__ Leaves a mess, doesn't clean up
19	__ Can be tense	49	__ Rarely feels anxious or afraid
20	__ Is fascinated by art, music, or literature	50	__ Thinks poetry and plays are boring
21	__ Is dominant, acts as a leader	51	__ Prefers to have others take charge
22	__ Starts arguments with others	52	__ Is polite, courteous to others
23	__ Has difficulty getting started on tasks	53	__ Is persistent, works until the task is finished
24	__ Feels secure, comfortable with self	54	__ Tends to feel depressed, blue
25	__ Avoids intellectual, philosophical discussions	55	__ Has little interest in abstract Ideas
26	__ Is less active than other people	56	__ Shows a lot of Enthusiasm
27	__ Has a forgiving nature	57	__ Assumes the best about people
28	__ Can be somewhat careless	58	__ Sometimes behaves irresponsibly
29	__ Is emotionally stable, not easily upset	59	__ Is temperamental, gets emotional easily
30	__ Has little creativity	60	__ Is original, comes up with new Ideas

APPENDIX

G. THE BIG FIVE INVENTORY (BFI-1)

I see myself as someone who...

1. Is talkative
2. Tends to find fault with others
3. Does a thorough job
4. Is depressed, blue
5. Is original, comes up with new ideas
6. Is reserved
7. Is helpful and unselfish with others
8. Can be somewhat careless
9. Is relaxed, handles stress well
10. Is curious about many different things
11. Is full of energy
12. Starts quarrels with others
13. Is a reliable worker
14. Can be tense
15. Is ingenious, a deep thinker
16. Generates a lot of enthusiasm
17. Has a forgiving nature
18. Tends to be disorganized
19. Worries a lot
20. Has an active imagination
21. Tends to be quiet
22. Is generally trusting

23. Tends to be lazy
24. Is emotionally stable, not easily upset
25. Is inventive
26. Has an assertive personality
27. Can be cold and aloof
28. Perseveres until the task is finished
29. Can be moody
30. Values artistic, aesthetic experiences
31. Is sometimes shy, inhibited
32. Is considerate and kind to almost everyone
33. Does things efficiently
34. Remains calm in tense situations
35. Prefers work that is routine
36. Is outgoing, sociable
37. Is sometimes rude to others
38. Makes plans and follows through with them
39. Gets nervous easily
40. Likes to reflect, play with ideas
41. Has few artistic interests
42. Likes to cooperate with others
43. Is easily distracted
44. Is sophisticated in art, music, or literature

Note. Copyright 1991 by Oliver P. John

APPENDIX

H. DEMOGRAPHIC QUESTIONNAIRE

Demographic Questions

1. Do you have citizenship in more than one country?
   ○ Yes
   ○ No
2. Which country do you consider to be your home country?
   ○ [list of countries]
3. How often you have been outside of your home country?
   ○ Never
   ○ 1 to 5 times
   ○ 6 to 10 times
   ○ More than 10 times
4. What is the longest amount of time that you have spent outside of your home country *at one time*?
   ○ I have never been outside of my home country
   ○ Less than 2 weeks
   ○ 2 to 4 weeks
   ○ 1 to 3 months
   ○ 3 to 6 months
   ○ 6 months to 1 year
   ○ 1 to 5 years
   ○ 5 to 10 years
   ○ More than 10 years
5. Which of the following options best describes the reason (or most frequent reason) for which you were/are outside of your home country?
   ○ I have never been outside of my home country
   ○ Vacation
   ○ School
   ○ Military assignment
   ○ Work assignment (non-military)
   ○ Volunteer work
   ○ Curiosity/adventure
   ○ Other
6. What is your age (in numeric format)?
7. What is your current employment status?
   ○ Student, unemployed
   ○ Non-student, unemployed
   ○ Employed part-time (less than 40 hours per week)
   ○ Employed full-time (40+ hours per week)
8. What is your gender?
   ○ Male
   ○ Female
   ○ Other
9. Which of the following categories best describes you?
   ○ Black or African American
   ○ Hispanic, Latino, or Spanish origin
   ○ White

- o Asian
- o American Indian or Alaska Native
- o Middle Eastern or North African
- o Native Hawaiian or Other Pacific Islander
- o Two or more races/ethnicities
- o Other

10. What is your current marital status?
    - o Single – never married
    - o Single – previously married
    - o Married or domestic partnership

11. Which of the following best describes your political orientation?
    - o Very conservative
    - o Somewhat conservative
    - o Neutral
    - o Somewhat liberal
    - o Very liberal

12. What is the highest education level you have achieved?
    - o Less than high school
    - o High school degree or GED
    - o Some college
    - o Associate's degree or other professional degree
    - o Bachelor's degree
    - o Some graduate school
    - o Master's degree
    - o Doctoral, law, or medical degree

13. Which of the following best describes the type of organization you currently work for?
    - o For profit
    - o Non-profit (religious, arts, social assistance, etc.)
    - o Government
    - o Health Care
    - o Education
    - o Other
    - o Not currently employed

Criterion: Overall, how well do you think you adapt when in a foreign or unfamiliar culture?

- o I have never been to a foreign culture
- o Not well at all
- o Slightly well
- o Moderately well
- o Very well
- o Extremely well

VITA

Kayitesi Wilt was born in Lansing, Michigan, to Timothy and Rukabuza Wilt. Kayitesi graduated from Middle Tennessee State University in 2010 with a Bachelor of Science in Psychology. A few years after earning her degree, Kayitesi discovered her passion for workplace improvement and decided to pursue formal education on the topic. She was accepted into UTC's Industrial-Organizational Psychology program in 2015 and graduated with her Master of Science in May 2017.