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A REVIEW OF HUMILITY MEASURES AND A TEST OF THE SOCIAL BONDS AND SOCIAL OIL HYPOTHESES

Stacey McElroy

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ACCEPTANCE

This dissertation, A REVIEW OF HUMILITY MEASURES AND A TEST OF THE SOCIAL BONDS AND SOCIAL OIL HYPOTHESES, by STACEY MCELROY, was prepared under the direction of the candidates Dissertation Advisory Committee. It is accepted by the committee members in partial fulfillment of requirements for the degree, Doctor of Philosophy, in the College of Education and Human Development, Georgia State University.

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A REVIEW OF HUMILITY MEASURES AND A TEST OF THE SOCIAL BONDS AND
SOCIAL OIL HYPOTHESES

by

STACEY MCELROY

Under the Direction of Don Davis, Ph.D.

ABSTRACT

Less than ten years ago, the science of humility seemed stuck with intractable measurement problems. However, due to theoretical innovations, measures have proliferated in recent years. In order to avoid fragmentation, humility science faces a critical stage of needing to reconcile and integrate definitions and measures. In Chapter 1, I review 22 measures of humility, including (a) survey measures of general humility, (b) survey measures of humility subdomains, (c) indirect measures of humility, and (d) state measures of humility. For each measure, I describe the scale structure, development of items, evidence of reliability, and evidence of construct validity. I also describe and compare the various content areas covered by each measure, and conclude by making recommendations for advancing research on humility. Then in Chapter 2, I test the social bonds and social oil hypotheses of humility in a sample of 99 interracial couples. In line with the social bonds hypothesis, I predicted that culturally-based ineffective arguing would lead to lower perceptions of one's partner's cultural humility, which would lead to lower relationship satisfaction and commitment. I conducted a mediation analysis using the PROCESS Macro

developed for SPSS, and found that approximately 26% of the variance in relationship satisfaction and about 8% of the variance in commitment was explained by the effect of ineffective arguing through cultural humility. To test the social oil hypothesis, I first attempted to estimate trait cultural humility by creating an aggregate score that combined self-report, informant-report, and observational coding of cultural humility. I predicted that trait cultural humility would moderate the effect of frequency of culturally-based disagreements on relationship satisfaction and commitment. Results of a moderation analysis conducted using the PROCESS Macro were not significant. However, the overall frequency of culturally-based disagreements was low, and cultural humility was significantly related to both relationship satisfaction and commitment. Results of this study add to the growing body of evidence for the social bonds hypothesis of humility, and advance the field of research on intercultural couples by providing quantitative support for themes noted in previous qualitative studies on intercultural couples.

INDEX WORDS: cultural humility, intercultural couples, trust, commitment, ineffective arguing

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in

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DEDICATION

I dedicate this to my Nanny. Thank you for the countless hours you spent helping me do homework. I would have never gotten here without the foundation you provided for me. You never told me what I should be, or anything that I could not be. You gave me the freedom to explore, dream, and find my way, knowing that I had your unending love and support. You always told me to “reach for the stars.” Now, whenever I look up at the beautiful night sky, I see you and am filled with love and gratitude.

I also dedicate this to my husband, Andreas. Thank you for inspiring me, for supporting me, for making me countless cups of coffee, for making me laugh, and for enriching my life in countless ways. Most of all, thank you for believing in me, even when I didn't believe in myself. I am so lucky to have you as my partner in life. Ich liebe dich.

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CHAPTER 1

ASSESSING HUMILITY: A CRITICAL REVIEW OF MEASURES

The scientific study of humility got off to a slow start due to measurement problems. More specifically, researchers doubted the validity of self-report measures because labeling oneself as very humble seemed akin to bragging (Davis, Worthington, & Hook, 2010). In recent years, however, the scientific study of humility has accelerated (nearly 200 independent samples in a meta-analysis by Davis et al., 2015). Accordingly, a variety of measures have been developed (Davis & Hook, 2014). The purpose of the present article is to critically assess the evidence of reliability and construct validity of existing humility measures so that I might recommend consolidation of definitions of humility and improve measurement strategies.

Given the proliferation of measures of humility and the conceptual range of these measures, some coherence is needed for the field to advance with purpose. Measures are organized into four sections: (a) survey measures of general humility; (b) survey measures of specific subdomains of humility; (c) indirect measures of general humility; and (d) state measures of humility. Two previous non-refereed sources have published reviews of measures. Hill et al., (2017) reviewed 16 instruments—eight measures of general humility, two measures of relational humility, three measures of intellectual humility, and three special applications. Worthington and Allison (2017) reviewed 16 instruments measuring humility and summarized their review under the following headings: Seven self-report measures as disposition, four measures of different types of humility (one measure of cultural humility, three measures of intellectual humility, one measure of spiritual humility), three other-report measures of humility, one implicit measure of humility, and one self-report of humility as a state. The primary difference between Hill et al.'s (2017) and Worthington and Allison's (2017) analyses was

conceptual organization and a few different conclusions about the relative strength of psychometric evidence supporting some instruments.

In my review, I expanded both searches using a more systematic search method than is usually found in edited book chapters. I also analyzed the measures more rigorously using a pre-specified approach and coding aspects of the measures. Additionally, I reviewed 22 measures rather than the 16 in the two previous reviews. Each measure was evaluated based on the following: (a) definition of humility; (b) development of items and evidence of factor structure; (c) evidence of reliability; and (d) evidence of construct validity. Finally, I end my description of each measure with (e) a summary of key themes and practical suggestions for researchers.

There are some relatively straightforward standards within the field regarding best practice for establishing evidence for content validity, the factor structure of a scale, and reliability (e.g., Worthington & Whittaker, 2006). However, given the lack of consensus regarding definitions of humility, I want to clarify my strategy of evaluating construct validity. A key challenge for humility researchers is the need to advance sharper definitions for evaluating evidence of construct validity, given the range of definitions and content being included on measures of humility. In this regard, I adopted a pragmatic strategy as an initial step towards conceptual consolidation.

For each published measure of humility, I had coders rate items based on the eight subdomains identified by Davis and Hook (2014). The eight categories included Openness/Lack of Superiority, Other-Oriented/Unselfish, Admit Mistakes/Teachable, Interpersonal Modesty, Accurate View of Self, Global Humility, Spiritual Humility, and Regulate Need for Status. Definitions of these eight subdomains, as well as predictions about relationships that would most strongly support construct validity, are summarized in Table 1.1.

Table 1.1

Humility Content Domains and Predictions for Convergent Validity

Subdomain	Description	Convergent Validity
Openness/Lack of Superiority	Open-minded. Does not see self as perfect, all-knowing, or superior. Open rather than superior stance towards the values and perspectives of other individuals and groups.	High openness, agreeableness, positive emotions, need for cognition; moderate self-esteem; low narcissism, negative emotions, anxiety, depression, neuroticism
Other-Oriented/Unselfish	Focuses more on others than self in interpersonal interactions. Has interpersonal qualities such as empathy, compassion, and generosity. Gives others the credit they deserve. Does not try to manipulate or control others for personal gain or benefit.	High gratitude, forgiveness, empathy, openness, agreeableness; low narcissism, negative emotions, anxiety, depression, neuroticism
Admit Mistakes/Teachable	Able to recognize a particular mistake, flaw, or limitation within oneself. Willing to receive feedback and learn from it. Not defensive when others note mistakes, flaws, or limitations and give feedback.	High openness, agreeableness, need for cognition; moderate self-esteem; low narcissism, neuroticism
Interpersonal Modesty	Does not show off, boast, or brag. Does not call attention to self, possessions, or accomplishments. Rather, involves sharing credit fairly and moderating attention that could lead to envy or jealousy. Includes items that explicitly mention “modesty.”	Strong modesty; Moderate self-esteem
Accurate View of Self	Has a desire to know true self. Has an awareness of their strengths and weaknesses.	Moderate self-esteem; Low narcissism, negative emotions, anxiety, depression, neuroticism
Global Humility	Includes items that refer explicitly to “humility.”	High humility; Moderate self-esteem; Low narcissism
Spiritual Humility	Recognizes one’s place in relation to the Sacred. Recognizes the existence of something greater than themselves. Includes items with spiritual content.	High spiritual transcendence; Low anger towards God, insecure attachment to God
Regulate Need for Status	Able to regulate need for having and demonstrating social status. Not overly	High modesty; Low narcissism

concerned with others recognizing their status or being impressed by them.

Method

I conducted a literature search, current as of October 19, 2016. First, I consulted existing reviews of humility (e.g. Davis, et al., 2010; Davis & Hook, 2014) and the *Handbook of Humility* (Worthington, Davis, & Hook, 2017) to identify measures of humility. Next, I searched PsycINFO using the keyword *humility* and identified all empirical studies. I reviewed the methods and references sections of these studies to identify any other measures of humility. I included measures from peer-reviewed, empirical articles as well as dissertations and conference presentations. My search initially resulted in 1254 abstracts. In all, I found 22 unique measures, including 11 survey measures of general humility, five survey measures of humility subdomains, three indirect measures, and three state measures.

To compare content between the measures and assess content validity, two coders were used following the procedure recommended by Kearns and Fincham (2004). We coded each item from each measure based on content domain. The first author read all items from the humility measures and created a list of content categories based on the eight categories in Davis and Hook (2014). Each item was then independently assigned to a content category by both the first author and a research assistant. Any discrepancies were resolved by a third coder (e.g., Kearns & Fincham, 2004). Results of coding are described in Table 1.2.

Table 1.2

Content of Humility Measures—the Number of Items Reflected in Each of Eight Themes

Measure	O	OO	AM	IM	AVS	H	SH	RNS
Expressed Humility Scale								
<i>Willingness to View Self Accurately</i>	1		2					
<i>Appreciation of Others' Strengths</i>	1	2						
<i>Teachability</i>	2		1					

H-H HEXACO					
<i>Sincerity</i>		4			
<i>Fairness</i>		4			
<i>Greed Avoidance</i>				3	1
<i>Modesty</i>	3				1
Relational Humility Scale					
<i>Global Humility</i>					5
<i>Superiority</i>	6	1			
<i>Accurate View of Self</i>				4	
Semantic Differentials	4	1		1	1
Humility/Modesty VIA-IS	3			5	2
Rosemead Humility Scale					
<i>Worldview</i>	1	2			2
<i>Accurate Assessment of One's Self</i>				3	
<i>Low Self-Focus</i>	1	2	3	1	
<i>Appreciation of Limitations</i>	1	1	1		
Healthy Humility Inventory	3	3		2	3
Humility Inventory					
<i>Other-Esteem</i>	1	4			
<i>Systemic Perspective</i>	5	1			
<i>Acceptance of Fallibility</i>	1		2		1
Humility AAVS				6	
Humility Subscale SLS			5		
CEO Humility					
<i>Self-Awareness</i>	1		2		
<i>Appreciation of Others</i>	1	2			
<i>Openness to Feedback</i>	2		1		
<i>Low Self-Focus</i>				2	1
<i>Self-Transcendent Pursuit</i>		2			1
<i>Transcendent Self-Concept</i>	2				2
Cultural Humility Scale					
<i>Positive</i>	4	2	1		
<i>Negative</i>	4			1	
Intellectual Humility Scale					
<i>Openness</i>	7				
<i>Arrogance</i>	6	2	1		
Spiritual Humility Scale					
					4
Comprehensive IHS					
<i>Independence of Intellect and Ego</i>	5				
<i>Openness to Revising One's View</i>				5	
<i>Respect for Others' Viewpoint</i>	3	2	1		
<i>Lack of Intellectual Overconfidence</i>	6				
Specific IHS					
	9				
Dispositional Humility Scale					
<i>Humility</i>	4	1	6	1	
<i>Accurate Self-Perspective</i>				5	

Implicit Association Test	8	1	2	1		
Schwartz Humility Scale		1	1	1		
Humility Related Feelings						
<i>Appreciative Humility</i>	3	11	2	2	2	1
<i>Self-Abasing Humility</i>		2			2	1
Experiences of Humility Scale						
<i>Other-Orientation</i>		3				
<i>Transcendent</i>						3
<i>Awareness of Selfishness</i>		3				
<i>Awareness of Egoism</i>		3				
State Humility Scale	4			2		

*Note: O = Openness/Lack of Superiority, OO = Other Oriented/Unselfish, AM = Admit Mistakes/Teachable, IM = Interpersonal Modesty, AVS = Accurate View of Self, H = Global Humility, SH = Spiritual Humility, RNS = Regulate Need for Status; Numbers in the table represent the number of items from the scale/subscale belonging to each category.

Survey Measures of General Humility

I reviewed 11 survey measures of general humility. Many of these were initially developed based on a relational humility perspective that began with other-reports in response to concerns about a modesty effect. This perspective draws on a tradition in which agreement among self-report, other-report, and behavior are integrated to estimate traits (Funder, 1995). In Table 1.3, I summarize evidence of reliability and validity, including information about whether measures have been used for both self-reports and other-reports.

Table 1.3

Humility Measures: Summary Data

Measure	Reliability			Validity
	Internal Consistency	Temporal Stability	Interrater Reliability	Convergent ($r > .30$)
Expressed Humility Scale (Owens et al., 2013; 9 items); Other-report	Total score α s = .94 to .97 (5 samples)	$r = .56$ (1 month)	None reported	Positively correlated with honesty-humility, openness, emotional stability, learning-goal orientation; Negatively correlated with narcissism
Honesty Humility Subscale of the HEXACO (Lee & Ashton, 2004; 32 items); Self- and other-report	Total score $\alpha = .84$ to .92; Subscale α s = .66 to .83 (2 samples)	None reported	Total score $r = .46$, facet score rs = .20 to .47	Positively correlated with agreeableness, forgiveness, gratitude; Negatively correlated with narcissism

Relational Humility Scale (Davis et al., 2011; 16 items); Self- and other-report	Total score α s = .89 to .95, Subscale α s = .79 to .97 (5 samples)	None reported	None reported	Positively correlated with honesty-humility, positive emotions, empathy; Negatively correlated with negative emotions
Humility/Modesty VIA-IS (Park et al., 2004; 10 items); Self-report	Total score α > .70 (1 sample)	$r > .70$ (4 months)	Not available	Positively correlated with modesty, humility; Negatively correlated with narcissism
Healthy Humility Inventory (Quiros, 2008; 11 items); Self-report	Total score α = .83 (1 samples)	None reported	Not available	Positively correlated with spiritual meaning; Negatively correlated with depression
Humility Inventory (Brown et al., 2013; 15 items); Self-report	Total score α = .82; Subscale α s = .66 to .68 (2 samples)	r s = .65 to .80 (3 months)	Not available	Positively correlated with self-esteem, gratitude; Negatively correlated with anxiety
Humility AAVS (Kim et al., 2005, 6 items); Self-report	Total score α = .75 to .81 (2 samples)	r = .81 (2 weeks)	Not available	Not significantly correlated with relevant constructs
Humility Semantic Differential (Rowatt et al., 2006; 7 items); Self- and other-report	Total score α s = .72 to .79 (2 samples)	None reported	r s = .36 to .40 (self and informant report)	Positively correlated with humility, modesty, agreeableness; Negatively correlated with narcissism
Humility Subscale of the Servant Leadership Survey (van Dierendonck & Nuijten, 2011; 5 items); Other-report	Total score α s = .91 to .95 (6 samples)	None reported	Not available	Not significantly correlated with relevant constructs
Rosemead Humility Scale (Bollinger et al., 2006; 36 items); Self-report	Total score α = .76, Subscale α s = .57 to .85 (1 sample)	None reported	Not available	Positively correlated with openness, agreeableness, self-esteem; Negatively correlated with narcissism
CEO Humility (Ou et al., 2014; 19 items); Other-report	Total score α s = .88 to .90, Subscale α s = .78 to .81 (2 samples)	None reported	None reported	Positively correlated with humility
Cultural Humility Scale (Hook et al., 2013; 12 items); Other-report	Total score α s = .86 to .93; Subscale α s = .84 to .93 (3 samples)	None reported	None reported	Positively correlated with multicultural competence
Intellectual Humility Scale (McElroy et al., 2014; 16 items); Self- and other-report	Total score α s = .94 to .96 (4 samples)	None reported	None reported	Positively correlated with openness, agreeableness, need for cognition, and objectivism; Negatively correlated with neuroticism, religious ethnocentrism
Spiritual Humility Scale (Davis, 2010; 4 items); Other-report	Total score α s = .84 to .85 (2 samples)	None reported	None reported	Positively correlated with humility, spiritual similarity
Specific Intellectual Humility Scale (Hoyle et al., 2016; 9 items); Self-report	Subscale α s = .88 to .96 (2 samples)	None reported	Not available	Positively correlated with intellectual humility; Negatively correlated with dogmatism

Comprehensive Intellectual Humility Scale (Krumrei-Mancuso et al., 2016; 22 items); Self-report	Full scale $\alpha = .88$; Subscale α s = .70 to .89 (4 samples)	$r = .70$ (3 months)	Not available	Positively correlated with intellectual humility, openness, open-minded thinking
Dispositional Humility Scale (Landrum, 2011; 17 items); Indirect	Subscale α s = .57 to .87 (1 sample)	None reported	Not available	Weakly correlated with relevant constructs
Implicit Association Test (Rowatt et al., 2006; 40 trials); Indirect	Total score α s = .87 to .90 (2 samples)	$r = .64$ (Time 1 – Time 2), $r = .44$ to $.45$ (2 weeks)	Not available	Non-significant, weak, or inconsistent relationships with relevant constructs
Schwarz Humility Scale (Schwarz et al., 2012, 2 items); Implicit	Average total score $\alpha = .49$ (9 samples)	None reported	Not available	Not significantly correlated with relevant constructs
Humility Related Feelings (Weidman et al., 2016, 54 items); Self-report	Subscale score α s = .87 to .94 (1 sample)	None reported	Not available	Positively correlated with modesty; Negatively correlated with self-esteem
Experiences of Humility Scale (Davis et al., 2016, 12 items); Self-report	Subscale score α s = .79 to .85 (3 samples)	None reported	Not available	Weakly related to relevant constructs
State Humility Scale (Kruse et al., 2017, 6 items); Self-report	Total score α s = .58 to .84 (2 samples)	$r = .48$ to $.70$ (2 weeks)	ICC = .35	Positively correlated with honesty-humility; Negatively correlated with negative affect and narcissism

*Note: Unless indicated, no examination of measurement invariance has occurred.

