TESTING A DIALECTICAL MODEL OF MEANING IN LIFE AND WELL-BEING IN
FOUR CULTURES

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A dissertation submitted in partial fulfillment of
the requirements for the degree of
DOCTOR OF PHILOSOPHY

WASHINGTON STATE UNIVERSITY
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AUGUST 2015

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ACKNOWLEDGMENT

My journey in the counseling psychology doctoral program has involved a mosaic of transformative experiences and invaluable relationships that have cultivated my growth and passion for this profession. I would like to express my profound gratitude to my dissertation chair, Dr. Tim Church, whose guidance and support has propelled my academic and professional development throughout the past four years. I also am grateful for the insight and knowledge shared by Dr. Brian French and Dr. Brian McNeill, who were vital members of my committee.

My family has unquestionably exemplified and provided the support, understanding, and perseverance essential to undertaking this dissertation and my professional endeavors. Dad, you have consistently demonstrated the value of hard work, dedication, resourcefulness, and amiability as a professional and father. Mom, you have ceaselessly worked to keep me humble, grateful, and driven to make the most of whatever opportunities life brings. Thank you both so much for your encouragement and assistance to help me find a vocation that suits my inherent abilities and my zeal for joining others in their respective quest for purpose and fulfillment.
Chair: A. Timothy Church

It is well established that subjective well-being and meaning in life are important to individuals’ overall psychological functioning. One important but unanswered question is whether meaning in life and well-being are manifested, and related to each other, in similar ways across cultures. This study examined how culture might influence individuals’ experience of meaning in life and subjective well-being. Specifically, Steger, Kawabata, et al.’s (2008) dialectical model of meaning in life was tested in a cross-cultural context using two cultural dimensions used by cultural psychologists to characterize cultural differences (i.e., individualism-collectivism and dialecticism).

Participants in four cultures completed a demographic questionnaire; a measure of dialecticism (Spencer-Rodgers, Srivastava et al., 2010); items from self-construal scales; the Meaning in Life Questionnaire (Steger et al., 2006); Scales of Psychological Well-being (Ryff, 1989); a need-satisfaction instrument; and the PANAS-X (Watson & Clark, 1994).

Structural equations modeling and hierarchical multiple regression were used to test the study hypotheses. As hypothesized, cultural differences were found in meaning in life and well-being, and their relationship. The cultural mean differences found between the United States, Australia, and Japan were consistent with expectations and were fully or partially accounted for by cultural differences in dialecticism. The presence of meaning in life was positively related to
positive affect and pleasure-stimulation need satisfaction, and negatively related to negative affect, in all four cultures. There was less definitive evidence of cultural differences in how search for meaning relates to presence of meaning and hedonic well-being. Other results—in particular the hypothesized three-way interaction between culture, presence of meaning, and search for meaning in the prediction of hedonic well-being—were less supportive of Steger et al.’s dialectical model, and some findings were best supported for cultural comparisons of the U.S. and Japan only. Overall, the study demonstrates that individuals in different cultures are both similar and different in their experiences of meaning in life and well-being. Theoretical and applied implications, limitations of the study, and future directions for research were discussed. The study demonstrated the importance of integrating cultural and individual differences when developing models of well-being and designing interventions targeting meaning in life.
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GENERAL INTRODUCTION

This dissertation is comprised of two manuscripts. The first manuscript (i.e., the Specialty Paper) is a critical review of the literature on meaning in life, well-being, and their relationship, particularly in a cross-cultural context. The second manuscript is an empirical article examining how culture might influence individuals’ experience of meaning in life and subjective well-being. Taken together, the manuscripts provide support for existing literature and the need for further inquiry into the manifestation of meaning in life and well-being across cultures. Such research demonstrates the value of enhancing our understanding of mental health from a multicultural perspective to inform the development of assessments and interventions that can facilitate well-being in an increasingly diverse world.

The critical review of the literature addressed research on meaning in life, well-being, and culture and their interrelationships as a means to guide inquiries about optimal human functioning. A broader understanding of meaning in life as it relates to well-being has emerged in recent years based on the emergence of positive psychology (Seligman & Csikszentmihalyi, 2000) and has led to a wealth of studies that incorporate personality, self, motivational, and cultural variables (Cohen & Cairns, 2012; Lavigne et al., 2013; Steger et al. 2013; Trent et al., 2013). The existing models and theories about what constitutes meaning in life leave open the potential impact of culture and individual differences in one’s experience of meaning in life. Previous investigations of cultural differences in the relationship between meaning in life and well-being have been limited to a small number of cultures, primarily the United States and East Asian countries. Individualism-collectivism and dialecticism appear to be particularly applicable cultural dimensions in testing for cultural differences in meaning in life and well-being. The successful development and application of theories and interventions based on cultural
differences has led to increased awareness and acceptance of concepts such as dialecticism, even in Western cultures (e.g., Linehan, 2000). Nevertheless, relevant studies have enhanced our knowledge in these areas in a somewhat piecemeal fashion, leaving open many questions, such as the following: How are meaning in life and well-being perceived or manifested in various cultures? What are the antecedents and consequences of meaning in life and well-being in different cultures? How do search and presence of meaning interact in the prediction of well-being and other outcomes in various cultures? What are the cultural dimensions (e.g., individualism-collectivism, dialecticism) that mediate any cultural differences?

A limited number of studies have been able to coherently integrate culture, meaning in life, and well-being to some degree (e.g., Steger, Kawabata, et al., 2008). However, no study to date has been able to successfully do so across a range of cultures, while being free of non-trivial methodological concerns. Future studies seeking to integrate culture, meaning in life, and well-being would likely benefit from a variety of considerations. These include administration of direct measures of cultural dimensions, using both global ratings and experience sampling methods, utilizing longitudinal designs to better determine the direction of causality between key constructs (e.g., meaning in life and well-being), inclusion of broader samples within cultures (e.g., non-college students), and testing theoretical hypotheses in a greater diversity of cultures. The empirical study, described in the second manuscript, addresses some of these considerations and improves upon previous studies by using direct assessment of cultural dimensions, the sampling of four diverse cultures, and the use of additional measures of meaning in life and hedonic well-being.

The empirical study examined how culture might influence individuals’ experience of meaning in life and well-being using Steger, Kawabata, et al.’s (2008) dialectical model of
meaning in life a cross-cultural context. Participants from the United States, Australia, China, and Japan completed self-report measures for meaning in life, hedonic well-being, and cultural dimensions. Structural equations modeling and hierarchical multiple regression were used to test the study hypotheses.

As expected, cultural differences were found in meaning in life and well-being, and their relationship. The cultural mean differences found between the United States, Australia, and Japan were consistent with expectations and dialecticism fully or partially mediated these differences. In all four cultures, the presence of meaning was positively related to positive affect and pleasure-stimulation need satisfaction, and negatively related to negative affect. Further (e.g., longitudinal) studies are needed to confirm the primary (or reciprocal) direction of causality in these relationships.

Cultural differences relating search for meaning in life to presence of meaning in life and hedonic well-being were less definitive. Some predictions did not conform to Steger, Kawabata, et al.’s (2008) model, including the proposed three-way interaction between culture, presence of meaning, and search for meaning in predicting hedonic well-being. In addition, U.S. versus Japan comparisons generally adhered to expectations better than comparisons between the other non-dialectical (e.g., Australia) and dialectical (e.g., China) cultures. Overall, the study demonstrates that individuals in different cultures are both similar and different in their experiences of meaning in life and well-being. Theoretical and applied implications, limitations of the study, and future directions for research were discussed. Both the specialty paper (i.e., critical review of the literature) and the empirical study demonstrated the importance of integrating cultural and individual differences when developing models of well-being and designing interventions targeting the presence of meaning and/or the search for meaning.
Definitive conclusions regarding the determinants of subjective well-being—and the interventions that might increase it—continue to be elusive. On the one hand, it has been well established that subjective well-being, which includes both cognitive and affective components, is relatively stable and strongly influenced by genetic factors. In addition, individuals tend to adapt significantly to positive and negative life events, leading them to return to a characteristic level of subjective well-being over time (Diener, Suh, Lucas, & Smith, 1999; Kashdan & Steger, 2007; Lymbomirsky, Sheldon, & Schkade, 2005). On the other hand, cultural, self, motivational, and trait variables have been shown to have independent effects on subjective well-being (Sheldon, Cheng, & Hilpert, 2011). For example, culture can provide individuals with ways to integrate their personally significant experiences, contributing to an evaluation of their life circumstances and well-being (Kitayama & Markus, 2000). In addition, multiple studies have shown that personality traits, satisfaction of needs, and interpersonal processes (e.g., social roles) can also influence wellbeing (Church et al., 2013; Otake, Shimai, Tanaka-Matsumi, Otsui, & Fredrickson, 2006). For example, Ryan and Deci (2001) contended that satisfaction of needs for autonomy, relatedness, and competence is a factor influencing happiness and subjective well-being in all cultures. Similarly, Ryff and Singer (2000) viewed positive relations with others as essential to human growth and prosperity. As these studies illustrate, the determinants of well-being are complex and multifaceted.

In addition to subjective well-being, a number of researchers have addressed meaning or purpose in life as an important component of optimal psychological functioning (Debats, 1996; Frankl, 1984; Scannell, Allen, & Burton, 2002; Sheldon et al., 2011; Zika & Chamberlain, 1992).
For example, Ryff and Singer (1996) proposed six dimensions of psychological well-being, including purpose in life. Indeed, the meaning in life construct has gained increasing attention in recent years as researchers seek to enhance our understanding of mental health or well-being and to design effective psychological interventions that increase individual “happiness” (Seligman, 2002) and facilitate individuals’ attainment of the “good life” (King & Napa, 1998). The meaning in life has also been investigated across cultures (e.g., Cohen & Cairns, 2012; Dogan, Sapmaz, Tel, Sapmaz, & Temizel, 2012; Steger, Kawabata, Shimai, & Otake, 2008), although much less frequently than well-being (Diener, Diener, & Diener, 1995; Diener, Suh, Smith, & Shao, 1995; Ouwenel & Veenhoven, 1991; Veenhoven, 1993).

The present review addresses research on meaning in life, well-being, and their relationship, particularly in a cross-cultural context. Particularly relevant are studies that have investigated the association between meaning in life and well-being (Zika & Chamberlain, 1992), distinguished them as separate constructs (Chamberlain & Zika, 1988; Steger & Frazier, 2005), and supported the importance for well-being of having a sense of meaning or purpose in life (Steger, Kawabata, et al., 2008; Zika & Chamberlain, 1987). Alternatively, some studies have implied a different direction of causation, in which well-being is viewed as important in developing a sense of meaning in life (King, Hicks, Krull, & Del Gaiso, 2006; Scannell, Allen & Burton, 2002; Trent & King, 2010; Trent, Lavelock, & King, 2013). Although I will review these studies as well, the literature addressing the influence of meaning in life on levels of well-being, including possible cultural effects, is limited and thus warrants special attention. Although meaning in life has shown promise as a determinant of well-being in different cultures (Cohen & Cairns, 2012; Dogan et al., 2012; Steger, Kawabata, et al., 2008), few studies have included non-western cultures. In the present paper, I investigate the available literature on
meaning in life, well-being, and their relationship across diverse cultures. I also consider these constructs in the context of two cultural dimensions addressed by cultural psychologists (i.e., individualism-collectivism and dialecticism). Finally, I present a promising dialectical model of meaning in life proposed by Steger, Kawabata, et al. (2008) that warrants further investigation across cultures.

Meaning in Life

In this section I will review literature on the meaning in life construct, including its definition, theoretical origins, relevant measures, and empirical studies. The review also addresses potential clinical applications aimed at evaluating and enhancing well-being in diverse populations.

Definition

Meaning in life definitions have varied considerably among researchers. Thus, there is no universally accepted definition. However, such definitions have typically incorporated aspects of comprehension (i.e., understanding of one’s life and the surrounding world), purpose (i.e., value-congruent aspirations directing one’s activity), affect, and spirituality (Steger, 2012). Baumeister and Vohl (2007) asserted that the most generally recognized definition of meaning in life involves the possession of both self-awareness (e.g., making sense of one’s life) and purpose (e.g., to seek wisdom and/or self-actualization). This definition is predominantly influenced by Frankl’s (1963) writings about his experiences in a Nazi concentration camp during World War II. Frankl’s experiences prompted his consideration of the significance of personal meaning in one’s life as an aspect of healthy psychological functioning. He believed that having some sense of meaning in life was essential for optimal psychological functioning and to stave off neurosis. Several studies have supported this claim. For example, Zika and Chamberlain (1992) found that
in young mothers and elderly men and women meaning in life was more strongly related to positive affect than negative affect. Factors that contribute to a sense of meaning or purpose in life include exerting effort and resources toward the attainment of cherished goals, interactions with others, encounters with art and nature, and the fulfillment of psychological needs (Debats, 1999; King et al., 2006). Indeed, having purpose or meaning in one’s life has been widely viewed as a primary requirement of human existence (Frankl, 1963) and universally important to achieving subjective well-being and avoiding psychological distress (King & Napa, 1998; Ryff & Singer, 1998; Scollon & King, 2004). In the next section, I review some of the available measures of meaning in life that have been widely used in studies over the past five decades.