Expressed Humility Scale

The Expressed Humility Scale (Owens, Johnson, & Mitchell, 2013) is a nine-item other-report scale that yields a total score and three subscale scores: Willingness to View Oneself Accurately (e.g., “This person actively seeks feedback, even if it is critical.”), Appreciation of Others’ Strengths (e.g., “This person takes notice of others’ strengths.”), and Teachability (e.g., “This person is willing to learn from others.”). Respondents assess a target person on each item using a 5-point rating from 1 (*strongly disagree*) to 5 (*strongly agree*). The content of the EHS spans the first three subdomains identified by Davis and Hook (2014): open rather than superior stance, other-oriented, and willingness to admit mistakes.

Development of items. *Expressed humility* is defined as “an interpersonal characteristic that emerges in social contexts that connotes (a) a manifested willingness to view oneself

accurately, (b) a displayed appreciation of others' strengths and contributions, and (c) teachability" (Owens et al., 2013, p. 1518). This definition was based on qualitative interviews of actual leaders (Owens & Hekman, 2012). Initial items ($N = 32$) were winnowed using exploratory factor analysis (EFA) and replicated using confirmatory factor analysis (CFA). CFA supported the interpretation of a higher order factor.

Evidence of reliability. Cronbach's alpha total scores ranged from .92 to .97 across nine samples (Basford, Offermann, & Behrend, 2014; Owens et al., 2013, Owens & Hekman, 2016; Zhang, Waldman, Han, & Li, 2015). The authors did not report Cronbach's alphas for the subscales or interrater reliability. Temporal stability after 1 month was estimated to be .56 for the total score.

Evidence of construct validity. In terms of convergent validity, EHS scores correlated strongly and negatively with narcissism ($r = -.63$) and positively with the Honesty-Humility subscale of the HEXACO ($r = .55$), openness ($r_s = ns$ to $.31$), emotional stability ($r = .49$), and learning goal orientation ($r = .63$) (Owens et al., 2013). Subsequent studies have shown multiple examples of criterion-related validity. Ratings of a supervisor's humility were related to employee job engagement ($r = .25$), job satisfaction ($r = .44$ to $.75$), transformational leadership ($r = .53$ to $.88$), and voluntary turnover ($r = -.14$ to $-.26$; Basford et al., 2014; Owens et al., 2013; Owens & Hekman 2012; Zhang et al., 2015). In terms of external validity, three samples of undergraduate business students and two samples of employees were used.

In summary, an important gap is the lack of estimates of rater agreement in studies that aggregated across informants to estimate a leader's humility. Results of our coding raise questions about evidence of discriminant validity for interpreting the subscales. I conclude that overall, this scale has good evidence of construct validity.

Honesty-Humility Subscale

The Honesty-Humility (HH) Subscale of the HEXACO-PI (Lee & Ashton, 2004) is a scale (length varies based on version) that yields a total score and four facet (i.e. subscales of the subscale) scores: (1) Sincerity (e.g., “I wouldn’t pretend to like someone just to get that person to do favors for me.”); (2) Fairness (e.g., “I would never accept a bribe, even if it were very large.”); (3) Greed Avoidance (e.g., “Having a lot of money is not especially important to me.”), and (4) Modesty (e.g., “I am an ordinary person who is no better than others.”). Respondents assess each item on a 5-point rating from 1 (*strongly disagree*) to 5 (*strongly agree*). The measure has been translated into 20 languages and includes self- and other-report versions of varying lengths (60-, 100-, and 200-item versions; hexaco.org). Longer versions of the scale are recommended for interpreting facet scores (Lee & Ashton, 2004). For the purposes of the present article, I review the 100-item version which has been recommended for most research purposes. Results of coding highlight the need to pay close attention to item content for interpreting facets. Fairness and Sincerity subscale items all were coded as related to other-orientedness. Modesty items aligned more with openness rather than superiority towards others; and Greed-Avoidance items aligned more with interpersonal modesty.

Development of items. *Honesty-humility* is defined as “sincere, honest, faithful/loyal, modest/unassuming, fair-minded versus sly, greedy, pretentious, hypocritical, boastful, pompous.” (Ashton & Lee, 2007, p. 154). The authors derived the items from the results of several lexical studies (for a review, see Ashton, Lee, & de Vries, 2014). Items were winnowed and refined by EFA, and results suggested a six-factor structure for the HEXACO (Lee & Ashton, 2004). This factor structure has been replicated in CFA (Ashton et al., 2014).

Evidence of reliability. Cronbach's alpha ranged from .82 to .89 for the Honesty-Humility factor score, and from .66 to .83 for the facet scores in large online and student samples using self-reports (Lee & Ashton, 2016). The alpha was .84 for the Honesty-Humility factor score, and ranged from .68 to .82 for the facet scores in a student sample using observer reports (Lee & Ashton, 2016). Self-other agreement was .46 for the Honesty-Humility subscale, and ranged from .20 to .47 for the facet scores (Lee & Ashton, 2016). Temporal stability over 2 months was .78 (de Vries, 2013).

Evidence of construct validity. Because this is one of the most widely used measures of personality, space limitations preclude me from reporting all relevant correlations with the HH subscale. Regarding evidence of convergent validity, I located positive relationships with agreeableness ($r = .35$; Lee & Ashton, 2005), forgiveness ($r = .13$ to $.81$; Lee, Ashton, Morrison, Cordery, & Dunlop, 2008, Grahek, Thompson, & Toliver, 2010), empathy ($r = .27$; Austin & Vahle, 2016), and gratitude ($r = .86$; Grahek et al., 2010). Correlations with narcissism ($r = -.38$ to $-.53$; Lee & Ashton, 2005, 2012) and anxiety ($r = -.17$; Lee et al., 2008) were negative, while correlations with positive affect and self-esteem were non-significant (Herbert, 2014; Romero, Villar, & Lopez-Romero, 2015). I also found correlations with openness to be variable, from weak negative ($r = -.18$; de Vries, de Vries, & Born, 2011), to non-significant (Sibley & Pirie, 2013), to weak positive ($r = .25$; Hilbig, Zettler, Leist, & Heydasch, 2013), as were correlations with negative affect ($r = -.03$ to $-.17$; Ashton, Lee, de Vries, Hendrickse, & Born, 2012; $r = .18$ to $.25$; Van Gelder & de Vries, 2014). In terms of external validity, psychometric properties of the HEXACO-100 were recently reported for large samples of community ($N > 100,000$) and undergraduate students ($N > 2,000$; Lee & Ashton, 2016).

In summary, although many humility researchers initially considered the HH to assess something other than humility, making an empirical case for this distinction is more difficult. The subscale's relationships with relevant constructs (i.e. agreeableness, narcissism) were in the expected direction and of sufficient strength to support the subdomains we identified. The only notable concerns were the variable relationships with openness and self-esteem, but this scale has demonstrated good evidence of construct validity overall.

Relational Humility Scale

The Relational Humility Scale (RHS; Davis et al., 2011) is a 16-item, other-report, scale that yields a total score and three subscale scores: (1) Global Humility (e.g., "He/she has a humble character."), (2) Superiority (e.g. "He/she has a big ego."), and (3) Accurate View of Self (e.g. "He/she knows his/her weaknesses."). Respondents assess a target person on each item using a 5-point rating from 1 (*strongly disagree*) to 5 (*strongly agree*). Coding results suggest that items align with Davis and Hook (2014) subdomains of global humility, openness rather than superiority, and accurate view of self.

Development of items. *Relational humility* is defined as "an observer's judgment that a target person (a) is interpersonally other-oriented rather than self-focused, marked by a lack of superiority; and (b) has an accurate view of self—not too inflated or too low." (Davis et al., 2011, p. 226). Items were also winnowed using experts and EFA, which suggested a 3-factor structure and replicated well using CFA in an independent sample.

Evidence of reliability. Cronbach's alphas ranged from .84 to .95 for the total score across seven samples, and from .79 to .97 for the subscale scores across five samples (Davis et al., 2011; Farrell et al., 2015; Van Tongeren, Davis, & Hook, 2014; Zhang et al., 2015).

Evidence of construct validity. Regarding evidence of convergent validity, the RHS has demonstrated positive relationships with other measures of humility including the Honesty-Humility Subscale of the HEXACO ($r = .56$; Davis et al., 2011) and intellectual humility ($r = .25$; Zhang et al. 2015). It has also produced significant correlations with negative emotions ($r = -.41$), empathy ($r = .49$), and positive emotions ($r = .57$) towards an offender (Davis et al., 2011). Two additional studies have found non-significant to weak positive correlations with trait forgiveness ($r = ns$ to $.26$; Van Tongeren et al., 2014; Zhang et al., 2015). Regarding criterion-related validity, the RHS produced moderate negative correlations with unforgiveness of a specific offense ($r = -.41$ to $-.49$; Davis et al., 2011; Van Tongeren et al., 2014) and moderate to strong positive correlations with commitment ($r = .32$), forgiveness ($r = .36$), and relationship satisfaction ($r = .52$) in a sample of couples (Farrell et al., 2015). This measure was developed using five samples of undergraduate students.

In summary, the RHS has good evidence of construct validity overall, and the relationship with intellectual humility provides some support for the Superiority and Accurate View of Self subscales. The pattern of correlations with various interpersonal and emotional constructs supports the authors' conceptualization of the relational and other-oriented nature of humility. Therefore, this measure has good initial evidence of construct validity.

Humility/Modesty Subscale of the Values in Action Inventory of Strengths

The Humility/Modesty Subscale of the Values in Action-Inventory of Strengths (VIA-IS; Park, Peterson, & Seligman, 2004) has 10-items. Sample items include "I am always humble about the good things that have happened to me." and "I rarely call attention to myself." Respondents assess each item on a 5-point rating from 1 (*very much unlike me*) to 5 (*very much*

like me). Coding indicated that VIA-IS items assess openness rather than superiority, interpersonal modesty, and global humility.

Development of items. *Humility/Modesty* is defined by, “Letting one’s accomplishments speak for themselves; not seeking the spotlight; not regarding oneself as more special than one is” (Park et al., 2004, p. 606). The authors developed a list of 24 character strengths theorized to load onto six latent factors. This was done over a three-year period by consulting 50 experts, existing lists of virtues, and examining popular media (McGrath, 2016). Items were then developed to assess each virtue. Subsequently, at least eight studies have empirically explored the factor structure using a variety of factor analytic techniques, and consistently found three to five factors (McGrath, 2016): Interpersonal Strengths, Emotional Strengths, Strengths of Restraint, Theological Strengths, and Intellectual Strengths. The Humility/Modesty subscale fell on the Interpersonal Strengths factor. Recently, McGrath (2016) found evidence of configural and metric invariance in the translated versions of the measure in 16 countries for most of the subscales, but (importantly for the present review) not for the Humility/Modesty subscale.

Evidence of reliability. Cronbach’s alphas ranged from .68 to .83 for the Humility/Modesty subscale (MacDonald, Bore, & Munro, 2008; McGrath, 2014). Temporal stability after 4 months was .71 (Steger, Hicks, Kashdan, Krueger, & Bouchard, 2007).

Evidence of construct validity. Regarding evidence of convergent validity, the subscale produced strong positive relationships with modesty ($r = .51$) and the humility semantic differentials ($r = .57$; Rowatt et al., 2006). It was also weakly related to agreeableness ($r = .24$), openness ($r = -.12$), and neuroticism ($r = -.22$; Rowatt et al., 2006). It was strongly related to narcissism ($r = -.52$) in the expected direction, but was not significantly related to self-esteem or

depression (Rowatt et al., 2006). In terms of external validity, the VIA-IS has been investigated in 54 countries.

Concerns about the VIA-IS as a measure of humility include the varying number of factors supported in factor analysis, and lack of support for measurement invariance for the Humility/Modesty subscale. Given its wide use, it is also surprising that I did not locate more support for construct validity, but most of these studies were not focused on the virtue of humility per se. The subscale's relationships with humility, modesty, and narcissism were in the expected direction and of sufficient strength to provide evidence of construct validity for the subdomains identified in coding. However, the weak negative correlation with openness was unexpected. Therefore, I conclude that this scale has initial evidence of construct validity, but warrants additional investigation.

Rosemead Humility Scale

The Rosemead Humility Scale (Bollinger, 2006) is a 36-item, self-report scale that yields a total score and five subscales: (1) Worldview (e.g., "My success is completely due to my own effort and ability."), (2) Accurate Assessment of One's Self (e.g., "I can honestly assess my strengths and weaknesses."), (3) Low Self-Focus (e.g., "I have difficulty accepting advice from other people."), (4) Appreciation of Limitations (e.g., "I know that I can learn from other people."), and (5) Personal Finiteness (e.g., "I see myself as a small part of the workings of the world."). Respondents assess each item on a 5-point rating from 1 (*I do not identify at all with this item*) to 5 (*I fully identify with this item*). Results of coding suggested that content included all subdomains of humility except for interpersonal modesty and need for status.

Development of items. The authors based their items on Tangney's (2000) six-part definition of humility. Bollinger's (2006) dissertation originally reported five factors. A major

weakness of this measure has been the instability of the factor structure across studies. More recently, Jankowski and Sandage (2014) reported a four-factor structure based on a CFA. This version of the measure included only 18 of the original 36 items and did not include the Personal Finiteness subscale. They also provided evidence for interpreting a higher order factor.

Evidence of reliability. Cronbach's alpha ranged from .53 to .82 for the total score, and from .51 to .85 for subscale scores (Dwiwardani et al., 2014; Exline & Hill, 2012; Grubbs & Exline, 2014; Jankowski & Sandage, 2014; Powers, Nam, Rowatt, & Hill, 2007; Sandage, Paine, & Hill, 2015). Temporal stability has not been reported.

Evidence of construct validity. Of seven studies I reviewed, all but two (Jankowski, Sandage, & Hill, 2013; Sandage et al., 2015) used the original 36-item version of the scale. Regarding convergent validity, the measure has performed inconsistently. It has shown weak to moderate relationships with measures of narcissism ($r_s = -.20$ to $-.42$; Exline & Hill, 2012; Grubbs & Exline, 2014). It was only weakly related to the Humility Semantic Differentials ($r = .20$; Powers et al., 2007) and has shown weak to moderate relationships with some other humility-related constructs, such as openness ($r = .18$ to $.32$), agreeableness ($r = .33$ to $.48$), neuroticism ($r = -.12$ to $-.24$), and self-esteem ($r = .19$ to $.30$; Dwiwardani et al., 2014; Exline & Hill, 2012; Grubbs & Exline, 2014). Regarding discriminant validity, the scale has produced inconsistent correlations with social desirability ($r = .16$ to $.33$), spiritual impression management ($r = .17$), desirable responding ($r = .43$), and impression management ($r = .56$; Exline & Hill, 2012; Grubbs & Exline, 2014; Powers et al., 2007; Sandage et al., 2015). In terms of external validity, the scale was originally developed and later refined with a sample of graduate students at a Christian-affiliated university. In summary, in spite of the comprehensive

coverage of most humility subdomains, I caution against the use of this measure primarily due to the inconsistency of factor structures and weak evidence supporting construct validity.

Humility Semantic Differentials

The Humility Semantic Differentials (Rowatt et al., 2006) is a 7-item scale (i.e., “humble/arrogant, intolerant/tolerant, modest/immodest, respectful/disrespectful, egotistical/not self-centered, conceited/not conceited, closed-minded/open-minded”) that yields a total score. Respondents assess each item on a 7-point rating between the two endpoints. The scale was developed using both self and other-reports. Most items were coded as assessing openness rather than superiority, but items also assessed global humility, interpersonal modesty, and other-orientedness.