**Measurement**

Despite the increasing focus in recent years on the health benefits of personal meaning and related constructs, available meaning in life measures continue to receive substantial criticism. Steger et al. (2006) noted that the majority of studies have used one of the following four measures of meaning in life: the Purpose in Life Test (PIL; Crumbaugh & Maholick, 1964), the Life Regard Index (LRI; Battista & Almond, 1973), the Purpose in Life subscale of the Psychological Well-Being Scale (PWB-P; Ryff 1989), and the Sense of Coherence—Meaning Scale (SOC-M; Antonovsky 1987). Steger et al. (2006) argued that these measures are unable to properly assess meaning in life because of the content of the items, resulting in continued attempts to develop more valid instruments such as the Meaning in Life Questionnaire (MLQ; Steger et al., 2006) and the Meaningful Life Measure (MLM; Morgan & Farsides, 2009a). In the following subsections I will first review the PIL, LRI, SOC-M, and PWB-P, which represent the most frequently used measures in the studies relevant to this paper. Then, I will review the MLM and the MLQ, which attempt to address some of the criticisms of previous measures.
The Purpose in Life Test (PIL). Crumbaugh and Maholick (1964) designed the PIL to elicit responses related to an individual’s perceived experience of “purpose in life” based on aspects of existentialism. The test authors did not evaluate the factorial structure of the PIL in their original analysis. However, Chamberlain and Zika (1988) found one general factor for the PIL, which accounted for 33% of the variance, in a New Zealand community sample. In a Chinese sample, Shek (1988) reported five factors, which they labeled quality of life, meaning of existence, death, choice, and retirement, along with two higher-order factors, labeled existence (i.e., quality of life and meaning of existence) and death (i.e., death, choice, and retirement). The final version of the PIL has 20 items that are rated on a 7-point scale, ranging from 1 to 7 (i.e., 1 = “I am usually completely bored.”, 7 = “I am usually exuberant, enthusiastic.”; 1 = “Every day is exactly the same.”, 7 = “Every day is constantly new and different.”). Crumbaugh and Maholick administered the PIL (along with three other measures to examine concurrent validity) to five samples, including clinical and non-clinical participants (total N = 225; Ns ranged from 21 to 75). As expected, the non-clinical participants scored significantly higher on the PIL than did clinical participants, who also displayed greater variability in their responses. In addition, the differences in PIL scores between non-clinical and clinical samples were larger for males than for females. The authors provided a split-half reliability estimate for the PIL, which was .81, Spearman-Brown corrected to .90. While age did not affect PIL scores, the five samples did not include participants more than 50 years old. The PIL demonstrated moderate concurrent validity with therapists’ ratings (Pearson r = .27, N = 39). In addition, scores on the PIL correlated .68 with scores on Frankl’s (1960) questionnaire (N = 136).

The Life Regard Index (LRI). Battista and Almond (1973) developed the 28-item LRI to provide a measure of positive life regard (i.e., meaning in life) without the value-laden item
content for which the PIL has been widely criticized. Positive life regard is defined as “an individual’s belief that he is fulfilling a positively valued life-framework or life-goal that provides him with a highly valued understanding of his life” (p. 409-410). The LRI contains two subscales, labeled Framework and Fulfillment. The Framework subscale measures an individual’s ability to view his/her life within some meaningful perspective or context or to have derived a set of life goals based on such a perspective. The Fulfillment subscale assesses an individual’s perceived degree of self-actualization, which includes the process of satisfying one’s life goals. The LRI uses a 5-point rating scale, ranging from 1 (agree) to 5 (disagree), with 14 reverse-scored items. Sample items include: “I have a philosophy of life that really gives my living significance” (Framework); “I feel like I have found a really significant meaning for leading my life” (Fulfillment).

Battista and Almond (1973) reported that the intercorrelation between the Framework and Fulfillment subscales was .76. Correlations relating each subscale to the total score were .94 and .93, respectively. The authors reported a test-retest reliability of .94 for the total score (they did not report test-retest reliabilities for the subscales). Debats, van der Lubbe, and Wezeman (1993) reported test-retest reliability of .73 for the Framework subscale and .79 for the Fulfillment subscale. Harris and Standard (2001) investigated an English version of the LRI-Revised (Debats, 1998), which utilizes a 3-point scale, in an American sample (N = 91). They reported test-retest reliabilities for an eight-week period of .82 for Framework (Cronbach alpha = .83), .81 for Fulfillment (α = .87), and .87 for the total scale (α = .92). Thus, while some studies have established good psychometric properties for the LRI (Chamberlain & Zika, 1988; Debats, 1990; van Ranst & Marcoen, 1997), others studies have failed to support its structural or factorial validity (Chamberlain & Zika, 1988; Debats, 1998; Harris & Standard, 2001; Yockey, 2006).
Unlike the PIL, studies with the LRI have found similar LRI scores for clinical and non-clinical samples (Debats, 1996). Studies have also found that the LRI correlates highly with life goal fulfillment, positive affect and life satisfaction (Zika & Chamberlain, 1992), as well as happiness and therapeutic outcomes (Debats, 1996). Debats (1990) found that the Framework and Fulfillment subscales correlated negatively with anxiety and depression measures.

**The Sense of Coherence Scale (SOC) – Meaning Subscale.** Antonovsky and Sagy (1986) developed the 29-item SOC, which is also known as “The Orientation to Life Questionnaire,” to measure the relationship between life stress and health. Antonovsky (1979) defined a sense of coherence as “a global orientation that expresses the extent to which one has a pervasive, enduring, though dynamic, feeling of confidence that one’s internal and external environments are predictable and that there is a high probability that things will work out as well as can reasonably be expected” (p. 132). Items include 11 comprehensibility, 10 manageability, and 8 meaningfulness items, with thirteen reverse-scored items. The SOC has been used cross-culturally in countries including the United States, Israel, Sweden, Finland, Iran, and Canada (Eriksson & Lindstrom, 2006; Mahammadzadeh, Poursharifi, & Alipour, 2010). Cronbach alpha reliability estimates have ranged from .83 to .95 in these samples. A 13-item version of the SOC showed alpha reliability estimates ranging from .74 to .91 across 16 studies in the first seven years of the measure’s existence. Criterion validity was demonstrated based on correlational data comparing the SOC with measures in four domains: global orientation to oneself and one’s environment; perceived stressors; health, illness, and well-being; and attitudes and behavior (Antonovsky, 1993).

**The Psychological Well-Being Scale – Purpose in Life (PWB-P).** Ryff developed the PWB to investigate possible attributes of positive psychological functioning. She operationalized
six theory-based dimensions of psychological well-being, including self-acceptance, positive relations with others, autonomy, environmental mastery, purpose in life, and personal growth. The PWB (Ryff, 1989) measures these six dimensions with an 84-item (long form) or 54-item (medium form) measure. The Purpose in Life subscale measures the extent to which individuals’ perceive themselves as having goals, intentions, and a sense of direction. Ryff contended that purpose in life reflects one aspect of meaning in life, while the other five dimensions represent precursors of meaning in life. The PWB-P uses a 6-point rating scale, ranging from 1 (strongly disagree) to 6 (strongly agree). Sample items include: “My aims in life have been more a source of satisfaction than frustration to me”; “For the most part, I am proud of who I am and the life I lead.”