Development of items. *Humility* is defined as “a psychological quality characterized by being more humble, modest, down-to-earth, open-minded, and respectful to others” (Rowatt et al., 2006, pp. 198-199). The authors did not use experts or factor analysis to winnow and refine the items.

Evidence of reliability. Cronbach’s alphas ranged from .72 to .79. Self-other agreement ranged from .36 to .40 in two samples (Rowatt et al., 2006).

Evidence of construct validity. Regarding evidence of convergent validity, the Humility Semantic Differentials produced positive relationships with the Humility Implicit Association Test ($r = .26$), the NEO-PI-R Modesty subscale ($r = .44$), and the VIA-IS Humility-Modesty subscale ($r = .57$; Rowatt et al., 2006). The scale correlated positively with openness ($r = .21$), self-esteem ($r = .24$ to $.28$), and agreeableness ($r = .47$); and negatively with the exploitative ($r = -.19$), vanity ($r = -.31$), and exhibitionism aspects of narcissism ($r = -.35$; Rowatt et al., 2006). Regarding evidence of discriminant validity, the scale produced a moderate positive relationship

($r = .30$) with the BIDR Impression Management Scale (Rowatt et al., 2006). The measure has been primarily used with undergraduates.

In summary, the Humility Semantic Differentials' is a pragmatic and face-valid way of assessing humility. There is currently no evidence reporting a factor structure of the measure, although initial evidence of estimated reliability and of construct validity suggest it can suffice as a brief measure of humility. However, more psychometric evidence is needed before recommending this as a strong measure of humility.

Healthy Humility Inventory

The Healthy Humility Inventory (HHI; Quiros, 2008) is an 11-item, self-report scale that yields a total score. Sample items include “I keep my opinions open to change” and “I show gentleness towards others.” Respondents assess each item on a 6-point rating from 1 (*not at all like me*) to 6 (*very much like me*). Coding suggested that content aligned with subdomains of openness rather than superiority, other-oriented, accurate view of self, and religion/spirituality.

Development of items. *Healthy humility* is defined as “an unexaggerated, open perception of the abilities, achievements, accomplishments, and limitations—of oneself and others—a perception that focuses primarily, but not exclusively, on the value of the non-self” (Quiros, 2008, p. 9). Items were winnowed and refined by evaluations of experts, and then by removing items that strongly correlated with social desirability. The author used EFA and CFA to determine the factor structure, which resulted in four factors with 11 items (i.e. two to three items per factor). However, given the poor stability of CFA, I have strong concerns about the factor structure of the HHI.

Evidence of reliability. Cronbach's alpha for the total score was .83 (Quiros, 2008). The author did not report alphas for the subscales, or temporal stability.

Evidence of construct validity. Regarding evidence of convergent validity, the measure produced a non-significant relationship with self-esteem (r s ranged from .01 to .11), a moderate positive relationship with spiritual meaning ($r = .33$), and moderate negative relationships with anxiety ($r = -.24$) and depression ($r = -.46$; Quiros, 2008). In summary, the HHI has very limited evidence of construct validity, and the measure was developed on undergraduate students, limiting external validity as well. While the HHI attempted to address concerns about social desirability, it is too limited in evidence of validity for me to recommend.

Humility Inventory

The Humility Inventory (HI; Brown, Chopra, & Schiraldi, 2013) is a 15-item, self-report scale that yields a total score and three subscale scores: (1) Other-Esteem (e.g., “One of my greatest joys is helping others excel.”), (2) Systemic Perspective (e.g., “I recognized I need help from other people.”), and (3) Acceptance of Fallibility (e.g., “I readily admit when I am wrong.”). Respondents assess each item on a 5-point rating from 1 (*strongly disagree*) to 5 (*strongly agree*). Coding suggested that content aligned with subdomains of openness rather than superiority, other-oriented, admitting mistakes, and regulation of the need for status.

Development of items. *Humility* is defined as “the ability and practice of accurately recognizing and accepting others’ weaknesses and one’s own strengths without self-aggrandizement, as well as the ability and practice of accurately recognizing and accepting others’ strengths and one’s own weaknesses and dependence without self-diminishment” (Brown et al., 2013, p. 59). Items were winnowed and refined by expert evaluation, pilot testing, EFA (which suggested a five-factor structure), and CFA (which replicated the five factors with an independent sample). However, because two factors did not load well on a higher order factor (i.e., Pride and Need for Recognition), they were excluded from the final measure.

Evidence of reliability. Cronbach's alpha was .82 for the total score, and ranged from .52 to .77 for the subscale scores. Temporal stability after 3 months ranged from .65 to .80 for the subscales.

Evidence of construct validity. Regarding evidence of convergent validity, the Humility Inventory produced moderate correlations with happiness ($r = .25$), self-esteem ($r = .34$), anxiety ($r = -.37$), and gratitude ($r = .55$; Brown et al., 2013). Discriminant validity was supported by non-significant to weak positive correlations between the Humility Inventory subscales and social desirability ($r = .04$ to $.26$). In terms of external validity, this scale was developed using a sample of undergraduates. In summary, the Humility Inventory has several limitations that lead me to caution against its use: low subscale alphas, limited evidence of construct validity, and the decision to drop factors based on CFA results.

Humility Subscale of the Asian American Values Scale

The Humility subscale of the Asian American Values Scale (AAVS; Kim, Li, & Ng, 2005) is a six-item, self-report subscale. Sample items include "One should be able to brag about one's achievements" (reverse-coded) and "One should not sing one's own praises." Respondents assess each item on a 7-point rating from 1 (*strongly disagree*) to 7 (*strongly agree*). All six items were coded as assessing interpersonal modesty.

Development of items. The authors did not define or describe their conceptualization of *humility*. The authors initially created items by surveying Asian American psychologists about Asian American values, including humility. Items were winnowed and refined by selecting the 30 items that best represented each value, reverse wording 15 of the items, and conducting an EFA of the full AAVS. Only six of the 30 humility items loaded on the humility factor, and this

result was replicated with an independent sample using CFA (Kim et al., 2005). The CFA results suggested adequate fit for a higher order factor measuring Asian American values.

Evidence of reliability. Cronbach's alpha s for the humility subscale score ranged from .71 to .83 across five samples (Kim et al., 2005; Park & Kim, 2008; Wong et al., 2012; Wong, Wang, & Maffini, 2013). Its temporal stability after two weeks was reported to be .81.

Evidence of construct validity. The article on the measure reported limited evidence of convergent validity (i.e., all subscales were intercorrelated). Other studies have shown the Humility subscale to correlate with values, achievement, help-seeking attitudes, and depression (see Kim et al., 2005; Park & Kim, 2008; Wong et al., 2012, 2013). Regarding discriminant validity, the subscale was weakly correlated with a measure of social desirability ($r = .14$; Kim et al., 2005). There is no evidence that supports using the measure to assess humility in non-Asian American samples.

In summary, the Humility subscale of the AAVS hones in on the subdomain of interpersonal modesty, based on results of our coding. As a measure of humility, the measure has limited evidence of construct validity, and so I caution against its use until more psychometric support accumulates.

Humility Subscale of the Servant Leadership Survey

The Humility subscale of the Servant Leadership Survey (van Dierendonck & Nuijten, 2011) is a 5-item, other-report scale that yields a total score. A sample item is, "My manager learns from criticism." Respondents rate a target person on each item using a six-point scale ranging from 1 (*never*) to 6 (*always*). Results of coding suggest that all five items assess one's willingness to admit mistakes.

Development of items. *Humility* was defined as “the ability to put one’s own accomplishments and talents in a proper perspective..., daring to admit that one is not infallible and does make mistakes..., [and] a proper understanding of one’s strong and weak points” (van Dierendonck & Nuijten, 2011, p. 252). Items were winnowed and refined through critical review by trained research assistants. Results of EFA suggested a 7-factor solution where humility items comprised one factor. CFA results in three samples (Spain, Argentina, and Mexico) suggested good fit for an 8-factor model and evidence of measurement invariance (Rodriguez-Carvajal, de Rivas, Herrero, Moreno-Jiminez, & van Dierendonck, 2014).

Evidence of reliability. Cronbach’s alpha for the Humility subscale ranged from .91 to .95 across six samples (van Dierendonck & Nuijten, 2011).

Evidence of construct validity. Although the Servant Leadership Survey has been examined in relation to other measures of leadership (see van Dierendonck & Nuijten, 2011), no studies provided evidence of convergent or discriminant validity of the Humility subscale. Regarding criterion-related validity, van Dierendonck and Nuijten (2011) found positive correlations of Humility with subordinate vitality ($r = .23$), engagement ($r = .33$), job satisfaction ($r = .48$), and organizational commitment ($r = .54$). In terms of external validity, the measure was developed with employees in the United Kingdom and Netherlands.

I currently caution against use of the Humility subscale. Decisions on the EFA were atypical, and there is no consistent evidence for a stable factor structure. If the goal is to assess one’s willingness to admit mistakes as a subdomain, stronger measures are available.

CEO Humility

The CEO Humility measure (Ou et al., 2014) is a 19-item, other-report scale with six subscales: (1) Transcendent Self-View (e.g., “Believes that all people are a small part of the

universe.”), (2) Low Self-Focus (e.g., “Keeps a low profile.”), (3) Self-Transcendent Pursuit (e.g., “Has a sense of personal mission in life.”), (4) Self-Awareness (e.g. “Actively seeks feedback, even if it is critical.”), (5) Openness to Feedback (e.g. “Is willing to learn from others.”), and (6) Appreciation of Others (e.g. “Takes notice of the strengths of others.”). Respondents assess each item on a 6-point rating from 1 (*strongly disagree*) to 6 (*strongly agree*). Results of coding suggested that items included content from all subdomains except accurate view of self and global humility.

Development of items. *Humility* includes “(1) reflexive consciousness, or understanding the self in relation to the world, (2) interpersonal being, or appreciating the self in relation to others, and (3) executive function, or experiencing the self by what the individual does.” (Ou et al., 2014, p. 37). The items were winnowed by commentary from 17 leadership experts, EFA, and CFA. An EFA suggested a three-factor structure. Before conducting a CFA, the authors added in eight items from the Owens et al. (2013) Expressed Humility measure, and results suggested a six-factor structure. A second-order CFA to test for a higher-order construct resulted in poorer fit.

Evidence of reliability. Cronbach’s alpha was .88 to .90 for the total score, and ranged from .78 to .81 for the subscale scores across two samples (Ou et al., 2014). Temporal stability was not reported.

Evidence of construct validity. Regarding evidence of convergent validity, the measure had positive relationships with expressed humility ($r = .60$), learning goal orientation ($r = .23$), and modesty ($r = .17$; Ou et al., 2014). It was not related to narcissism. Regarding criterion-related validity, it was positively (but weakly) related to middle management work engagement ($r = .09$), and more strongly to top management team integration ($r = .41$), and empowering

organizational climate ($r = .31$; Ou et al., 2014). In terms of external validity, the scale was originally developed with a sample of Chinese undergraduate students and business students, and has been investigated with a sample of managers in China. The non-significant relationship with narcissism raises questions about construct validity, and it is not clear how the measure would perform outside of a Chinese business context. The decisions in the factor analysis were also atypical. One advantage, however, is the comprehensive coverage of most subdomains.

Survey Measures of Humility Subdomains

I reviewed five measures specifically designed to target subdomains of humility. All of these measures were published since 2010, so there has been little time to evaluate evidence of construct validity through continued use within the literature. I strongly recommend three based on the strength of the scale development process and initial evidence of construct validity.

Cultural Humility Scale

The Cultural Humility Scale (CHS; Hook, Davis, Owen, Worthington, & Utsey, 2013) is a 12-item, other-report scale that yields two subscale scores: Positive (e.g., “Is open to explore.”) and Negative (e.g., “Makes assumptions about me.”). Respondents assess a target person on each item using a 5-point rating from 1 (*strongly disagree*) to 5 (*strongly agree*). Coding suggested that content is primarily focused on openness rather than superiority, although items were also coded as assessing other-orientedness, willingness to admit mistakes, and accurate view of self.

Development of items. *Cultural humility* is defined by “the ability to maintain an interpersonal stance that is other-oriented (or open to the other) in relation to aspects of cultural identity that are most important to the client” (Hook et al., 2013, p. 354). Items were winnowed and refined based on expert reviews and factor analysis. Results of EFA suggested a two-factor structure, which replicated well in an independent sample using CFA.

Evidence of reliability. Cronbach's alpha ranged from .86 to .93 for the subscale scores across four samples (Hook et al., 2013; Owen et al., 2014).

Evidence of construct validity. Regarding evidence of convergent validity, perceptions of the cultural humility of one's therapist were strongly and positively related to perceptions of multicultural competence ($r = .64$; Owen et al., 2014). Regarding criterion-related validity, the CHS also correlated with client-rated improvement ($r = .33$ to $.59$), and produced strong positive relationships across three samples (Hook et al., 2013; Owen et al., 2014). The very strong relationships with working alliance ($r = .60$ to $.75$) may raise questions about discriminant validity. In terms of external validity, the CHS was developed using three samples of therapy clients, some of which were recruited from an undergraduate research pool. Results of our coding suggest that the content of items is especially focused on openness (rather than superiority). More work is needed to situate this construct among other measures related to multicultural competence and of humility. Overall, I conclude that there is currently moderate evidence for construct validity.

Intellectual Humility Scale

The Intellectual Humility Scale (McElroy et al., 2014) is a 16-item, other-report scale that yields a total score and two subscale scores: Openness (e.g., "Is good at mediating controversial topics.") and Arrogance (e.g., "Has little patience for others' beliefs."). Respondents assess a target person on a 5-point rating from 1 (*strongly disagree*) to 5 (*strongly agree*). Results of coding suggest that most items assess openness rather than superiority, although two items assessed other-orientedness and one assessed willingness to admit mistakes.

Development of items. *Intellectual humility* is defined as "having (a) insight about the limits of one's knowledge, marked by openness to new ideas; and (b) regulating arrogance,

marked by the ability to present one's ideas in a non-offensive manner and receive contrary ideas without taking offense, even when confronted with alternative viewpoints" (McElroy et al., 2014, p. 20). Items include interpersonal and intrapersonal dimensions. Items were winnowed and refined by EFA and CFA. Results of EFA suggested a two-factor structure, which replicated well in an independent sample using CFA. Although the two factors correlated strongly with one another ($r = .73$ to $.74$), the authors did not report evidence to suggest a higher-order factor.

Evidence of reliability. Cronbach's alpha ranged from .89 to .96 for the total score and .87 to .94 for the subscales across six samples (Davis et al., 2015; McElroy et al., 2014).

Evidence of construct validity. With regard to convergent validity, the scale has produced relationships with personality constructs in the expected directions including openness ($r = .38$ to $.54$), agreeableness ($r = .65$ to $.78$), and neuroticism ($r = -.58$; Davis et al., 2015; McElroy et al. 2014). Davis et al. (2015) also found a moderate positive relationship with need for cognition ($r = .37$) and objectivism ($r = .42$), and a moderate negative relationship with religious ethnocentrism ($r = -.39$). The IHS predicted agreeableness and openness after controlling for relational humility scores. In terms of criterion validity, the IHS was strongly related to trust (McElroy et al., 2014). In terms of external validity, the Intellectual Humility Scale has been used in Mechanical Turk and college student samples. Results of coding suggest that item content of the IHS is aligned with openness rather than superiority towards others, which is also consistent with empirical results (Davis et al., 2015). There is a need to distinguish the IHS from other relational constructs (e.g., trust) and to clarify how measures of general humility are related to measures of intellectual humility. Overall, I conclude that there is currently moderate evidence for construct validity.

The Comprehensive Intellectual Humility Scale

The Comprehensive Intellectual Humility Scale (Krumrei-Mancuso & Rouse, 2016) is a 22-item, self-report scale with four subscales: (1) Openness to Revising One's Viewpoint (e.g., "I am willing to change my opinions on the basis of compelling reason."), (2) Lack of Intellectual Overconfidence (e.g., "My ideas are usually better than other people's ideas."), (3) Respect for Others' Viewpoints (e.g., "I am willing to hear others out, even if I disagree with them."), and (4) Independence of Intellect and Ego (e.g., "I feel small when others disagree with me on topics that are close to my heart."). Respondents assess each item on a 5-point rating from 1 (*strongly disagree*) to 5 (*strongly agree*). Coding suggested that most items assess openness/lack of superiority and admit mistakes/teachable, although two items assess other-oriented/unselfish subdomains.

Development of items. *Intellectual humility* is defined as, "a nonthreatening awareness of one's intellectual fallibility...resulting in openness to revising one's viewpoints, lack of overconfidence about one's knowledge, respect for the viewpoints of others, and lack of threat in the face of intellectual disagreements." (Krumrei-Mancuso & Rouse, 2016, p. 210). Items were winnowed by experts in humility. EFA suggested a four-factor solution, which was replicated by a CFA that also provided evidence for a higher order factor.