In Ryff’s (1989) original instrument development study, participants (N = 321) consisting of young, middle-aged, and older adults completed the PWB, the Affect Balance Scale (ABS; Bradburn, 1969), the Life Satisfaction Index (LSI; Neugarten, et al. 1961), the Self-Esteem Scale (SES; Rosenberg, 1965), the Revised Philadelphia Geriatric Center Morale Scale (PGCMS-R; Lawton, 1975), Levenson’s (1974) three locus of control subscales, and the Self-Rating Depression Scale (SDS; Zung, 1965). Correlational analyses showed that scores for the PWB subscales each showed positive and significant correlations with other measures of positive functioning (e.g., ABS, LSI, SES, PGCMS-R, Levenson’s locus of control subscales), with coefficients ranging from .25 to .73. Correlations comparing PWB subscale scores and measures of negative functioning (e.g., SDS, Levenson’s locus of control subscales) were negative and significant, ranging from -.30 to -.60. Higher scores on the PWB-P appeared to be at least partially influenced by developmental stage. Middle-aged adult participants reported higher levels of purpose in life than young adults and older adults, in that order. Regression analyses
involving participant demographics showed that self-rated finances, age, and marital status were predictive of the six psychological well-being indexes, including the Purpose in Life subscale. However, educational level and gender failed to provide significant prediction of the indexes of well-being. Overall, four of the six dimensions (e.g., purpose in life, positive growth, autonomy, and positive relations with others) provided information about positive psychological functioning beyond that provided by the other measures (e.g., ABS, LSI, SES, PGCMS-R, Levenson’s locus of control subscales). This suggests that positive psychological well-being is more complex and multidimensional than measures of short-term affect, such as happiness. Thus, there is a need to assess these additional areas of well-being (e.g., purpose in life, positive relations with others).

Ryff (1989) proposed that further research might explore how meaning and purpose in life influence well-being since most research to date has solely examined the reverse relationship. Further, given the inability of subjective well-being (i.e., life satisfaction) to encompass some of the prominent dimensions of the PWB (e.g., autonomy, personal growth, positive relations with others, environmental mastery), exploring meaning and purpose in life as a predictor of these scales may be noteworthy. In Ryff’s (1989) study, internal consistency (α) coefficients for the PWB scales were as follows: autonomy, .86; environmental mastery, .90; personal growth, .87; positive relations with others, .91; purpose in life, .90; and self-acceptance, .93. The test-retest reliability coefficients over a 6-week period in a subsample of participants (N = 117) were as follows: autonomy, .88; environmental mastery, .81; personal growth, .81; positive relations with others, .83; purpose in life, .82; self-acceptance, .85. Van Dierendonck (2005) added a spiritual well-being dimension to the PWB, because a number of empirical studies have connected meaning in life to religion and spirituality.
The Meaning in Life Measure (MLM). Morgan and Farsides (2009a) developed the 23-item Meaningful in Life Measure in response to the various deficiencies of the previous meaning in life measures (e.g., PIL, LRI, PWB-P), which are noted later. The measure contains five subscales, including Purposeful Life, Valued Life, Accomplished Life, Principled Life, and Exciting Life. Participants (Study 1: N = 201, Study 2: N = 211, Study 3: N = 91) completed the PIL, LRI, PWB-P, and four items created by the authors measuring a sense of meaning that were separate from any other potential confounding content (e.g., “My life is…: meaningful; significant; important; worthwhile). Study 2 participants also completed a second set of measures six months following the initial administration.

Morgan and Farsides (2009a) used exploratory factor analysis (EFA) in Study 1 to identify the latent constructs underlying the items in the PIL, LRI, and PWB-P, plus the four items developed by the authors. The authors used principal-axis factoring with promax (oblique) rotation because principal-axis factoring specifically models error variance, scores were positively skewed, and the latent constructs were expected to correlate as in previous studies. Scree plots were used to identify dimensionality.

Confirmatory factor analysis was used in Study 2 to validate the five-factor structure discovered in the EFA, which included exciting life (defined by the PIL items), purposeful life (PIL items), principled life (LRI items), accomplished life (PWB-P items), and valued life (additional items developed by the authors). Participants completed items that had the highest loadings from each extracted factor, with a total of fourteen items excluded from Study 1. The authors compared this five-factor structure with a four-factor model and a one-factor model, but decided that the five-factor model was superior. Intercorrelations between the five extracted
factors ranged from .47 to .61, with valued life scores correlating strongly with accomplished life scores and weakly with purposeful life scores.

In Study 3, the authors provided evidence of convergent validity of the MLM through correlational analyses with the original PIL, the LRI, and the PWB-P scales upon which the items were based. The authors contended that each of the original measures did not properly account for some of the MLM subscales. Specifically, the PIL does not include a measure of accomplished life, neither the LRI nor the PWB-P measures valued life, and the PWB-P lacks a measure of a principled life. This is not surprising, given that the authors combined items for all three previous measures in developing the MLM. Alpha coefficients for the MLM’s five subscales ranged from .85 to .88, with test-retest coefficients over a 6-month period ranging from .64 to .70. The authors investigated the factor structure, internal reliability, and convergent validity in two separate studies (Morgan and Farsides, 2009a,b). However, the generalizability of the findings was limited by the methods used to select the number of factors (e.g., scree-plot analysis) and various sampling issues, including age restriction and gender bias (e.g., 9 to 1 ratio of women to men in Study 2, 4 to 1 ratio in Study 3). In addition, no other studies addressing the reliability or validity of the MLM have been conducted to date.

**The Meaning in Life Questionnaire (MLQ).** In a series of three studies, Steger et al. (2006) developed the MLQ to address some of the deficiencies in previous meaning in life measures. The MLQ contains 10 items, which were derived from eighty-four original items. The instrument measures two distinct subscales measuring the presence of meaning in life and the search for meaning in life. The MLQ uses a 7-point rating scale, ranging from 1 (absolutely untrue) to 7 (absolutely true). A sample Presence item is: “My life has a clear sense of purpose.” A sample Search item is: “I am seeking a purpose or mission for my life.” Scores on the MLQ
correlate highly with a wide range of indicators of psychological distress and pathology (Steger, 2010). The longitudinal stability of the MLQ has been demonstrated in samples over periods of 2 weeks (Steger, 2005), 1 month (Steger, Kawabata, et al., 2008), and 1 year (Steger & Kashdan, 2007).

In Steger et al.’s (2006) Study 1a, participants (N = 151) completed several measures, including the SWLS, the Long-Term Affect Scale (Diener, Smith, & Fujita, 1995), 40 items from Saucier’s (1994) Mini-Markers to assess the Big Five dimensions, the Brief Symptom Inventory Depression Subscale (Derogatis & Spencer, 1992), the Intrinsic/Extrinsic Religiosity Scale (Gorsuch & McPherson, 1989), Marlowe-Crowne Social Desirability Scale (Crowne & Marlowe, 1960), Schwartz’s values scale (Schwartz & Sagiv, 1995), and a 44-item version of the MLQ. Steger et al. used principal-axis factoring with oblique, direct oblimin rotation (N = 151) to analyze the correlation matrix of the 44-item MLQ. The scree plot suggested two dominant factors with presence of meaning as the first factor and search for meaning as the second factor. The authors retained items with factor loadings greater than .60 on the intended factor and less than .20 on the other factor. This resulted in 17 items being retained, nine for the presence subscale and eight for the search subscale.

In Study 1b, the authors then used CFA (N = 154) to further refine their item selection. For the final scale, the authors selected 10 items after eliminating items that had factor loadings less than .60 or CFA modification indices suggesting substantial covariation with the unintended latent factor or other items. The authors also demonstrated both convergent and discriminant validity of the MLQ scales. For example, the authors found convergent validity for both subscales, with the Presence subscale positively related to Big Five conscientiousness and the Search subscale positively related to Big Five neuroticism, depression, and several negative
emotions. Discriminant validity was also demonstrated, with the MLQ subscales being uncorrelated with the value rankings, social desirability, and extrinsic religiosity.

In Study 2 ($N = 400$), the authors used CFA to replicate the factor structure in independent samples. The CFA path estimate relating the Presence and Search dimensions was stronger ($\beta = -.28$) than in Study 1b ($\beta = -.19$). Overall, Study 2 replicated the two-factor structure of the MLQ as the factor loadings ranged between .65 and .83 on the intended factors and fit indices showed good fit of the model to the data.

In Study 3, the authors used a multi-trait multi-method (MTMM) design to establish convergent and divergent validity. The researchers obtained both self-report and informant reports, with participants completing the MLQ, LRI, PIL, Life Orientation Test (Scheier & Carver, 1985), and the Rosenberg Self-Esteem Test (Rosenberg, 1965), at two points in time, separated by a 1 month interval. In MTMM designs, convergent validity is demonstrated when different methods of measuring the same trait are significantly related (e.g., self-report ratings on each subscale are significantly positively related to informant ratings for the same subscales). Discriminant validity is established when alternate methods for assessing each subscale show stronger relationships than do other methods of assessing different traits (e.g., life satisfaction, self-esteem, optimism). Both MLQ subscales showed good convergent and discriminant validity. For example, convergent validity for MLQ-P subscale scores was demonstrated as self-report ratings were significantly correlated with informant ratings at both Time 1 and Time 2. Further, convergent validity with the PIL and LRI was shown via four heteromethod correlations relating the MLQ-P subscale scores at Time 1 and Time 2. Discriminant validity was demonstrated for the MLQ-P subscale as scores were more highly correlated with the PIL and LRI than other well-being measures. On the one hand, the PIL ($r = .70$) and LRI ($r = .68$) displayed higher
correlations with well-being measures than did the MLQ-P (r = .44) and showed higher mean convergent correlations between self-reports and informant reports (PIL r = .43; LRI r = .50) than did the MLQ-P (r = .34). On the other hand, using Campbell and Fiske’s (1959) stringent test of discriminant validity, in which monotrait-heteromethod and heterotrait-monomethod correlations are compared, the MLQ-P showed a stronger pattern of discriminant validity (69% of the correlations) than did the PIL (50%) and LRI (63%). Finally, the MLQ demonstrated internal consistency coefficients greater than .80 in all three studies: .86 (Presence) and .87 (Search) for Study 1b, .86 and .86 for Study 2, and .82 and .87 for Study 3.

Summary evaluation of meaning in life measures. The PIL, LRI, SOC, PWB-R, and MLQ represent the most widely used meaning measures to date. The PIL and PWB-P have consistently shown strong internal consistency and test-retest reliability, as well as concurrent validity, across studies (Ryff, 1989; Steger et al. 2006, 2008; Zika & Chamberlain, 1992). Therefore, numerous studies have used these measures to assess purpose or meaning in life or to determine convergent validity when creating new meaning in life measures (Morgan & Farsides, 2009a; Steger et al., 2006). However, researchers regularly criticize these scales. They have been described as too lengthy (Chamberlain & Zika, 1988), as unable to distinguish beliefs and value outlooks from meaning in life dimensions (Debats, 1996), and as containing items from multiple content domains. Further, Harris and Standard (2001) noted inconsistencies in the format and name of the scale used in numerous studies with the LRI and LRI-Revised. For example, Debats and colleagues used a 23-item version of the LRI, yet still referred to the scale as the LRI (Debats, 1990; Debats et al., 1993; Debats, 1996). In a more recent example, Steger (2007) tested the structural validity of the “Life Regard Index”, using the original 28-item, 5-point scale of the LRI. He reordered the items but did not convert to a 3-point scale as suggested by Debats (1998).
In addition, questions remain about the factor structure of most of the meaning in life instruments. For example, in their analysis of the PIL, LRI, and SOC, Chamberlain and Zika (1988) found that only the PIL demonstrated an underlying general factor. They found that the LRI items generally loaded on multiple factors, but with no evidence of Battista and Almond’s (1973) Framework and Fulfillment dimensions. Harris and Standard (2001) found weak support for the theorized two-factor Framework and Fulfillment structure of the LRI-Revised (Debats, 1998) using maximum likelihood factor analysis with promax oblique rotation ($\kappa = 4$). The intercorrelation between the two subscales was .94. Yockey (2006) found that a six-factor model of the LRI-Revised was a modestly better fit than a one-factor model and the theorized two-factor model. Similarly, Chamberlain and Zika’s (1988) factor analysis of the SOC items did not show support for a three-component structure as suggested by Antonovsky (1983). In addition, Dyck (1987) found that numerous items in the PIL indirectly assess depressed feelings or attitudes. In a critique of the PWB, Christopher (1999) contended that the measure lacks cross-cultural validity because it is based on cultural values and assumptions of Western personality theorists such as Jung, Rogers, Buhler, Jahoda, Erikson, Neurgartens, and Allport.

Few studies have tested the structural invariance of meaning in life measures in multigroup comparisons. For example, Reker and Fry (2003) tested the factor structure and factorial invariance of the PIL, LRI, SOC-M, and three other meaning in life measures in samples of younger and older adults. The authors found that the first-order factor loadings of all six measures were structurally invariant across age. However, some scales were less affected by sources of noninvariance than others. It should be noted that the authors only tested invariance at the scale level using item parcels, with each item parcel hypothesized to have a nonzero loading on the first-order factor it was designed to measure and zero loadings on the other first order.
factors. In another example, Van Ranst and Marcoen (1997) tested the factor validity and invariance of the LRI in samples of younger and older adults. Factor loadings for items from the Framework dimension but not the Fulfillment dimension were age invariant. Therefore, the authors suggested that the LRI is likely a poor measure when testing age differences in meaning in life.