Evidence of reliability. Cronbach's alpha was .88 for the total score, and ranged from .70 to .89 for the subscale scores across four samples (Krumrei-Mancuso & Rouse, 2016). Temporal stability was .75 after one month and .70 after three months for the full scale, and ranged from .46 to .74 after one month and .50 to .76 after three months for the subscales.

Evidence of construct validity. Regarding evidence of convergent validity, the scale has produced positive relationships with the subscales of the Intellectual Humility Scale ($r = .52$ to

.52), the humility/modesty subscale of the HEXACO ($r = .23$), tolerance toward other people and ideas ($r = .28$), openness ($r = .40$), and open-minded thinking ($r = .56$ to $.57$; Krumrei-Mancuso & Rouse, 2016). Regarding discriminant validity, the scale was weakly correlated with social desirability ($r = .15$ to $.22$). In terms of external validity, the scale was originally developed and later refined with samples of Mechanical Turk participants and undergraduate students.

Temporal stability for the full scale was acceptable after three months, but it was marginal for some subscales. The primary concern is that the correlation with social desirability was similar to those with existing measures of humility and modesty. Evidence of criterion related validity is needed. However, I conclude that this is promising as a self-report measure of intellectual humility, with moderate initial evidence of construct validity.

Specific Intellectual Humility Scale

The Specific Intellectual Humility Scale (Hoyle, Davisson, Diebels, & Leary, 2016) is a 9-item, self-report scale that yields a total score. Items (e.g. “My views about _____ are just as likely to be wrong as other views.”) are assessed on a 5-point rating from 1 (*not at all like me*) to 5 (*very much like me*). The scale authors also developed an abbreviated, three item scale with similar psychometric properties. All nine items were coded as being associated with openness rather than superiority.

Development of items. *Specific intellectual humility* is defined as “the recognition that a particular personal view may be fallible, accompanied by an appropriate attentiveness to limitations in the evidentiary basis of that view and to one’s own limitations in obtaining and evaluating information relevant to it” (Hoyle et al., 2016, p. 165). This scale was originally published as the Domain Specific Intellectual Humility Scale (see Hopkin, 2014), but has since been refined. Items were winnowed and refined using factor analyses. An EFA resulted in nine

items which all loaded on a single factor. CFA supported the single-factor structure and showed strong evidence of measurement invariance across different domains (i.e. politics, religion).

Evidence of reliability. Cronbach's alpha for the full scale ranged from .88 to .96 across eight different domains and two samples (Hoyle et al., 2016). Alphas ranged from .79 to .88 for the abbreviated scale (Hoyle et al., 2016).

Evidence of construct validity. Regarding evidence of convergent validity, the scale was related to a measure of general intellectual humility ($r = .24$ to $.63$), dogmatism ($r = -.22$ to $-.53$), and openness ($r_s = .11$ to $.21$; Hoyle et al., 2016) across different domains. Additionally, the scale produced some curvilinear effects such that the more extreme views one held on a specific issue (i.e. physician assisted suicide), the less intellectually humble they were about that issue. Regarding discriminant validity, the scale was weakly and negatively related to social desirability ($r = -.06$ to $-.16$; Hoyle et al., 2016) across different domains. In terms of external validity, the Specific Intellectual Humility Scale was developed using three samples of Mechanical Turk workers, undergraduate students, and community participants. The design of the scale and abbreviated form enhances its utility for a variety of specific research questions. Although this scale shows promise as a measure of specific intellectual humility, more work is needed to establish evidence of criterion-related validity. Overall, I conclude that there is currently limited evidence for construct validity.

Spiritual Humility Scale

The Spiritual Humility Scale (Davis, 2010) is a 4-item, other-report scale that yields a total score. The items include, "He/she accepts his/her place in relation to the sacred."

Respondents assess a target person for each item using a 5-point rating from 1 (*strongly*

disagree) to 5 (*strongly agree*). All four items were coded as assessing the religious/spiritual subdomain.

Development of items. *Spiritual humility* is defined as an individual's perception of a target's humility "in relation to the Sacred" (Davis, 2010, p. 93). Items were winnowed and refined by factor analyses. Results of EFA suggested a one-factor structure, which in an independent sample using CFA.

Evidence of reliability. Cronbach's alpha ranged from .84 to .85 for the total score across two samples (Davis et al., 2010).

Evidence of construct validity. Regarding evidence of convergent validity, spiritual humility judgements of an offender produced positive correlations with relational humility judgements of an offender ($r = .42$), human similarity of an offender ($r = .25$), spiritual similarity of an offender ($r = .46$) and trait gratitude ($r = .22$). Additionally, spiritual humility judgements of an offender produced weak negative correlations with revenge ($r = -.22$), avoidance ($r = -.25$), and unforgiveness motivations towards an offender ($r = -.26$; Davis et al., 2010). Regarding evidence of discriminant validity, the SHS was not correlated with religious commitment (Davis et al., 2010). In terms of external validity, the Spiritual Humility Scale was developed using two samples of undergraduate students. While the measure demonstrates evidence of discriminant validity in relation to relational humility and religious commitment, to situate the construct well more research is needed to determine the correlates of the SHS. Overall, I conclude that there is currently limited evidence for construct validity.

Indirect Measures of Humility

Only three measures have attempted an indirect approach to assessing humility. These were created to address concerns about the validity of self-reports of humility. Two measures

instruct participants to rate how much they like or how similar they are to a hypothetical individual with characteristics of humility. The third utilizes an implicit association approach. I remain cautious about each of these measures, so this is an important area for future investigation.

Dispositional Humility Scale

The Dispositional Humility Scale (Landrum, 2011) is a 17-item, scale that yields a total score and two subscale scores: (1) Humility (e.g., “I like people who are open and flexible.”) and (2) Accurate Self-Perspective (e.g., “I like people who are aware of their limitations.”).

Respondents assess each item on a 5-point rating from 1 (*strongly disagree*) to 5 (*strongly agree*). Coding results suggest that most items align with willingness to admit mistakes, accurate view of self, and openness.

Development of items. *Humility* is defined based on Tangney’s (2000) six-part definition which includes “(a) accurate assessment of one’s abilities and achievements, (b) ability to acknowledge one’s mistakes, imperfections, gaps in knowledge, and limitations, (c) openness to new ideas, contradictory information, and advice, (d) keeping one’s abilities and accomplishments (one’s place in the world) in perspective, (e) relatively low self-focus, a “forgetting of the self” while recognizing that one is but part of a larger universe, and (f) appreciation of the value of all things, as well as the many different ways that people and things can contribute to the world (Landrum, 2011, p. 217). The authors had participants rate the type of qualities they like in a person, with the idea that people will like others who are more similar to them (i.e., humble individuals should like humble individuals). Items were winnowed and refined based on pilot testing, feedback from expert reviewers, and factor analyses. EFA suggested a six-factor structure, but the authors only retained two of the factors that aligned with

their definition of humility, and this structure has not been examined by CFA in an independent sample.

Evidence of reliability. Cronbach's alpha ranged from .57 to .87 for the subscale scores within one sample (Landrum, 2011).

Evidence of construct validity. Regarding convergent validity, the authors reported weak correlations of the subscales with self-esteem and narcissism ($r = .17$ or less; Landrum, 2011). Regarding discriminant validity, this measure was not related to social desirability (Landrum, 2011). In terms of external validity, the measure was developed using a sample of undergraduate students. I caution against the use of this measure because decisions during factor analysis were atypical and results align poorly with theoretical foundation. Furthermore, there is very limited evidence of construct validity.

Implicit Association Test

The Implicit Association Test of Humility versus Arrogance (Rowatt et al., 2006) is a computer-administered test that consists of 40 trials and yields a total score. The Implicit Association Test of Humility versus Arrogance measures participants' reaction times to pairings of self with humble words and other with arrogant words, and contrasts this with participants' reaction times to pairings of self with arrogant words (i.e., arrogant, immodest, egotistical, high-and-mighty, closed-minded, conceited) and other with humble words (i.e., humble, modest, tolerant, down to earth, respectful, open-minded). The underlying assumption is that reaction times will be faster with more accurate pairings. In other words, if an individual is humble, then they will respond faster to pairings of self and humble words than self with arrogant words. Results of coding suggest that most items assessed the openness versus superiority subdomain.

Development of items. *Humility* is defined as “a psychological quality characterized by being more humble, modest, down-to-earth, open-minded, and respectful to others” (Rowatt et al., 2006, p. 198-199). The authors did not provide details about how items were developed.

Evidence of reliability. Cronbach’s alpha ranged from .87 to .90 for the total score across three samples (Powers et al., 2007; Rowatt et al., 2006). Temporal stability after two weeks ranged from .44 to .45 (Rowatt et al., 2006).

Evidence of construct validity. This measure has largely demonstrated nonsignificant relationships with other humility constructs including existing measures of humility and personality (i.e. the VIA humility/modesty, NEO modesty, self-esteem, agreeableness; see Powers et al., 2007; Rowatt et al., 2006). Regarding discriminant validity, this measure was not related (Rowatt et al., 2006) or only weakly related to social desirability ($r = .17$; Powers et al., 2007). Regarding criterion-related validity, this measure was moderately and positively related to students’ course points ($r = .30$) and letter grade ($r = .32$; Rowatt et al., 2006). In terms of external validity, this measure was developed using two samples of undergraduate students. I recommend the Humility IAT as a supplement to other measures but caution strongly against its use as a primary measure of humility. First and foremost, the temporal stability estimates suggest that the measure scores can vary quite a bit over a short time. Furthermore, the measure has weak evidence of construct validity.

Humility Subscale of the Schwartz Values Survey

The Humility Subscale of the Schwartz Values Survey (Schwartz et al., 2012) is a two-item measure. Participants assess how similar a hypothetical person (e.g. “It is important to him to be humble.”) is to themselves on a 6-point rating from 1 (*not at all like me*) to 6 (*very much*

like me). Coding results suggest that items assess other-orientedness, interpersonal modesty, and global humility.

Development of items. *Humility* is defined as “recognizing one’s insignificance in the larger scheme of things” (Schwartz et al., 2012, p. 669). Items were drawn from the original Schwartz Values Survey (Schwartz, 1992) and the Portrait Values Questionnaire (Schwartz, 2006). The authors selected three items to assess each of the 19 values they identified. The factor structure was analyzed by CFA, and the CFI was below .90 suggesting questionable fit. This led the authors to drop several items, including one humility item. Results of a second CFA suggested acceptable fit for the authors’ theorized factor structure. A third CFA was conducted, and humility was found to load onto the second order factor of conformity.

Evidence of reliability. The average Cronbach’s alpha coefficient was .49 across nine samples (Schwartz et al., 2012).

Evidence of construct validity. The authors reported correlations with several single items assessing attitudes towards various political or moral positions, but I did not locate correlations with any established measures that would suggest evidence of convergent validity (Schwartz et al., 2012). In terms of external validity, this measure was developed using 15 samples of undergraduate students and community participants in 10 countries. The Humility Subscale of the Schwartz Values Scale has limited evidence of stable factor structure. A theory-driven CFA had marginal factor loadings. Although this measure was developed using samples in 10 different countries, measurement invariance was not investigated. Cronbach’s alpha was also below desirable levels, although this is unsurprising given that this subscale only contains two items. I conclude that there is currently little evidence for construct validity and recommend caution in using this measure until further evidence of construct validity is established.

State Measures of Humility

I review three survey measures of state humility. This is a newer area of work; two of these measures have only recently been submitted for publication, and one was published in 2016. Therefore, there has been little time to evaluate evidence of construct validity in the current literature. One measure approaches the measurement of humility as a state emotional experience, while the other two draw upon the theory of humility as a hypoegoic state. I recommend using each of these measures cautiously until additional evidence of construct validity has been published.

Humility-Related Feelings

The Humility-Related Feelings (Weidman et al., 2016) is a 54-item, self-report scale that yields two subscale scores: (1) Appreciative Humility (e.g., “Kind”) and (2) Self-Abasing Humility (e.g., “Shameful”). Respondents assess each item on a 5-point rating from 1 (*not at all*) to 5 (*extremely*). Coding results suggest that items covered all subdomains except spiritual humility.

Development of items. *Humility* was defined as having two dimensions, “one involving generally prosocial, affiliative feelings of appreciation for others, and another involving more antisocial, withdrawal-oriented feelings of self-abasement” (Weidman et al., 2016, p. 2). The items were winnowed and refined by review of the authors, a hierarchical cluster analysis, and EFA. Results of the EFA produced seven factors. A parallel analysis suggested a five-factor solution. The authors opted to retain only the first two factors (called appreciative and self-abasing humility), based on their initial theorizing.

Evidence of reliability. Cronbach's alpha was .94 for the appreciative humility subscale and .87 for the self-abasing humility subscale (Weidman et al., 2016). Temporal stability was not reported.

Evidence of construct validity. Regarding evidence of convergent validity, the Appreciative Humility subscale was significantly related to modesty adjectives (i.e. "not boastful"; $r = .79$), agreeableness ($r = .27$), and openness ($r = .14$), and the self-abasing humility subscale was significantly related to modesty ($r = .71$), self-esteem ($r = -.31$), agreeableness ($r = .16$), and neuroticism ($r = .24$) after controlling for evaluative valence (Weidman et al., 2016). In terms of external validity, this measure was developed using four samples of undergraduate students and Mechanical Turk participants. The Humility-Related Feelings has several notable limitations. The biggest concerns for this measure are the measurement approach, and weak evidence for stable factor structure and construct validity. I also wonder whether such evidence would be forthcoming, given that items appear to be fairly general words (e.g., calm, unhappy). Additionally, although the authors retained a two-factor solution that more closely aligned with their conceptualization of humility, other indicators suggested five- and seven-factors. A CFA has not been computed to determine whether the two-factor structure replicates. Much work is still needed to understand what this measure is assessing, and how it compares to the other measures of humility and humility-related constructs.

Experiences of Humility Scale

The Experiences of Humility Scale (Davis et al., submitted for publication) is a 12-item, self-report scale that yields four subscales: Other-Orientation (e.g. "More focused on others."), Transcendence (e.g. "Part of something bigger than myself."), Awareness of Selfishness (e.g. "Obsessed with my needs."), and Awareness of Egotism (e.g. "Ashamed for being so self-

focused.”). Items are assessed on a 5-point rating from 1 (*strongly disagree*) to 5 (*strongly agree*). Coding results suggest that items align with other-orientedness and spiritual humility.

Development of items. *State humility* is defined as “a hypoegoic state in which one is relatively free of the need to rely on self-enhancement strategies to satisfy needs for approval or self-gratification” (Davis et al., submitted for publication). The items were winnowed and refined using factor analyses. An EFA resulted in four factors comprised of 12 items. CFA replicated the factor structure suggested by the EFA. Measurement invariance has not been examined.

Evidence of reliability. Cronbach’s alpha for the subscales ranged from .79 to .85 across three samples (Davis et al., submitted for publication).

Evidence of construct validity. Regarding evidence of convergent validity, participants who were assigned to write for three minutes about a meaningful experience scored lower on the Awareness of Selfishness and Awareness of Egoism subscales than participants assigned to write about their to-do list. Additionally, the Other-Orientation subscale was significantly associated with agreeableness ($r = .20$) and neuroticism ($r = -.18$), as was the Awareness of Egoism subscale (agreeableness $r = -.22$; neuroticism $r = .20$). The Transcendent subscale was significantly associated with agreeableness ($r = .17$), as was the Awareness of Selfishness subscale (agreeableness $r = -.19$). In terms of external validity, the Experiences of Humility Scale was developed using three samples of undergraduate students. The Experiences of Humility Scale has some evidence of construct validity. However, the measure currently has weak evidence of construct validity and work is needed to situate the measure among related constructs.

State Humility Scale

The State Humility Scale (SHS; Kruse, Chancellor, & Lyubomirsky, 2017) is a six item, self-report scale. Items (e.g. “I feel that, overall, I am no better or worse than the average person.”) are assessed on a 7-point rating from 1 (*strongly disagree*) to 7 (*strongly agree*).

Coding results suggest that items align with openness and accurate view of self.

Development of items. *State humility* is defined as “hypoegoic state theorized to depend on a decreased self-focus and increased other focus” (Kruse et al., 2014). Items were generated from participant descriptions of humility, which were then coded for common themes. The authors then created six items based on the four most common themes. They did not conduct an EFA, but results of a CFA suggested a single factor.

Evidence of reliability. Cronbach’s alpha for the scale was .58 to .84 across two samples (Kruse et al., 2017). Temporal stability ranged from .45 to .69 over a two-week period (Kruse et al., 2017).