Overall, Steger et al. (2006) contended that the MLQ shows multiple improvements over existing meaning measures, including more precise or reliable measurement, greater stability of factor structure, and the novel inclusion of a search for meaning component. Later studies have demonstrated that MLQ scores are reasonably stable over one year intervals and are distinct from life satisfaction (Steger, Kashdan, Sullivan et al., 2008; Steger et al., 2011). Steger et al. (2006) argued that the MLQ also addresses the item-content limitations of earlier meaning in life measures, which are confounded by other constructs (e.g., mood, life satisfaction). As a result, Steger and Shin (2010) proposed that the MLQ can be effective as a measure of meaning in life in therapeutic practice. Given the potential significance of the distinction between the presence and search for meaning, in the next subsection I review research by Steger and colleagues addressing the distinction.

**Presence versus Search for Meaning**

Steger, Kawabata et al. (2008) defined the presence of meaning in life as the degree to which people perceive their lives as comprehensible and significant, and feel a sense of purpose or mission in their lives that transcends typical daily life concerns. Steger, Kashdan, Sullivan, et al. (2008) defined the search for meaning dimension as the strength, intensity, and activity associated with one’s desire and efforts to acquire and/or enrich one’s understanding of the meaning and purpose in one’s life. These two dimensions are not mutually exclusive but each
can offer important and distinct information about an individual’s sense of self, physical health, and well-being. In research studies, the process of searching for meaning in life has received considerably less attention than the presence of meaning, despite assertions that search for meaning is a natural, fundamental human motivation (Frankl, 1963; Maddi, 1970; Steger, Kashdan, Sullivan et al., 2008). Therefore, the MLQ provides an important new dimension, the search for meaning in life, to existing meaning measures.

The significance of the distinction between the presence and search dimensions of the MLQ is further indicated by research relating the two dimensions to physical health and psychological wellbeing. For example, in empirical research with the MLQ, the presence of meaning subscale has shown positive relationships with positive affect, self-esteem, life satisfaction, optimism, hope, happiness, curiosity, self-actualization, daily positive social interactions, and more positive perceived health, as well as negative relationships with depression, anxiety, perceived and experienced stress, negative affect, and PTSD (e.g., Kashdan & Breen, 2007; Steger et al., 2006; Steger, Kashdan, Sullivan et al., 2008; Steger, Mann, Michels, & Cooper, 2009). For example, Steger, Oishi, and Kesebir (2011) found that participants with higher MLQ Presence ratings tended to report higher ratings for life satisfaction. Similarly, Steger et al. (2009) found that participants with higher MLQ Presence ratings reported higher levels of physical health. The Steger, Oishi, and Kesebir (2011) study will be addressed in more detail later.

In contrast to the findings with the MLQ Presence subscale, numerous studies have found positive correlations relating search for meaning in life to depression and rumination, open-mindedness, drive, and absorption and, conversely, negative correlations with relatedness, self-acceptance, and perceived well-being (Park, Park, & Peterson, 2010; Steger, Kawabata, et
al., 2008; Steger, Oishi, & Kesebir, 2011). For example, Baumeister (1991) suggested that higher levels of search for meaning may indicate that presence of meaning has been lost to some degree, thereby signaling a likelihood of higher levels of distress and discontent. This idea appears to have informed recent studies that have found an inverse relationship between presence and search for meaning and that greater search for meaning is associated with lower life satisfaction (Cohen & Cairns, 2012; Steger & Kashdan, 2007; Steger, Kashdan, Sullivan, et al., 2008). For example, Steger and Kashdan (2007) found among participants in the United States that higher search for meaning scores were strongly associated with lower presence of meaning scores. These findings showed that most participants currently searching for meaning feel their lives may have somewhat limited purpose or meaning. Nonetheless, some individuals who are searching for meaning may still perceive that their lives are full of meaning. However, these studies were performed in Western cultures (e.g., the United States, Australia) and only one study has simultaneously tested this relationship across cultures (Steger, Kawabata, et al., 2008). Cross-cultural investigations exploring the relationship between the presence and search for meaning might therefore help to clarify the influence of culture on individual human functioning.

**Summary**

In this section, I reviewed the definition and measurement of meaning in life, as well as some of the empirical research that has applied these measures. I concluded that all existing measures of meaning in life have limitations. However, the MLQ appears to be the best available measure of meaning in life. It has a replicable factor structure, excellent reliability, and contains a unique dimension (i.e., search for meaning in life) that is not included in alternative measures. In addition, it may be particularly useful in clinical applications such as in logotherapy. Examining meaning in life as a determinant of well-being may help to enhance our
understanding of psychological well-being and the possible influence of culture as individuals seek to attain personal fulfillment and well-being. In the next section, I review current models of well-being.

Well-being

Hedonic versus Eudaimonic Well-being

Ryan and Deci (2001) contrasted two distinct but overlapping paradigms in research on well-being: hedonism and eudaimonism. Hedonic well-being is comprised of pleasure or happiness. Most research on hedonic psychology has measured subjective well-being (Diener & Lucas, 1999). In this research, subjective well-being refers to three components, life satisfaction (the cognitive component) and positive and negative mood (the affective components). In contrast, eudaimonic well-being refers to fulfilling or realizing one’s daimon or true nature. Eudaimonic well-being occurs when one’s life activities are highly congruent with deeply held values and are holistically or fully engaged, allowing one to feel authentic and intensely alive (Waterman, 1993). Thus, this construct of eudaimonic well-being seems to share similarities with purpose or meaning in life. In general, eudaimonic theories of well-being maintain that not all desires or outcomes that a person might value will lead to well-being once achieved.

Based on evidence from a number of investigations, Ryan and Deci (2001) concluded that well-being is a multidimensional construct including aspects of both hedonic and eudaimonic well-being. Compton et al. (1996) investigated the relationships among 18 indicators of well-being and mental health and identified two moderately correlated factors, subjective well-being and personal growth. The authors suggested that these hedonic and eudaimonic factors are overlapping but distinguishable, so that both aspects should be assessed. King and Napa (1998) asked participants to rate features of the “good life” and found that both happiness
and meaning were frequently mentioned. Similarly, McGregor and Little (1998) analyzed a diverse set of mental health indicators and found two common factors, happiness and meaningfulness. Further, the authors found that while pursuing personal goals, one’s experience of happiness may be distinct from finding meaning and acting with integrity. This evidence appears to suggest that the most noteworthy aspects of hedonic well-being (subjective well-being, happiness) and eudaimonic well-being (personal growth, meaningfulness) may be divergent rather than convergent. However, based on empirical evidence, Kashdan, Biswas-Diener, and King (2008) argued that hedonic and eudaimonic well-being conceptually overlap and may operate concurrently. Overall, a significant limitation of available measures of well-being is that they do not assess both eudaimonic and hedonic well-being. In the following subsections I provide an overview of major models of hedonic (subjective) and eudaimonic well-being.