Evidence of construct validity. Regarding evidence of convergent validity, state humility was correlated with honesty-humility ($r = .49$), negative affect ($r = -.29$), and narcissism ($r = -.64$). It was not significantly related to self-esteem, openness or agreeableness. In terms of external validity, the SHS has been evaluated in 25 samples of undergraduate students and online community participants. Based on the one peer-reviewed publication I located on this measure, internal consistency was marginal in some samples, and there was limited evidence of convergent validity. On the one hand, this assesses states of humility, which do change often. On the other hand, the relatively high temporal stability reported for some samples may raise questions about whether this measure is assessing a state experience. Therefore, I conclude that

there is currently weak evidence for construct validity and recommend caution in using this measure until further evidence of construct validity is published.

Discussion

The goal of the present review was to assess the current measures of humility in order to evaluate potential strategies for consolidating definitions and measurement approaches. Despite concerns about self-reports, a variety of survey measures, including self-report measures, have been developed in recent years. This is appropriate, because now that various strategies have been developed, scholars can begin comparing the relative validity of various approaches (e.g., self-report, other-report, implicit measures). Davis and Hook (2014) suggested that the primary challenge facing the advancement of humility scholarship is no longer concerns about response bias, which have been reduced due to limited evidence of the problem and multi-method strategies of assessing trait humility. The current challenge involves sprawling definitions and the need to more precisely delineate the various subdomains that are being assessed under the label of humility. As a first step, I used coders to assign items to eight categories suggested by Davis and Hook (2014), and I used this information to inform how I evaluated evidence of construct validity for various measures of humility.

I concluded that three measures of general humility have relatively strong evidence of construct validity. Humility scholars (as a narrow subfield) are still ambivalent about the Honesty-Humility subscale of the HEXACO-PI; however, based on results of Davis et al. (2016), the modesty facet has strong evidence of construct validity. Greed-avoidance is perhaps less central to how the literature has conceptualized humility. The Expressed Humility Scale (Owens et al., 2013) has been published in several top-tier business journals and appears to be a measure

of choice for studying humility in leaders. The Relational Humility Scale (Davis et al., 2011) has been used widely in studies on humility in relationships.

I also recommended three measures of humility subdomains. The Cultural Humility Scale (Hook et al., 2013) is gaining popularity within studies of psychotherapy or multiculturalism. Although the Intellectual Humility Scale (McElroy et al., 2014) has been less widely used as a subdomain of humility, it has so far demonstrated adequate evidence of construct validity, and shown to be distinct from general humility while loading onto a higher-order humility factor. Finally, the Comprehensive Intellectual Humility scale (Krumrei-Mancuso et al., 2016) has demonstrated good initial evidence of construct validity. However, each of the humility subdomain measures has limited evidence of construct validity because of their recent publication and limited use thus far.

I also recommended the use of four measures with caution, but these measures have strong potential. The Values in Action Inventory of Strengths (Park et al., 2004) was originally criticized for conflating modesty and humility; however, I find that making such a distinction is less tenable now. Davis et al. (2016) have shown that modesty is often related to humility and some definitions have included modesty within the definition of humility (see Worthington & Allison, 2017). With publication of some careful psychometric work, researchers could more confidently interpret the large and growing number of studies that have used the VIA framework. For the other measures I recommended more cautiously, they require additional time to become established in the literature because they were all relatively newer measures.

Likewise, although many psychologists have harshly criticized the IAT (e.g., Fiedler, Messner, & Bluemke, 2006), I believe indirect methods are worth exploring further. Much of the work examining socially desirable responding and impression management has failed to offer

strong support for concerns that self-reports of humility are inherently biased. However, there were a couple of the self-report measures with moderate correlations with impression management, and there is not yet definitive evidence as to whether individuals higher in narcissism can accurately report their level of humility. For example, correlations between the humility measure and impression management were moderately positive for the two measures (i.e. Humility Semantic Differentials, Rosemead Humility Scale) where narcissism and impression management have been examined simultaneously.

I thus put forth the following recommendations. First, I suggest that it is necessary to create a definition that incorporates modesty and aspects of the approach underlying the HEXACO (as well as the VIA-IS). That would bring huge research literatures clearly in the domain of humility and eliminate some controversy about whether those instruments are actually measuring humility.

Second, the three aspects of a definition of humility need to incorporate recent research. For example, I believe that the concept of an accurate self-appraisal is inadequate, even when it is coupled with an awareness of weaknesses (as well as strengths) unless it is coupled with the Owens et al. (2013) notion of teachability. After all, one could still act arrogantly with full and accurate knowledge of weaknesses, unless one has an attitude that one can and should change for the better. There is still open disagreement about whether humility must necessarily involve an orientation toward the betterment of others (argued forcefully in Worthington & Allison, 2017) or merely involve low self-focus (e.g., Chancellor & Lyubomirsky, 2013). It likely is too early to make a definitive conclusion about this.

Hence, drawing from Worthington and Allison (2017), but modifying their third point, I propose the following consolidated definition. “Humility has three qualities. Humble people are

those who (1) have an accurate sense of self, know their limitations, and are teachable; (2) present themselves modestly in ways that do not put others off by arrogance or by false, insincere modesty or displaying weakness; and (3) are especially oriented to advancing others and not through groveling weakness but through power under control, power used to build others up and not to squash them down” (ms. pp. 11-12). I believe our coding of items of the 22 instruments supports this definition. The five categories most assessed were Openness/Lack of Superiority (98 items, 15 instruments), Other Oriented/Unselfish (62 items, 16 instruments), Admit Mistakes/Teachable (33 items, 10 instruments), Interpersonal Modesty (22 items, 8 instruments), Accurate View of Self (21 items, 7 instruments). The three least assessed categories were Global Humility (11 items, 7 instruments), Spiritual Humility (15 items, 5 instruments), and Regulate Need for Status (5 items, 5 instruments). Those three elements were omitted from my recommended definition of general humility, although assessing each separately might still yield useful data.

Third, I recommend two strategies that can contribute to enhanced measurement of general humility. (1) Develop a new measure that unambiguously assesses each of the three aspects of humility. Or, (2) organize the measures that apply to each aspect so that researchers have a choice of measures to use to assess each aspect of general humility.

Fourth, I suggest that measurement of separate domains of humility, not just general humility, is a vital aspect of assessing humility. A number of studies have assessed both general humility and some one or more domains of humility within the same study (e.g., Davis, McElroy, et al., 2016; Davis, Rice, et al., 2016). Typically, the specific assessment predicts more variance than the mere assessment of general humility. Both are needed. The assessment of general humility is more nearly a personality assessment, but the assessment of various domains

(e.g., intellectual humility, relational humility, spiritual humility, etc.) is more predictive within the particular targeted domain.

Limitations

The current review had several important limitations. First, only one measure has research to situate it within personality judgment field (i.e., HEXACO), including use of round-robin or other dyadic models (de Vries, 2010). Second, most measures had very limited samples (i.e. mostly undergraduate students), so evidence of external validity in interpreting the scores was restricted. Third, most studies used cross-sectional designs, so I have inadequate support for temporal stability (or longitudinal measurement invariance) of measures. Fourth, almost no longitudinal intervention research exists, so I do not know how responsive the measures are to clinical or psychoeducational interventions to promote changes in humility.

Suggestions for Future Research

The next frontier of humility research may involve combining various assessment methods of humility (i.e., self-report, other-report, behavioral, and implicit) in order to obtain a less biased and more valid dispositional measure of humility (Howard, 1990). Each assessment method has strengths and weaknesses. For example, informant reports may not be able to capture the intrapersonal quality of humility, while self-reports may be subject to impression management. However, by combining these methods, the strength in one approach can make up for the weakness in the other.

Additionally, one assessment method that appears to be missing from the measures reviewed is a behavioral coding scheme that researchers could use in the lab to rate humility. Although informant reports have been developed as a guard against over reporting humility on self-reports (and against truly humble people under-reporting), there is also the danger that

informants may over-report a target's level of humility relative to the target's self-assessment. Rowatt et al. (2006) noted this trend in their study; informant reports of the targets' humility was on average higher than targets' self-reports of humility. To improve accuracy, it would be valuable to have a behavioral coding scheme for humility that could be employed by an unrelated, unbiased third party (Rowatt et al., 2006). Then, researchers could examine the incremental predictive validity of these various approaches to humility (i.e. self-report, informant-report, behavioral coding) to determine the most accurate and efficient method for examining humility in various contexts. For example, self-reports of humility may provide the best data for examining humility as a coping mechanism for intrapersonal stress (i.e. perfectionism), while informant reports or behavioral coding may provide the best data for humility in interpersonal situations. Additional areas for future research include examining the relationship between state humility and trait humility, and evaluating measurement invariance based on gender and between self- and other-reports.

In conclusion, humility research has made great strides over the past decade. Definitions are beginning to converge, and a number of measures have been developed to assess humility in various contexts. There is no single best measure for humility; the most appropriate measure of humility depends on the research question and context, and combining methods may lead to the best overall assessment.

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CHAPTER 2

CULTURAL HUMILITY: TESTING THE SOCIAL OIL AND SOCIAL BONDS

HYPOTHESES IN INTERCULTURAL COUPLES

The number of intercultural couples in the United States has steadily increased over the past 30 years (Reiter, Richmond, Stirlen, & Kompel, 2009; Silva, Campbell, & Wright, 2012). For example, interracial marriages increased by 28% from 2000 (when interracial marriage became legal in all 50 states) to 2010, representing 10% of marriages in 2010 (Wang, Rankin, & Chong, 2015). These changes reflect growing acceptance of interracial marriage in many communities (e.g., Herman & Campbell, 2012), but marriage research has not developed strong knowledge about the unique needs, challenges, and strengths of intercultural relationships. Given the increased prevalence of intercultural relationships, research on intercultural couples is underdeveloped—especially studies on the relationship dynamics and quality of intercultural couples (Sullivan & Cottone, 2006). For the current paper, the term “intercultural couple” refers to a romantic relationship between two people who identify as having a different race or ethnicity from each other (Reiter et al., 2009).

Existing research has highlighted some of the unique challenges that intercultural couples may face, including negotiating cultural differences within their relationship and coping with prejudice within their family or community (Fu, Tora, & Kendall, 2001; Lehmiller & Agnew, 2006; McNamara, Tempenis, & Walton, 1999; Reiter & Gee, 2008; Reiter et al., 2009). These distinct challenges may motivate intercultural couples to develop specialized skills or strengths (e.g., open communication about culture and partner support of one’s culture; Reiter & Gee, 2008) in order to develop and maintain relationship quality. Because this line of work is in its infancy, no theoretical working model has yet been proposed and tested that explains the relationship among negotiating cultural differences, cultural openness, and relationship quality.

Researchers have thus called for a more programmatic examination of intercultural relationships (Inman, Altman, Kaduvettoor-Davidson, Carr, & Walker, 2011; Sullivan & Cottone, 2006). The purpose of the current empirical study is to begin to address this need through extending a model of cultural humility to intercultural couples, and evaluate initial evidence for this model.

Sources of Strain for Intercultural Couples

Prior research on intercultural couples has primarily highlighted problem-focused narratives. For example, relative to intracultural couples, intercultural couples are at risk for worse relationship outcomes, including shorter relationship duration, higher risk of divorce (Bratter & King, 2008; Chartier & Caetano, 2012), alcohol problems (Chartier & Caetano, 2012), and intimate partner violence (Chartier & Caetano, 2012; Fusco, 2010; Martin, Cui, Ueno, & Fincham, 2013). This correlative work sets the stage for programmatic work to clarify the complex relationship dynamics that can put intercultural couples at greater risk for worse relationship outcomes, and to identify factors that may attenuate risk and inform intervention strategies.

One possibility is that intercultural couples are at greater risk because they may have greater potential for disagreements regarding values. Having to regularly negotiate cultural differences may put them at greater risk to develop misunderstandings or hurts that deteriorate relationship quality (Fu et al., 2001). Indeed, some scholars have conceptualized cultural differences as interpersonal stressors (Shupe, 2007). For instance, compared to intracultural couples, intercultural couples report more disagreements about child rearing practices (McNamara et al., 1999; Negy & Snyder, 2000) and conflict due to cultural differences (Reiter & Gee, 2008). Moreover, in one qualitative study, intercultural partners described challenges associated with negotiating a new identity as a bicultural couple and as parents of bicultural

children (Inman et al., 2011). For individuals in intercultural relationships, difficulties may arise when individuals assume their culturally bound worldview is objective reality, make assumptions about their partner's culture, lack interest in learning about their partner's cultural background, and habitually relate with incompatible conflict management styles (Silva et al., 2012). These attitudes and relationship patterns may lead to entrenched patterns of ineffective arguing, which has been associated with decreased relationship satisfaction and relationship dissolution (Kurdek, 1994a, 1994b).

Although the research narratives have typically focused on problems or weaknesses of intercultural couples, the challenges of navigating cultural differences can also provide opportunities for growth and the development of unique skills and personal qualities that enhance long-term outcomes in couples. For example, the demands of managing cultural differences may require the couple, from the outset and throughout formative stages, to rely on each other to cope with discrimination and negotiate different values and perspectives. As such, at least some couples might emerge from the formative stages of the relationship with expertise in entering and adapting to new systems, which may accrue advantages for rising to the demands of adjusting to future transitions across the lifespan (e.g., transition to parenthood, empty nesting, retirement). Intercultural couples may also develop unique intellectual and social strengths associated with cultivating habits of working through cultural differences within their relationship. Thus, I am particularly interested in strength factors that make some couples particularly adept at navigating challenges that arise within an intercultural relationship.

Humility in the Context of Cultural Differences in Couples

One potentially important personal characteristic that may promote relationship quality in intercultural couples is cultural humility. Silva and colleagues (2012) theorized that well-

adjusted couples have to mutually develop strategies for addressing cultural differences within their relationship, such as highlighting similarities or directly discussing differences. For example, respecting and adopting some of one's partner's culture as their own should increase relationship quality, whereas relying on stereotypes and refusing to acknowledge cultural differences should deteriorate relationship quality (Silva et al., 2012).

Additional theoretical work is needed to apply the concept of humility to the navigation of cultural differences in couples. Humility has been defined as (a) having an accurate view of self and (b) cultivating an other-oriented rather than selfish interpersonal stance. Recently, several teams have suggested that humility may involve a variety of subdomains, analogous to self-efficacy or intelligence (McElroy et al., 2014). Key subdomains of humility involve situations that make it particularly difficult to restrain egotism and cultivate an other-oriented stance, and the navigation of cultural differences is one of these difficult situations. From this perspective, cultural humility is defined as “the ability to maintain an interpersonal stance that is other-oriented (or open to the other) in relation to aspects of cultural identity that are most important to the [partner]” (modified based on Hook, Davis, Owen, Worthington, & Utsey, 2013).

Social Bonds and Social Oil Hypotheses

Related to romantic relationships, two key hypotheses have emerged from theorizing on the benefits of humility within relationships. The first, called the social bonds hypothesis, states that perceptions of humility regulate commitment in relationships (Davis et al., 2013). This prediction suggests that perceptions of humility mediate the relationship between seeing offensive or sacrifice behaviors and subsequent changes in relationship commitment (or other outcomes associated with relationship quality). Namely, seeing one's partner act selfishly ought

to cause one to view him or her as less humble, which ought to weaken one's social bond. Seeing one's partner act unselfishly ought to cause one to view him or her as more humble, which ought to strengthen the social bond.

This hypothesis is based on theorizing on altruism. Although psychologists have doubted whether people can truly act unselfishly (as implied by the other-oriented aspect of the definition for humility), developing strong social bonds appears to motivate individuals to act in the interest of a relationship or larger collective (Brown & Brown, 2006). Commitment, which is one's confidence that a relationship (i.e., a sense of "we-ness") will continue indefinitely (Owen, Rhoades, Stanley, & Markman, 2011), is the psychological experience of a social bond. Highly committed couples not only tend to sacrifice more for each other, but sacrifice behavior also enhances psychological well-being (Stanley, Whitton, Bradberry, Clements, & Markman, 2006). Thus, commitment allows couples to experience sacrifice as an investment in their own well-being, whereas weakly committed couples experience sacrifice as detrimental to their well-being.

The social bonds hypothesis has been tested in romantic couples of the same race. In one study, perceptions of one's partner's humility were related to relationship outcomes through the mediating role of commitment. More specifically, humility was related to increased commitment, which was in turn related to increased relationship satisfaction and forgiveness (Farrell et al., 2015). Furthermore, in a longitudinal study examining forgiveness of offenses in romantic relationships, perceptions of the offending partner's humility were found to predict the target partner's level of unforgiveness (Davis et al., 2013). This provided support for the idea that humility facilitates the maintenance and repair of social bonds.

The second hypothesis, called the social oil hypothesis, predicts that humility helps to protect against relational wear and tear due to competitive personality traits or stressful situations

(Worthington, Davis, & Hook, 2017). In this hypothesis, humility is evaluated as an enduring personality trait rather than a relationship-specific judgment. The social oil hypothesis posits that although certain personality traits (i.e. perfectionism) and situations (i.e. transitioning into parenthood) generally lead to declines in relationship quality, if an individual is also high in trait humility these effects should be attenuated. In this way, humility is thought to moderate the relationship between relational strain and relationship quality.