Models of subjective (hedonic) well-being. Brickman and Campbell (1971) proposed a hedonic treadmill model of subjective well-being, which posits that individuals fluctuate in their temporary experiences of positive and negative emotion yet always revert to a neutral state. Brickman, Coates, and Janoff-Bulman (1978) demonstrated this phenomenon through comparisons of lottery winners versus non-winners and paraplegics versus those able to walk. Neither lottery winners nor those able to walk reported greater levels of happiness than their respective comparison groups. This suggested that happiness is relatively stable in individuals over time. Overall, these studies suggested that happiness may be ever-elusive, yet also fairly consistent within individuals despite shifts in external conditions.

Similarly, based on a review of many studies, Diener, Lucas, and Scollon (2006) concluded that external conditions are often weakly related to perceived happiness and that
longitudinal studies of happiness have shown evidence of adaptation over time. For example, the authors noted that demographic variables predict less than 20% of the variance in happiness (Campbell, Converse, & Rodgers, 1976), while income, physical attractiveness, and objective health are each weakly correlated with well-being (Diener, Sandvik, Seidlitz, & Diener, 1993; Diener, Wolsic, & Fujita, 1995; Okun & George, 1984). Furthermore, longitudinal studies involving major traumatic events (e.g., physical injury, death of spouse) have demonstrated that people are able to recover relatively quickly and soon experience happiness, sometimes within a few months (Bonanno, Wortman, & Nesse, 2004; Lucas, Clark, Georgellis, & Diener, 2003; Silver, 1982). While adaptation is a healthy sign of resilience and strength, Diener et al. caution that it is not an immovable force that counters any efforts toward enhancing well-being. As such, it becomes important to consider evidence-based alternatives to the hedonic treadmill model that may inform interventions to boost subjective well-being for a variety of individuals.

Diener et al. (2006) offered a revision to the longstanding hedonic treadmill model of affect, arguing that neutral states or adaptation levels are not universal and that individuals have unique, multiple set points that vary over time and across domains. Given such variations, both between and within individuals, Diener et al.’s revised model allows for possible interventions aimed at increasing levels of happiness. For example, positive affect increased when individuals made attempts to utilize their signature strengths more frequently (Seligman, Steen, Park, & Peterson, 2005), exhibited random acts of kindness (Sheldon & Lyubomirsky, 2004) and increased their gratitude-centered cognitions (Emmons & McCullough, 2003).

One possible nuance when considering subjective or hedonic well-being involves an individual’s emotional complexity, which refers to the ratio and intensity of experienced positive and negative affect. For example, Frederick and Losada (2005) reported that the normative ratio
of positive to negative affect is 2.5 to 1. Participants with high ratings of subjective well-being typically reported a ratio of 4.3 to 1, while participants with low levels of subjective well-being reported ratios that were significantly lower than the normative ratio. The authors contended that humans developed positive and negative emotions as psychological adaptations, which served as survival or reproductive tools. For example, positive emotions promoted personal and social growth, while negative emotions supported the pursuit of survival-based needs. Overall, these findings help to make sense of the intricacy of the affective components of subjective well-being. They can also inform future studies and interventions aimed at increasing positive affect and decreasing negative affect. Relevant factors include client history, current circumstances, available resources, and other cultural considerations.

**Models of eudaimonic well-being.** Major models of eudaimonic well-being include Ryff’s (1989) six-dimensional model of psychological well-being and Deci and Ryan’s (1985, 2000) Self-Determination Theory. Ryff’s six dimensions were briefly introduced above in the presentation of meaning in life measures. She defines the six dimensions as follows: self-acceptance (i.e., holding of positive attitudes about oneself); positive relations with others (i.e., having warm, trusting interpersonal relations); autonomy (i.e., independence, self-determination, and the self-regulation of behavior); environmental mastery (i.e., an individual’s ability to effectively manage one’s life and surroundings); purpose in life (i.e., having goals, intentions, and a sense of direction in life); and personal growth (i.e., continuing to develop one’s potential and to expand as a person). Ryff sought to integrate mental health, clinical, and life span developmental theories to operationalize positive psychological functioning in a way that extends beyond the well-studied components of subjective well-being (i.e., positive affect, negative affect, life satisfaction). These dimensions also helped to inform theory regarding
positive human health while transcending the traditional medical (i.e. absence of disease) model. For example, Ryff and Singer (1998) proposed a model integrating and interweaving aspects of the mind and body by considering multidimensional aspects of functioning toward understanding well-being based on examples from African and American cultures. The authors contended that interventions aimed at opportunities for fully engaging one’s life could become powerful for persons of all ages. Further, there may be aspects of positive human health that are universal across variants such as age, education, wealth, and religious beliefs. It should be noted that multiple studies (e.g., Kafka & Kozma, 2002; Spencer & Hauser, 2006) showed that the Ryff’s PWB scale does not support six distinct dimensions of psychological well-being. Nevertheless, the push toward applying Ryff’s model of eudaimonic well-being likely contributed to the abundance of research on these determinants of well-being that followed, such as that of Scollon and King (2004), which will next be described in the next section in more detail.

Ryan and Deci (2001) proposed that Self-Determination Theory (SDT) shares many similarities with Ryff and Singer’s (1998) eudaimonic approach. However, SDT views basic psychological needs as the principle factors that foster well-being, rather than being components of well-being. Ryan and Deci (2000) contended that the human needs for competence, relatedness, and autonomy are essential for facilitating optimal functioning toward growth, social development, and personal well-being. The authors suggested that while the satisfaction of basic needs is universally necessary to achieve well-being, individuals likely experience different levels of well-being depending on the extent to which their basic needs are satisfied. For example, they believed that contextual, cultural, and developmental factors can impact the degree to which individuals satisfy these basic needs, which in turn influences their personal growth, integrity, and well-being. Ryan and Deci (2001) argued that subjective well-being is not
a comprehensive indicator of well-being because it does not account for various positive experiences (e.g., satisfaction of basic needs) and other conditions that foster eudaimonic well-being. For example, they suggest that vitality, self-actualization, and mental health represent additional conditions independent of subjective or hedonic well-being that promote optimal, healthy human functioning. In SDT, satisfaction of needs for autonomy, competence, and relatedness are essential elements in achieving optimal functioning and eudaimonic well-being.

Finally, Seligman (2002) proposed a model of authentic happiness that incorporates aspects of both hedonic and eudaimonic well-being. Seligman (2002) proposed that three theories of happiness—positive emotions and pleasure (the pleasant life), engagement (the engaged life), and meaning (the meaningful life)—are each necessary for authentic happiness. Empirical studies often use Seligman’s authentic happiness model and the associated Orientations to Happiness Scale (Peterson, Park, & Seligman, 2005) as a means to operationalize the multidimensional construct of happiness.