The social oil hypothesis was developed from a large body of personality literature linking personality traits to coping strategies and relationship functioning (e.g., Carver & Conner-Smith, 2010; Caspi, Roberts, & Shiner, 2005; Roberts, Kuncel, Shiner, Caspi, & Goldberg, 2007). Importantly, the social oil hypothesis makes predictions about the interaction between humility and other personality characteristics and coping styles that would normally have deleterious effects on relationships. Although it may seem counterintuitive to imagine humility existing alongside a trait like narcissism or a disengagement style of coping, paradox theory provides a framework for understanding how such traits may co-exist (Owens, Wallace, & Waldman, 2015). Rather than negating each other, these disparate sets of traits can operate in interdependent and complimentary ways (Owens et al., 2015). Therefore, to the extent that humility helps individuals recognize their own limitations, accept support, admit wrongdoings, and engage in forgiveness of themselves and others, it should help to buffer the effects of normally deleterious personality traits and relationship offenses (Krause, Pargament, Hill, & Ironson, 2016).

There is some preliminary support for the social oil hypothesis in the context of romantic relationships. Perhaps the strongest evidence so far is a recent study linking humility with better dyadic adjustment in a sample of married couples transitioning to parenthood for the first time

(Garthe et al., under review; Reid et al., under review). In other words, humility appeared to buffer the effects of relational strain on relationship quality. There is additional support for the social oil hypothesis in other contexts. For example, expressed humility (i.e., managers who appeared humble to their subordinates) buffered the effects of narcissism (self-reported) on workplace outcomes in a sample of managers (Owens et al., 2015). Humility has also been shown to moderate the relationship between the experience of stressors and symptoms of depression, anxiety, and PTSD (Krause et al., 2016; Krause & Hayward, 2012). Taken together, these results suggest that trait humility may moderate the relationship between sources of relational strain and relationship outcomes.

However, these initial studies examining humility in couples have several limitations with regards to providing support for the social oil hypothesis. First, there are no known published studies that have attempted to estimate trait humility in a sample of couples. Since perceptions of humility (in the form of partner-reports used so far) are influenced by other events in the couples' history, they are not a strong measure of one's actual level of humility (Davis et al., 2013). As discussed in Chapter 1, the best way to assess trait humility is with a multi-method strategy that includes several sources of measurement.

Second, as it relates to my research questions, prior work examining the social bonds and social oil hypotheses has not examined how cultural differences may strain commitment and relationship quality in romantic couples, and whether cultural humility is able to attenuate this relationship. I focus on cultural humility (as opposed to relational humility) because I conceptualize the cultural difference as a potential interpersonal stressor. Since I am specifically interested in the way culture plays a role in the relationship dynamics of intercultural couples, cultural humility may offer a more precise assessment of the way partners negotiate cultural

differences. As described in Chapter 1, cultural humility is a specific subdomain of relational (or general) humility. Accordingly, cultural humility should tap into this more general domain of humility, while assessing the cultural processes I am specifically interested in.

The Present Study

Thus, the purpose of the present study is to evaluate both the social bonds and the social oil hypotheses in the context of intercultural couples. First, I will examine the social bonds hypothesis of humility. Contextualized to the present study, I predict that ineffective arguing about cultural disagreements will cause participants to view their partners as less culturally humble, which will lead to decreases in measures of relationship quality. The hypothesis implies mediation: Perceptions of humility mediate the relationship between partners' reports of ineffective arguing and relationship quality. Here, I will only use participants' reports of their partners' cultural humility, since the social bonds hypothesis posits that it is an individual's perception of their partner's humility that regulates commitment based on their experience of humility-relevant behaviors (measured with ineffective arguing in the present study).

Second, I will examine the social oil hypothesis. This hypothesis implies moderation and requires estimation of humility as a trait rather than just a perception, which is prone to change over time based on fluctuations in unselfish behavior. Contextualized to the present study, I hypothesize that the frequency of culturally based disagreements will be related to lower relationship quality, but that having a partner who is high in trait cultural humility will act as a buffer and attenuate this effect. Support for this hypothesis would suggest that, even though cultural differences may test a relationship, individuals who practice behaviors that demonstrate cultural humility can meet the demands of these challenges and maintain high relationship quality. To estimate trait cultural humility for this model, I will use a multi-method strategy that

aggregates partners' self-reports, participants' reports of their partners' cultural humility, and coding of a writing sample.

Method

Participants and Procedure

Participants were recruited from an undergraduate research pool at a large urban university in the southeast United States. Students were eligible to participate if they were currently in a committed relationship for at least three months with a partner who identified as a different race than the student. Students first viewed the consent form online, then provided email addresses for themselves and their romantic partner. This information was used to recruit partners into the study and to match student and partner data. Partners were then sent a link to the consent form, and if they also agreed to participate both the student and the partner received a link to a survey. Student-participants received partial course credit in exchange for participating. See Table 2.1 for a summary of measures completed by student- and partner-participants.

Table 2.1

Summary of Measures

Measure	Student-Participants	Partner-Participants
Demographics	X	X
Cultural Humility Scale	X	X
Writing Sample (Observational Coding)	X	X
Frequency of Disagreements	X	
Ineffective Arguing Inventory	X	
Revised Commitment Inventory	X	
Couples Satisfaction Index	X	

The final sample ($N = 246$) consisted of 155 student-participants (67.5% female) and 99 partner-participants (72.5% male). Student-participants ranged in age from 19 to 62 years old ($M = 23.96$, $SD = 5.47$), and partner-participants ranged in age from 18 to 49 years old ($M = 25.00$, $SD = 5.15$). Student-participants identified as 43.4% Black/African American, 26.6% White, 16.9% Asian/Pacific Islander, 13.6% Latino/a, and 8.4% Multiracial. Partner-participants identified as 33.7% White, 21.3% Multiracial, 18.0% Black/African American, 14.6% Asian/Pacific Islander, and 12.4% Latino/a. Racial pairings of the couples were as follows: Black/African American and White (19.9%), Latino/a and White (13.0%), Black and Multiracial (11.0%), Asian and White (8.9%), Black and Latino/a (8.9%), Asian and Black (6.2%), Asian and Latino (5.5%), White and Multiracial (5.5%), Asian and Multiracial (1.4%), Black and Native American (1.4%), and Latino/a and Multiracial (.7%). Additionally, 17.8% of the dyads were of the same race, but a different ethnicity (i.e. Vietnamese and Indian, White and Persian). Participants were asked to identify their sexual orientation on a 10-point spectrum ranging from Exclusively Attracted to Same Sex to Exclusively Attracted to Opposite Sex. Student-participants identified as 74.3% Exclusively Attracted to Opposite Sex, 4.3% Exclusively Attracted to Same Sex, and 21.3% identified as somewhere in between. Partner-participants identified as 75.0% Exclusively Attracted to Opposite Sex, 8.3% Exclusively Attracted to Same Sex, and 16.8% identified as somewhere in between. Relationship duration ranged from 3 months to 16 years ($M = 2.25$, $SD = 2.80$) for student-participants and from 3 months to 16 years ($M = 2.64$, $SD = 2.73$) for partner-participants.

Measures

Perceived cultural humility. Perceived cultural humility was assessed using the 12-item Cultural Humility Scale (CHS; Hook et al., 2013). The CHS consists of two subscales (positive

and negative), and items are rated on a five-point Likert-type scale ranging from 1 = *strongly disagree* to 5 = *strongly agree*. An example item is, “Is open to seeing things from my perspective” (other-report) or “am open to seeing things from my partner’s perspective” (self-report). The scale has demonstrated evidence of internal consistency, with Cronbach’s alpha coefficients ranging from .86 to .93 (Hook et al., 2013). The CHS has shown evidence of construct validity in prior studies. The scale is associated with the therapeutic working alliance and perceived multicultural competence, demonstrating evidence of construct validity (Hook et al., 2013). For the present sample, Cronbach’s alpha coefficients for student-participants ranged from .83 to .90 for the subscales, and was .89 for the full scale; alphas for partner-participants ranged from .75 to .86 for the subscales, and was .82 for the full scale.

Coded humility. Student- and partner-participants were instructed to write for five minutes about culturally based disagreements in their relationship. The prompt stated:

Please think about the most hurtful time when the cultural difference between you and your partner was a source of stress or contributed to a disagreement in your relationship. Please write a paragraph describing how you saw the situation, as well as how you think your partner saw the situation. If you are not sure how your partner saw the situation, please just do your best to describe what you think. This is very important, because we are hoping to understand BOTH perspectives.

These writing samples were then evaluated by three members of the research team. Research assistants read each writing sample, then rated the participant who produced the writing sample on the Cultural Humility Scale. The intraclass correlation (ICC) across observer ratings was .53, which indicates “fair” agreement (Cicchetti, 1994). These scores were then averaged together to form a single score for observer ratings.

Trait cultural humility. Trait cultural humility was estimated using an aggregate of three scores: CHS self-reports, CHS other-reports, and coded humility. In previous studies, ratings by different observers using the same measure have been aggregated together to form a multimethod assessment of a trait, which has increased convergent validity (i.e. Schwarz & Mearns, 1989). Aggregate scores were computed by taking the mean of partner-reports, self-reports, and observer ratings. The ICC was .36.

Areas of cultural disagreement. Frequency of cultural disagreements was assessed using an adapted version of the 20-item Couples Problem Inventory (CPI; Gottman & Levenson, 1992). Participants rated the frequency of disagreements stemming from the cultural difference in their relationship on a five-point Likert-type scale ranging from 1 = *never* to 5 = *always*. Example items include “finances”, “household tasks”, and “parents”. The scale has demonstrated evidence of internal consistency, with Cronbach’s alphas ranging from .75 to .79 (Gottman & Levenson, 1992). The scale is associated with relationship satisfaction, demonstrating evidence of construct validity (Kurdek, 1994a). Cronbach’s alpha was .92 for the current study.

Ineffective arguing about culture. Ineffective arguing about culture was assessed using the 8-item Ineffective Arguing Inventory (IAI; Kurdek 1994b). Participants rate items on a five-point Likert-type scale ranging from 1 = *strongly disagree* to 5 = *strongly agree*. An example item is, “By the end of an argument, each of us has been given a fair hearing.” The scale has demonstrated evidence of internal consistency, with Cronbach’s alpha ranging from .86 to .89 (Kurdek, 1994b). The scale has demonstrated evidence of construct validity, correlating with relationship satisfaction, partner reports of ineffective arguing, and relationship dissolution (Kurdek, 1994b). Cronbach’s alpha for the current study was .89.

Commitment. Commitment was assessed with the 8-item Dedication Commitment Subscale of the Revised Commitment Inventory (RCI; Owen, Rhoades, Stanley, & Markman, 2011). Participants rated items on a seven-point Likert-type scale ranging from 1 = *strongly disagree* to 7 = *strongly agree*. An example item is, “My relationship with my partner is more important to me than almost anything in my life.” The subscale has demonstrated evidence of internal consistency, with a Cronbach’s alpha of .86 (Owen et al., 2011). The scale is associated with the Dyadic Adjustment Scale, Marital Adjustment Test, and negative communication, demonstrating evidence of construct validity (Owen et al., 2011). Cronbach’s alpha was .81 for the current study.

Relationship satisfaction. Relationship satisfaction was assessed with the 16-item Couples Satisfaction Index (CSI-16; Funk & Rogge, 2007). Participants rated items on a six-point Likert-type scale ranging from 0 = *strongly disagree* to 5 = *strongly agree*. An example item is, “My relationship with my partner makes me happy.” The scale has demonstrated evidence of internal consistency, with a Cronbach’s alpha of .98 (Funk & Rogge, 2007). In terms of construct validity, the scale has correlated with the Dyadic Adjustment Scale, Marital Adjustment Test, and Quality of Marriage Index (Funk & Rogge, 2007). Cronbach’s alpha for the current study was .96.

Results

Preliminary Analyses

Participants who partially or fully completed the survey included 177 student-participants and 139 partner-participants partially or fully completed the survey. To handle invalid protocols, I examined patterns of missing data and survey response times. There was less than 3% of data missing per item for student-participants and less than 2% per item for partner-participants.

Students ($N = 11$) and partners ($N = 28$) who completed only the demographics questionnaire but no survey items were excluded from the study. Additionally, students who completed the survey in less than 10 minutes ($N = 11$) and partners who completed the survey in less than five minutes ($N = 12$) were excluded (Huang, Liu, & Bowling, 2015). Next, Little's Missing Completely at Random (MCAR) test was conducted to examine the pattern of missing data in order to determine if missing data could be imputed for the remaining participants. Little's MCAR test was not significant for student-participants, but was significant for partner-participants. However, because less than 1% of the overall data was missing for partner-participants, I proceeded with imputation as recommended by Schlomer et al. (2010). Expectation maximization was used to impute missing data. Although multiple imputation has been recommended over expectation maximization, the PROCESS macro used to conduct moderation and mediation analyses (i.e. the primary analyses of interest for this study) cannot handle data imputed using multiple imputation. Schlomer et al. (2010) also note that expectation maximization is superior to deletion and mean substitution for handling missing data.

Bivariate correlations and descriptive statistics are reported in Table 2.2. Before proceeding with further analyses, I checked the data for outliers and normality. Outliers (2% or less per variable) were adjusted to three standard deviations from the mean. There were no problems with normality. As predicted, among student-participants, ineffective arguing was negatively related to relationship satisfaction ($r = -.65, p < .01$) and commitment ($r = -.36, p < .01$). Frequency of culturally based disagreements was also negatively related to relationship satisfaction ($r = -.59, p < .01$) and commitment ($r = -.30, p < .01$). Likewise, trait cultural humility was positively related to relationship satisfaction ($r = .50, p < .01$) and commitment ($r = .28, p < .01$), whereas self-report cultural humility was not significantly related to relationship

satisfaction ($r = .13$, $p = .22$) or commitment ($r = -.00$, $p = .99$). Finally, participants reported relatively infrequent culturally-based disagreements, with mean scores ranging from 1.64 to 2.62 for each area of disagreement. Only 15.5% to 49.0% of participants rated each area of disagreement a three (i.e. “sometimes”) or above.

Table 2.2

Bivariate Correlations and Descriptive Statistics

Variable	Mean	SD	1	2	3	4	5	6	7
1. Partner Cultural Humility	45.41	8.44	--						
2. Self Cultural Humility	47.88	6.55	.24*	--					
3. Observed Cultural Humility	39.78	4.03	.15	.03	--				
4. Aggregate Cultural Humility	44.75	4.43	.86**	.66**	.42**	--			
5. Frequency of Disagreements	40.24	13.55	-.56**	-.23*	-.07	-.49**	--		
6. Ineffective Arguing	19.96	6.83	-.56**	-.25*	.03	-.47**	.57**	--	
7. Couples Satisfaction	65.71	13.13	.57**	0.13	.06	.50**	-.59**	-.65**	--
8. Commitment	42.33	7.95	.32**	0.00	.05	.28**	-.30**	-.36**	.56**

** $p < .01$

* $p < .05$

The Social Bonds Hypothesis

To test the social bonds hypothesis of humility, I used Model 4 of the PROCESS Macro for SPSS (Hayes, 2013). Specifically, I hypothesized that perceptions of cultural humility would mediate the relationship between ineffective arguing about cultural differences and relationship quality. These analyses included all of the student-participants.

As predicted, ineffective arguing was negatively related to relationship satisfaction ($\beta = -1.24$, $p < .01$); ineffective arguing was negatively related to perceived partner cultural humility (β

= $-.69, p < .01$); also, controlling for ineffective arguing, perceived partner cultural humility was related positively to relationship satisfaction ($\beta = .45, p < .01$). The relationship between ineffective arguing and relationship satisfaction remained significant, but demonstrated a reduction in magnitude ($\beta = -.93, p < .01$). Finally, using the bias-corrected bootstrapping procedure based on 5,000 resamples, the indirect effect of ineffective arguing on relationship satisfaction through perceived cultural humility was significant (*estimated* = $-.31, SE = .10, 95\% CI = -.54$ to $-.14$). The R^2 mediation effect size (Fairchild, MacKinnon, Taborga, & Taylor, 2009) indicated that about 26% of the variance in relationship satisfaction was explained by the effect of ineffective arguing through cultural humility. See Figure 2.1 for an illustration of these results.

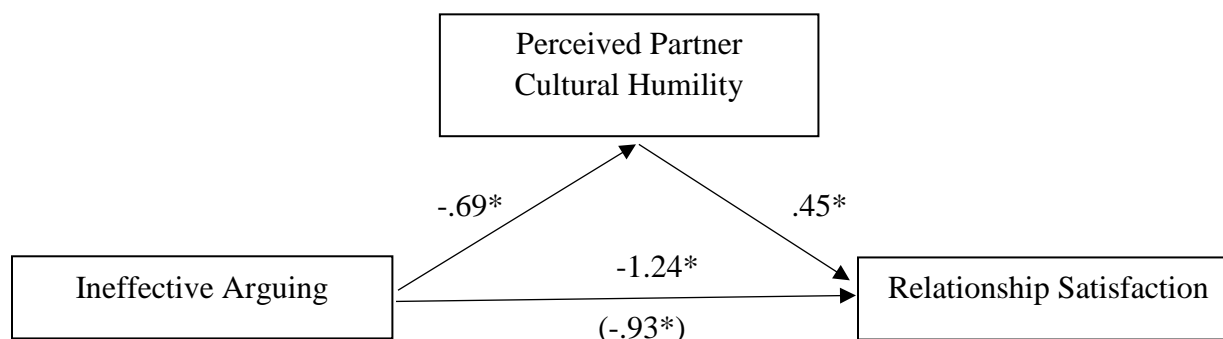


Figure 2.1 Perceived partner cultural humility mediates the relationship between ineffective arguing and relationship satisfaction. The number in parenthesis is the indirect effect. $*p < .001$

I ran a parallel set of analyses using commitment as the dependent variable. As predicted, ineffective arguing was negatively related to commitment ($\beta = -.41, p < .01$); ineffective arguing was negatively related to perceived partner cultural humility ($\beta = -.69, p < .01$); also, controlling for ineffective arguing, perceived partner cultural humility was marginally related positively to commitment ($\beta = .16, p = .06$). The relationship between ineffective arguing and commitment

remained significant, but demonstrated a reduction in magnitude ($\beta = -.30, p = .01$). Finally, using the bias-corrected bootstrapping procedure based on 5,000 resamples, the indirect effect of ineffective arguing on commitment through perceived cultural humility was significant (*estimated* = $-.11, SE = .06, 95\% CI = -.24$ to $-.01$). The R^2 mediation effect size (Fairchild et al., 2009) indicated that about 8% of the variance in commitment was explained by the effect of ineffective arguing through cultural humility. See Figure 2.2 for an illustration of these results.

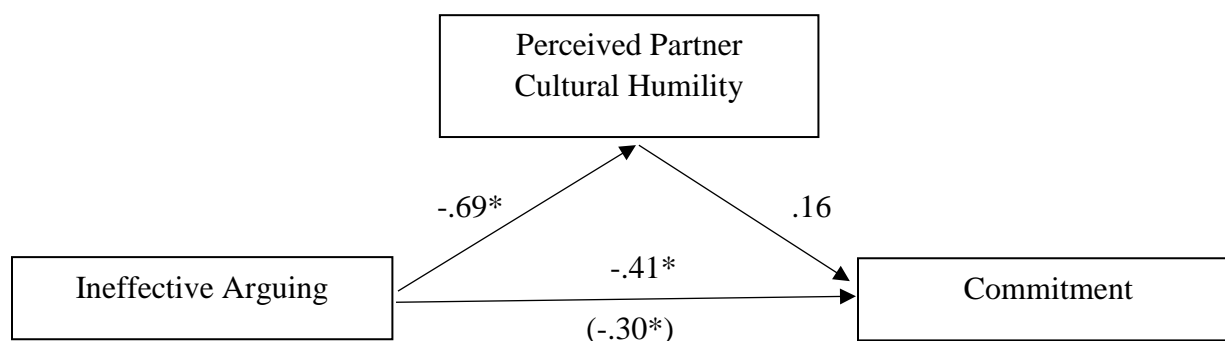


Figure 2.2 Perceived partner cultural humility mediates the relationship between ineffective arguing and commitment. The number in parenthesis is the indirect effect. $*p < .01$

The Social Oil Hypothesis

To test the social oil hypothesis of humility, I used Model 1 of the PROCESS Macro for SPSS (Hayes, 2013). I hypothesized that having a partner who is higher in trait cultural humility would buffer the detrimental effects of frequent culturally based disagreements on relationship quality. For trait cultural humility, I created an aggregated score by taking the mean of observed cultural humility, partner-, and self-reports of cultural humility for the subsample of 91 participants that had both student and partner data. Results of the two separate moderation analyses are reported in Table 2.3, and indicate that the interaction between culturally based disagreements and cultural humility did not predict incremental variance in relationship satisfaction ($\Delta R^2 = .00, F = .46, p = .50$) or commitment ($\Delta R^2 = .01, F = .59, p = .44$).

Table 2.3

Results of Moderation Analyses

	Coefficient	SE	t	p	CI
Couples Satisfaction					
Constant	68.11	1.21	56.44	< .001	65.71 to 70.52
Aggregate CHS	.40	.28	1.45	.15	-.15 to .95
Disagreement Frequency	-.43	.09	-4.66	< .001	-.62 to -.25
Aggregate CHS X Frequency Disagreement	.01	.02	.68	.50	-.03 to .05
Commitment					
Constant	43.89	.94	46.70	<.001	42.02 to 45.76
Aggregate CHS	.04	.22	.19	.85	-.39 to .47
Disagreement Frequency	-.17	.07	-2.28	.03	-.31 to -.02
Aggregate CHS X Frequency Disagreement	-.01	.02	-.77	.44	-.04 to .02

Discussion

As societal attitudes and behaviors change regarding intercultural relationships, it is important to understand the unique challenges and strengths of these couples. The purpose of the present article was to extend theorizing on humility to this context and provide an initial empirical test of this theorizing. Much of the existing quantitative literature has been comparative in nature, highlighting disparities in relationship outcomes when compared to homogamous couples. In contrast, the focus of the present article was to evaluate theorizing on factors that may lead to better outcomes in some intercultural couples relative to others. Specifically, I extended theorizing on humility to this context, and examined the degree to which cultural humility might influence these relationships.

Results of this study provide quantitative support for themes noted in previous qualitative studies on intercultural couples. First, frequency of culturally-based disagreements and culturally-based ineffective arguing had a strong, negative association with relationship satisfaction, and a moderate negative association with commitment. This supports qualitative

descriptions of relational strain due to difficulties negotiating cultural differences (Fu et al., 2001; Lehmiller & Agnew, 2006; McNamara et al., 1999; Reiter et al., 2009). Conversely, trait cultural humility had a strong positive association with relationship satisfaction and a moderate positive association with commitment. This supports previous theorizing and themes from qualitative studies that productive discussions about cultural differences and demonstrating respect for one's partner's culture can strengthen intercultural relationships (Reiter & Gee, 2008; Silva et al., 2012).

Furthermore, this is the first known study to attempt to quantitatively measure culturally-based conflict, as opposed to general relationship conflict, and relate it to relationship outcomes in intercultural couples. Although previous quantitative studies have implied that cultural differences were a reason for disparities such as shorter relationship duration and more frequent intimate partner violence (Bratter & King, 2008; Chartier & Caetano, 2012; Fusco, 2010; Martin et al., 2013), no direct link between culturally-based conflict and relationship outcomes had been established. Despite the associations found in this study, it is important to note that, within a group of couples that had been together an average of 2.64 years, participants reported relatively infrequent culturally-based disagreements, with the frequency of most areas of disagreement based on cultural differences being classified as "rarely." Therefore, there is still much to understand about risk factors for intercultural couples and possible adaptive mechanisms that may be protective.

Regarding the social bonds hypothesis, the results of our study align well with prior work showing that negative relationship experiences (offenses or conflict) are negatively related with relationship quality, and that perceptions of humility statistically mediate this relationship. Namely, results were consistent with the hypothesis that engaging in ineffective arguing about

cultural differences was associated with individuals viewing their partners as less culturally humble, which was in turn associated with lower relationship quality (Davis et al., 2013). Although it is important to replicate these results using stronger designs for testing mediation (Cole & Maxwell, 2003), should this hypothesis continue to receive empirical support, it would have important implications for understanding how daily patterns can maintain or damage relationship quality in intercultural couples.

Previous work on attributions in married couples has indicated that negative attributions about behaviors lead to lower relationship satisfaction (for a review, see Bradbury & Fincham, 1990). Judgments of cultural humility are one type of attribution individuals may make about their partner's behavior during culturally-based disagreements. Attributions have to do with how one interprets another's behavior (Bradbury & Fincham, 1990). If individuals interpret their partner's behavior as indicating closed-mindedness and disrespect about core pieces of their identity, they are likely to feel less satisfied in their relationship. Related to the current study, with increased ineffective arguing about cultural differences, an individual's view of the interaction may have changed from "my partner said something hurtful about my culture out of ignorance" to "my partner is arrogant and disrespectful about my culture." The latter evaluation, a more global, enduring, and damaging view of one's partner, should lead to decreases in relationship satisfaction and commitment. However, because different attributions can be made about the same event or set of behaviors, this opens the door to modifying such attributions through learning healthy communication techniques or therapeutic intervention. For example, individuals who reported greater marital satisfaction also endorsed more benign attributions about an offense, which facilitated forgiveness of that offense (Fincham, Paleari, & Regalia, 2002).

Although this study was cross-sectional and causal claims cannot be made, this model rests on previous theory and work demonstrating that perceptions of personality traits can change due to relationship stressors (Katz-Wise, Priess, & Hyde, 2010), and more specifically, that humility judgments may be sensitive to daily behaviors in romantic relationships (Davis et al., 2013). The causal direction is ambiguous based on my results, and alternative models are worth considering. For example, perceiving one's partner as low in cultural humility may lead to more engagement in ineffective arguing, thereby leading to lower relationship quality. In such a model, it would be important to carefully consider how an individual arrived at a particular judgment of their partner's cultural humility if not through some discussion about culture within the relationship. The current body of humility literature notes the importance of diagnostic situations that strain humility as being the best situation in which to accurately judge humility, and having to negotiate a difference in worldview or cherished values should provide such a situation. Another possibility is that there could be a cascade effect, whereby culturally-based ineffective arguing leads to lower perceptions of the partner's cultural humility, leading to more ineffective arguing and so on.

Regarding the social oil hypothesis, we did not find evidence that cultural humility buffered the relationship between ineffective cultural arguing and relationship outcomes. The poor response rate of partner-participants limited our power for this analysis, so it is probably wise to withhold speculation on this finding until results are replicated in other samples. Additionally, the ICC was relatively low. Writing samples offer a rather limited sample of behavior, so more than three coders may be needed to show adequate reliability. It is possible that with a better sample of behavior, such as videotaped interactions, observational ratings of humility would more closely approximate an individual's trait level of humility.

Limitations and Suggestions for Future Research

First, as discussed previously a test of mediation assumes causality, and the strongest research design to make claims of causality are longitudinal or experimental studies. This study has the limitation of being cross-sectional in nature, and therefore it is impossible to know if the model accurately represents the causal order of the variables. One model worth investigating in a longitudinal study is the Vulnerability-Stress-Adaptation model proposed in Worthington et al., (2017). This model synthesizes several ideas discussed in this paper by taking into account humility as both an enduring personality trait, and also as a state that can fluctuate in response to stressors. Examining such a model longitudinally, particularly across a major life or relationship stressor, would provide a much stronger test of the social bonds hypothesis of humility.

Another limitation of this study is the relatively low response-rate of the partners of the participants, and a limited behavioral sample upon which to base observational coding. This may have caused the test of moderation to be underpowered and unable to detect a significant interaction between the frequency of culturally based disagreements and trait cultural humility. A future study may consider assessing additional variables such as attachment, stage of identity development, and obtaining a full set of data from each partner. This would allow for potential covariates to be examined, and to have better insight into how both partners view the relationship.

A third limitation is that several factors may have caused this sample to be biased. Not only was it limited to a convenience sample of undergraduate students, but resources precluded offering partners of participants any compensation for their participation in the study. Efforts were taken to reduce the amount of time required of partners, but still partners who participated did so through purely altruistic motives, either for their partner, the research process, or a

combination of both. Partners who are willing to engage in such efforts may generally be more willing to sacrifice in their relationship, and thereby have relationships with overall lower levels of conflict and distress. Indeed, the relatively low rates of conflict endorsement on the Couples Problem Inventory described earlier would support this idea. Therefore, it would be worthwhile to secure equal funding or compensation for both partners in future studies, and to conduct studies with married couples who may have higher levels of commitment.

In terms of future research, eventually basic research on strengths of intercultural couples might provide a foundation for recommendations for couple's therapy. For example, therapists may benefit from a tool to help assess the frequency and stress of culturally-based disagreements, as well as empirically supported interventions to help partners develop cultural humility and have more productive discussions about cultural differences. Currently, there are workbook interventions aimed at increasing relational humility, and these interventions could be adapted to target cultural humility more specifically. The efficacy of these workbook interventions for humility and forgiveness already has some empirical support (see Fife, Weeks, & Stellberg-Filbert, 2013; Lavelock et al., 2014). With the number of intercultural couples on the rise and the documented health disparities of intercultural couples, it will be important for clinicians to find effective ways of helping intercultural couples understand and effectively navigate conflicts in their relationships.

Conclusions

Although intercultural relationships have been on the rise for the past several decades, empirical research on the relationship dynamics and quality of intercultural couples has lagged behind. This study adds to the nascent body of work that is beginning to explore the more nuanced determinants of relationship quality for intercultural couples. In order to advance this

line of work, I offer several suggestions. First, a validated measure of culturally-based conflict is needed. Existing measures may be too general, and may miss situations specific to intercultural couples. Such a measure might be based on current descriptions of areas of disagreement for intercultural couples in qualitative studies, and expert review by scholars and clinicians who work with intercultural couples. Second, the gold standard for understanding relationship processes and predicting relationship outcomes in couples involves observational coding of videotaped interactions, and tracking couples longitudinally (e.g. Gottman, Coan, Carrere, & Swanson, 1998; Gottman & Krokoff, 1989). These methods could be applied to a sample of intercultural couples to help better understand risk and resilience factors in intercultural couples.

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APPENDICES

Appendix A: Participant Measures

Demographics

1. What is your gender?

Male

Female

Transgender

Other

2. What is your age?

3. What is your race?

American Indian

Asian/Asian American/Pacific Islander

African American/Black

Latino/a

White

Multiracial

4. What is your ethnicity?

5. What language do you speak at home? (Home means with your family of origin, OR if you live with your partner, home means with your partner).

6. What language did you grow up speaking?

7. What is your nationality/country of origin?

8. What is your parent's nationality/country of origin?

9. What is your sexual orientation?

Exclusively attracted to same sex ←-----→ Exclusively attracted to opposite sex

10. What is your current relationship status?

Single

Dating

Committed Relationship

Engaged

Married

Separated

Divorced

Widowed

11. Which statement describes you best?

I consider myself spiritual and religious

I consider myself religious but not spiritual

I consider myself spiritual but not religious

I consider myself neither

12. What is your religious/spiritual affiliation?

Christian

Jewish

Muslim

Buddhist

Hindu

Atheist

Agnostic

Pagan

Other

13. Please estimate current income:

\$0-9,999

\$10,000-19,999

\$20,000-29,999

\$30,000-39,999

\$40,000-49,999

\$50,000-59,999

\$60,000-69,999

\$70,000-79,999

\$80,000-89,999

\$90,000-99,999

Over \$100,000

15. How liberal/conservative are you politically (move the cursor to the right)?

16. In what way(s) are you and your partner culturally different from each other?

My partner has a different race/ethnicity than me.

I am _____ and my partner is _____.

My partner is a different nationality than me.

I am _____ and my partner is _____.

17. How stressful is the racial/nationality difference in your relationship?

18. How long have you and your partner been together?

19. (For international) Please select one:

I was born in another country and immigrated to the U.S.

My parents were born in another country, but I was born in the U.S.

Other: _____

Writing Sample

Please think about the most hurtful time when the cultural difference between you and your partner was a source of stress or contributed to a disagreement in your relationship. Please write a paragraph describing how you saw the situation, as well as how you think your partner saw the situation. If you are not sure how your partner saw the situation, please just do your best to describe what you think. This is very important, because we are hoping to understand BOTH perspectives.

Cultural Humility Scale- Self Report

Please think about the cultural difference between you and your partner you identified earlier. How important is this aspect of your cultural background? (1 = Not at all important, 5 = Very important)

Using the scale below (1 = Strongly disagree to 5 = Strongly agree), please indicate the extent to which you agree or disagree with the following statements. Regarding my partner's culture, I...

1. Am respectful.
2. Am open to explore.
3. Assume I already know a lot.
4. Am considerate.
5. Am genuinely interested in learning more.
6. Act superior.
7. Am open to seeing things from his/her perspective.
8. Make assumptions about him/her.
9. Am open-minded.
10. Am a know-it-all.
11. Think I understand more than I actually do.
12. Ask questions when I am uncertain.

Areas of Disagreement

For each area listed below, please rate the following:

Finances
Lack of affection
Sex
Previous lovers
Drinking or smoking
Distrust or lying
Lack of equality in the relationship
Excessive demands or possessiveness
Frequent physical absence
Job or school commitments
Friends
Household tasks
Leisure time
Personal values
Politics and social issues
Parents
Driving style
Personal grooming
Personal digs or insults
Being overly critical
Other: _____

To what extent do you experience disagreements related to these areas based on cultural difference?

Never
Rarely
Sometimes
Frequently
Always

How stressful is this to you?

Ineffective Arguing Inventory

Thinking about the culturally based conflict identified earlier, rate each item on a scale of 1 = Strongly Disagree to 5 = Strongly Agree

1. By the end of an argument, each of us has been given a fair hearing.
2. When we begin to fight or argue, I think, "Here we go again."
3. Overall, I'd say we're pretty good at solving our problems.
4. Our arguments are left hanging and unresolved.
5. We go for days without settling our differences.
6. Our arguments seem to end in frustrating stalemates.
7. We need to improve the way we settle our differences.
8. Overall, our arguments are brief and quickly forgotten.

Couples Satisfaction Index-16

1. Please indicate the degree of happiness, all things considered, of your relationship. 0 = Extremely unhappy to 6 = Perfect

5. In general, how often do you think that things between you and your partner are going well? 0 = Never to 5 = All the time

Please rate the following items on a scale of 0 = Not at all true to 5 = Completely true.

9. Our relationship is strong

11. My relationship with my partner makes me happy

12. I have a warm and comfortable relationship with my partner

17. I really feel like part of a team with my partner

Please rate the following items on a scale of 0 = Not at all to 5 = Completely

19. How rewarding is your relationship with your partner?

20. How well does your partner meet your needs?

21. To what extent has your relationship met your original expectations?

22. In general, how satisfied are you with your relationship?

For each of the following items, select the answer that best describes how you feel about your relationship. Base your responses on your first impressions and immediate feelings about the item.

26. Interesting 5 4 3 2 1 0 Boring

27. Bad 0 1 2 3 4 5 Good

28. Full 5 4 3 2 1 0 Empty

30. Sturdy 5 4 3 2 1 0 Fragile

31. Discouraging 0 1 2 3 4 5 Hopeful

32. Enjoyable 5 4 3 2 1 0 Miserable

Revised Commitment Inventory

Please rate the following items on a scale of 1 = Strongly disagree to 7 = Strongly agree.

1. My friends would not mind if my partner and I broke up
2. If we ended this relationship, I would feel fine about my financial status
3. The steps I would need to take to end this relationship would require a great deal of time and effort
4. I could not bear the pain it would cause my partner to leave him or her even if I really wanted to
5. It would be difficult for my friends to accept it if I ended the relationship with my partner
6. It would be relatively easy to take the steps needed to end this relationship
7. I would not have trouble supporting myself should this relationship end
8. My family really wants this relationship to work
9. I would have trouble finding a suitable partner if this relationship ended
10. I believe there are many people who would be happy with me as their spouse or partner
11. I have put a number of tangible, valuable resources into this relationship
12. Though it might take awhile, I could find another desirable partner if I wanted or needed to
13. I would not have any problem with meeting my basic financial needs for food, shelter, and clothing without my partner
14. I have put very little money into this relationship
15. The process of ending this relationship would require many difficult steps
16. If I really felt I had to leave this relationship, I would not be slowed down by concerns for how well my partner would do without me
17. My family would not care if I ended this relationship
18. My relationship with my partner is more important to me than almost anything in my life
19. I want this relationship to stay strong no matter what rough times we encounter
20. I like to think of my partner and me more in terms of "us" and "we" than "me" and "him" or "her"
21. I think a lot about what it would be like to be married to (or dating) someone other than my partner
22. My relationship with my partner is clearly part of my future life plans
23. My career (or job, studies, homemaking, childrearing, etc.) is more important to me than my relationship with my partner
24. I do not want to have a strong identity as a couple with my partner
25. I may not want to be with my partner a few years from now

Informants

Please provide the name and email addresses of three informants who would be willing to complete a brief survey about your personality.

Informant 1: _____

Informant 2: _____

Informant 3: _____

Partner

Please provide the name and email address of your partner. They will complete a survey about your relationship.

Appendix B: Partner Measures

Demographics

See Appendix A: Target Measures

Writing Sample

See Appendix A: Target Measures

Cultural Humility Scale- Partner Report

Please think about the cultural difference between you and your partner you identified earlier. How important is this aspect of your cultural background? (1 = Not at all important, 5 = Very important)

Now please think about your partner. Using the scale below (1 = Strongly disagree to 5 = Strongly agree), please indicate the extent to which you agree or disagree with the following statements about your partner. Regarding my culture, my partner...

1. Is respectful.
2. Is open to explore.
3. Assumes he/she already knows a lot.
4. Is considerate.
5. Is genuinely interested in learning more.
6. Acts superior.
7. Is open to seeing things from my perspective.
8. Makes assumptions about me.
9. Is open-minded.
10. Is a know-it-all.
11. Thinks he/she understands more than he/she actually does.
12. Asks questions when he/she is uncertain.

Informants

Please provide the name and email addresses of three informants who would be willing to complete a brief survey about your personality.

Informant 1: _____

Informant 2: _____

Informant 3: _____

Partner

Please provide the name and email address of your partner. This will be used to match your surveys.

Appendix D: Humility Measures

Expressed Humility Scale

1. This person actively seeks feedback, even if it is critical.
2. This person admits it when they don't know how to do something.
3. This person acknowledges when others have more knowledge and skills than him- or herself.
4. This person takes notice of others' strengths.
5. This person often compliments others on their strengths.
6. This person shows appreciation for the unique contributions of others.
7. This person is willing to learn from others.
8. This person is open to the ideas of others.
9. This person is open to the advice of others.

Healthy Humility Inventory

1. I have compassion for others.
2. I show gentleness towards others.
3. I desire to help others.
4. I think it is important to know myself.
5. I seek wisdom.
6. I want to know my true self.
7. I am guided by some higher being.
8. I believe in something greater than myself.
9. I believe that all things happen for a reason.
10. I keep my opinions open to change.
11. I often challenge my beliefs.

Honesty-Humility Subscale of the HEXACO-PI-R

1. If I want something from a person I dislike, I will act very nicely toward that person in order to get it.
2. I wouldn't use flattery to get a raise or promotion at work, even if I thought it would succeed.
3. If I want something from someone, I will laugh at that person's worst jokes.
4. I wouldn't pretend to like someone just to get that person to do favors for me.
5. If I knew that I could never get caught, I would be willing to steal a million dollars.
6. I would be tempted to buy stolen property if I were financially tight.
7. I would never accept a bribe, even if it were very large.
8. I'd be tempted to use counterfeit money, if I were sure I could get away with it.
9. Having a lot of money is not especially important to me.
10. I would like to live in a very expensive, high-class neighborhood.
11. I would like to be seen driving around in a very expensive car.
12. I would get a lot of pleasure from owning expensive luxury goods.
13. I am an ordinary person who is no better than others.
14. I wouldn't want people to treat me as though I were superior to them.
15. I think that I am entitled to more respect than the average person is.
16. I want people to know that I am an important person of high status.

Humility Inventory

1. One of my greatest joys is helping others excel.
2. I enjoy noticing unique talents in others.
3. I try to make others feel important.
4. I believe most people are capable of great things.

5. I enjoy looking outside myself to the emotional needs of others.
6. I recognize I need help from other people.
7. I need strength beyond my own.
8. I find other's opinions are often quite good.
9. I accept that things don't always go my way.
10. My way of doing things isn't always the best.
11. I wouldn't do as well as I do without help from others.
12. It's OK if others aren't impressed with me.
13. I readily admit when I am wrong.
14. I appreciate learning of my weaknesses.
15. It's OK when others outperform me.

Humility/Modesty Subscale of the Values in Action Strengths Inventory

21. I am always humble about the good things that have happened to me.
45. I do not like to stand out in a crowd.
69. I do not act as if I am a special person.
93. I never brag about my accomplishments.
117. I am proud that I am an ordinary person.
141. I prefer to let other people talk about themselves.
165. I rarely call attention to myself.
189. I have been told that modesty is one of my most notable characteristics.
213. No one would ever describe me as arrogant.
237. People are drawn to me because I am humble.

Humility Semantic Differentials

1. Humble/arrogant
2. Modest/immodest
3. Respectful/disrespectful
4. Egotistical/not self-centered
5. Conceited/not conceited
6. Intolerant/tolerant
7. Closed-minded/open-minded

Humility Subscale of the Servant Leadership Survey

1. My manager learns from criticism.
2. My manager tries to learn from the criticism he/she gets from his/her superior.
3. My manager admits his/her mistakes to his/her superior.
4. My manager learns from the different views and opinions of others.
5. If people express criticism, my manager tries to learn from it.

Relational Humility Scale

1. He/she has a humble character.
2. He or she is truly a humble person.
3. Most people would consider him/her a humble person.
4. His or her close friends would consider him/her humble.
5. Even strangers would consider him/her humble.
6. He/she thinks of him/herself too highly.
7. He/she has a big ego.
8. He/she thinks of him/herself as overly important.
9. Certain tasks are beneath him/her.

10. I feel inferior when I am with him/her.
11. He/she strikes me as self-righteous.
12. He/she does not like doing menial tasks for others.
13. He/she knows him/herself well.
14. He/she knows his/her strengths.
15. He/she knows his/her weaknesses.
16. He/she is self-aware.

Rosemead Humility Scale

1. True happiness comes from meeting one's own needs.
2. I will never be happy until I get all that I deserve.
3. My success is completely due to my own effort and ability.
4. I have trouble believing there is a reality beyond what I can see.
5. I have a hard time believing in things that I cannot see.
6. I generally have a good idea about the things I do well or do poorly.
7. I can honestly assess my strengths and weaknesses.
8. I have a good sense of what I am not very good at doing.
9. I have difficulty accepting advice from other people.
10. When I am treated unfairly, I have a hard time forgetting about it.
11. I resist change even if someone shows me a better way to do something.
12. I think often about whether I am being treated fairly.
13. I tend to disregard people's suggestions on how I should do things if they differ from what I think.
14. It makes me feel uncomfortable when someone points out one of my faults.

15. I am often disappointed with my performance in different situations.
16. I know that I can learn from other people.
17. I am equally excited about a friend's accomplishments as I am about my own.
18. When presented with ideas different from my own, I feel enlightened.

Cultural Humility Scale

1. Is respectful.
2. Is open to explore.
3. Is considerate.
4. Is genuinely interested in learning more.
5. Is open to seeing things from my perspective.
6. Is open-minded.
7. Asks questions when he/she is uncertain.
8. Assumes he/she already knows a lot.
9. Makes assumptions about me.
10. Is a know-it-all.
11. Acts superior.
12. Thinks he/she understands more than he/she actually does.

Domain Specific Intellectual Humility Scale

1. My views about _____ are just as likely to be wrong as other views.
2. I recognize that my views about _____ are based on limited evidence.
3. Although I have particular views about _____, I realize that I don't know everything that I need to know about it.
4. It is quite likely that there are gaps in my understanding about _____.

5. My sources for information about _____ might not be the best.
6. I am open to new information in the area of _____ that might change my view.
7. My views about _____ today may someday turn out to be wrong.
8. When it comes to my views about _____ I may be overlooking evidence.
9. My views about _____ may change with additional evidence or information.

Intellectual Humility Scale

1. Often becomes angry when their ideas are not implemented.
2. Values winning an argument over maintaining a relationship.
3. Always has to have the last word in an argument.
4. Gets defensive if others do not agree with them.
5. Becomes angry when their advice is not taken.
6. Has little patience for others' beliefs.
7. Acts like a know-it-all.
8. Often points out others' mistakes.
9. Makes fun of people with different viewpoints.
10. Seeks out alternative viewpoints.
11. Encourages others to share their viewpoints.
12. Enjoys diverse perspectives.
13. Is open to competing ideas.
14. Is good at mediating controversial topics.
15. Is good at considering the limitations of their perspective.
16. Is open to others' ideas.

Spiritual Humility Scale

1. He/she accepts his/her place in relation to the sacred.
2. He/she is comfortable with his/her place in relation to the sacred.
3. He/she is humble before the sacred.
4. He/she knows his/her place in relation to nature.

Dispositional Humility Scale

I like people who...

1. ...are willing to admit when they've made a mistake.
2. ... can admit to their mistakes.
3. ... admit when they are wrong.
4. ... are able to admit to others when they are wrong.
5. ... have the ability to acknowledge mistakes, imperfections, and gaps in knowledge.
6. ... are open and flexible.
7. ... are willing to take others' advice and suggestions when given.
8. ... can admit their faults/imperfections.
9. ... have an openness to new ideas.
10. ... have compassion for others.
11. ... are smart, but know that they are not all-knowing.
12. ... are closed-minded.
13. ...try to keep their accomplishments in perspective.
14. ... accurately assess one's abilities and achievements.
15. ... are aware of their limitations.
16. ... are willing to admit their inadequacies.
17. ... are able to keep their abilities and accomplishments in perspective.

Implicit Association Test

Arrogant Words

1. arrogant
2. immodest
3. egotistical
4. high-and-mighty
5. closed-minded
6. conceited

Humble Words

1. humble
2. modest
3. tolerant
4. down to earth
5. respectful
6. open-minded

Schwartz Humility Scale

7. He tries not to draw attention to himself.
34. It is important to him to be humble.
50. It is important to him to be satisfied with what he has and not to ask for more.

Asian American Values Scale-Multidimensional

1. One should be able to brag about one's achievements.
2. One should be able to boast about one's achievement.
3. One should not sing one's own praises.

4. One should not openly talk about one's accomplishments.
5. One should be able to draw attention to one's accomplishments.
6. Being boastful should not be a sign of one's weakness and insecurity.

CEO Humility

1. actively seeks feedback, even if it is critical.
2. acknowledges when others have more knowledge and skills than himself/herself.
3. admits when he/she doesn't know how to do something.
4. shows appreciation for the contributions of others.
5. takes notice of the strengths of others.
6. often compliments others on their strengths.
7. is willing to learn from others.
8. is open to the ideas of others.
9. is open to the advice of others.
10. does not like to draw attention to himself/herself.
11. keeps a low profile.
12. is not interested in obtaining fame for himself/herself.
13. has a sense of personal mission in life.
14. devotes his/her time to the betterment of the society.
15. his/her work makes the world a better place.
16. believes that all people are a small part of the universe.
17. believes that no one in the world is perfect, and he/she is no better or worse than others.
18. believes that something in the world is greater than he/she.
19. believes that not everything is under his/her control.

Comprehensive IHS

1. I feel small when others disagree with me on topics that are close to my heart.
2. When someone contradicts my most important beliefs, it feels like a personal attack.
3. When someone disagrees with ideas that are important to me, it feels as though I'm being attacked.
4. I tend to feel threatened when others disagree with me on topics that are close to my heart.
5. When someone disagrees with ideas that are important to me, it makes me feel insignificant.
6. I am open to revising my important beliefs in the face of new information.
7. I am willing to change my position on an important issue in the face of good reasons.
8. I am willing to change my opinions on the basis of compelling reason.
9. I have at times changed opinions that were important to me, when someone showed me I was wrong.
10. I'm willing to change my mind once it's made up about an important topic.
11. I can respect others, even if I disagree with them in important ways.
12. I can have great respect for someone, even when we don't see eye-to-eye on important topics.
13. Even when I disagree with others, I can recognize that they have sound points.
14. I am willing to hear others out, even if I disagree with them.
15. I welcome different ways of thinking about important topics.
16. I respect that there are ways of making important decisions that are different from the way I make decisions.
17. My ideas are usually better than other people's ideas.
18. For the most part, others have more to learn from me than I have to learn from them.

19. When I am really confident in a belief, there is very little chance that belief is wrong.
20. On important topics, I am not likely to be swayed by the viewpoints of others.
21. I'd rather rely on my own knowledge about most topics than turn to others for expertise.
22. Listening to perspectives of others seldom changes my important opinions.

Humility Related Feelings

Kind

Generous

Helpful

Good

Understanding

Graceful

Considerate

Friendly

Peaceful

Pleased

Satisfied

Connected

Happy

Smile

Content

Compassionate

Respectful

Relaxed

Wisdom

Equal

Confident

Honest

Accepting

Accomplished

Empathic

Self-worthy

Worldly

Proud

Calm

Obedient

Humble

Human

Modest

Hot

Unhappy

Shameful

Sad

Unimportant

Ashamed

Small

Worthless

Stupid

Guilty

Submissive

Embarrassed

Anxious

Quiet

Meek

Shy

Self-conscious

Simple

Reserved

Unpretentious

Blushing

Experiences of Humility Scale

1. More focused on others
2. More attentive to the needs of others
3. Less focused on myself
4. Part of something much bigger than myself
5. Deep reverence
6. "Small" in a good way
7. Preoccupied
8. Obsessed with my needs
9. Needy

10. Ashamed for being so self-focused
11. Like I've been too concerned with myself
12. Like my perceptions of myself are overblown

State Humility Scale

1. I feel that, overall, I am no better or worse than the average person.
2. I feel that I have both many strengths and flaws.
3. I feel that I do not deserve more respect than other people.
4. To be completely honest, I feel that I am better than most people.
5. I feel that I deserve more respect than everyone else.
6. I feel that I do not have very many weaknesses.