For example, Peterson, Park, and Seligman (2005) tested this theory in two studies. Participants ($N = 845$) responded via online surveys to the Orientations to Happiness Scale and the Satisfaction with Life Scale (Diener et al., 1985). The authors used factor analysis to select the 18 items that comprise the three subscales of the Orientations to Happiness Scale, which measure meaning, pleasure, and engagement. They sought to determine how well the three subscales independently and concurrently predicted life satisfaction. The authors found that respondents with higher ratings on each of the three subscales tended to have higher life satisfaction scores than those with lower ratings on the three subscales. Meaning, pleasure, and engagement were each found to be independently associated with life satisfaction, indicating that the presence or absence of all three is necessary to affect life satisfaction. Overall, Peterson et al.
found that most people who are satisfied with their lives tend to pursue all three aspects of authentic happiness, with engagement and meaning as the highest priorities.

The development of models of eudaimonic well-being has allowed a deeper understanding of happiness, enjoyment, and fulfillment in one’s life. Ryff’s PWB theory and SDT each share a common goal of achieving optimal functioning through personal growth, strong social ties, and autonomy. A difference between the two approaches is that PWB considers basic psychological needs to be aspects of well-being, while SDT views such needs as the primary factors that foster well-being. SDT has been widely supported to date across various contexts, including in cross-cultural studies where satisfaction of the three needs has proven universally important for well-being (e.g., Chirkov, Ryan, & Willness, 2005; Church et al., 2013; Sheldon, Cheng, & Hilpert, 2011, Sheldon, Elliot, Kim & Kasser, 2001). Researchers also continue to apply Ryff’s PWB model across cultures (e.g., Church et al., 2013; Sirigatti et al., 2013), despite limitations of the PWB measure (e.g., its uncertain structure).

Some researchers (e.g., Seligman, 2002) have attempted to enhance our understanding of well-being by integrating aspects of existing models. Gallagher, Lopez, and Preacher (2009) extended this method by developing an integrated model of hedonic, eudaimonic, and social well-being to provide a parsimonious, hierarchal model of well-being. The authors used confirmatory factor analysis to find support for their integrated model, which showed 14 first-order factors and three second-order factors representing hedonic, eudaimonic, and social well-being. They showed that lower levels of negative affect and higher levels of positive affect are indicative of major components of hedonic well-being, as well as representative of the larger structure of well-being. Overall, it is clear that well-being cannot be fully explained by experiencing pleasure or a lack of distress. Eudaimonic and social well-being are also important.
Questions remain with regard to how individuals might enhance their engagement in and enjoyment of their experiences. For example, to what extent does feeling good or having friends or financial wealth lead to optimal human functioning? What contributes to personal growth and fulfillment? Do the importance of these factors change over time? I will address some of these questions in the next section as I review studies that make connections between meaning in life, well-being and psychological functioning.

Relating Meaning in Life, Well-being, and Psychological Functioning

In this section, I will review studies that related meaning in life with aspects of well-being and psychological functioning. A number of studies have related meaning in life to “the good life” and helped to clarify the determinants of a meaningful and enjoyable life. King and Napa (1998) investigated individuals’ perceptions of the “good life” in samples of college students (N = 104) and adults in the surrounding community (N = 264). The authors examined happiness, meaning in life, and money as three possible determinants of participants’ ratings of the desirability and moral goodness of a fictitious target’s life based on a career profile description of the target. The desirability of a life referred to perceptions of how much the life reflects the good life and whether the participant would want to have such a life. Moral goodness denoted how principled and ethical each participant perceived a target individual to be, which included the participant’s assessment of the target individual’s likelihood of going to heaven. Participants first rated the quality of the target’s job or life (as if the career was the participant’s) with items that included “At my job, I feel happy most of the time,” and “In my job, I really feel like I am touching the lives of people.” Next, participants responded to three questions about the desirability (e.g., “How much do you think this person is leading ‘the good life’?”), quality, and moral goodness of the target’s life. The authors found that meaning in life and happiness were
the fundamental determinants of participants’ views of the “good life,” while money was deemed immaterial. They also found a strong relationship between meaning in life and participants’ ratings of the desirability and moral goodness of the target. The meaning in life measures used by King and Napa, which referred, for example, to targets’ job satisfaction, were limited in scope, however. For example, the measures did not offer a comprehensive assessment of an individual’s understanding or purpose in life. In addition, participants in the two studies were primarily comprised of Christian, middle-class, Euro-American college students from the southern United States. Therefore, strong cultural and religious influences may have impacted the results and limited the generalizability of the findings.

In a series of three studies with college students and community adults, Scollon and King (2004) found that happiness and meaning in life were strong predictors of “the good life,” which the authors defined in terms of desirability and moral goodness. Participants were given a personal/career inventory profile of a fictitious target for review, which included information about the target individual’s level of meaning in life experienced, level of effort required for their job, and income level. Participants then completed two 4-item measures of the desirability and moral goodness of the individual’s life. While participants did not demonstrate a preference for high levels of wealth as compared to moderate levels, they did report a dislike of poverty. Further, the college student participants most preferred effortful engagement in deriving meaning in their lives, while the community adults most preferred meaningful lives of ease. Overall, the results were consistent with studies showing the limited effect of wealth on well-being and pointed to possible differences in well-being levels based on perceptions of effortful engagement or phase of life issues.
Numerous studies in the United States have linked levels of meaning in life with psychological functioning in work or similar contexts. For example, Bonebright, Clay, and Ankenmann (2003) found that enthusiastic workaholics experienced greater levels of purpose in life and life satisfaction than non-enthusiastic workaholics. The authors defined enthusiastic workaholics as persons exhibiting high levels of work involvement, drive to work, and enjoyment of work. The fulfillment experienced by workaholics tends to be related to work task stimulation, an innate drive or urge to work, or the emotional euphoria that arises from the rewards of hard work. A number of other studies have demonstrated that higher levels of meaning are positively related to work enjoyment, life satisfaction, and happiness, while lower levels of meaning in life are associated with depression and anxiety, suicidal ideation, substance use, and need for therapy (Bonebright & Clay, 2000, Debats, 1996; Scannell, Allen, & Burton, 2002). For example, Scannell et al. (2002) found that positive well-being was associated with meaning in life to a greater degree than was negative well-being, which was consistent with similar studies using clinical samples, elderly adults, and middle-aged mothers (Debats, 1996, Zika & Chamberlain, 1992). The authors administered cognitive and affective measures of meaning in life. Affective meaning in life was more strongly associated than cognitive measures of meaning in life with positive measures of well-being (e.g., happiness, spiritual well-being, self-esteem). Depression (i.e., Brief Symptom Inventory) significantly predicted cognitive measures of meaning in life and was the only negative measure that was strongly related to cognitive or affective meaning in life scores. Contrary to earlier studies, Scannell et al. did not find links between meaning in life and physical health (Ryff & Singer, 1998).

A few recent studies have related lay beliefs about self-concept to the creation of meaning in life. In essence, one’s capacity to connect with and comprehend who one is may
fundamentally contribute to experiencing purpose or meaning in life. For example, Schlegel, Hicks, Arndt, and King (2009) artificially increased the cognitive accessibility of participants’ true selves by priming them with true self-concept traits or actual self-concept traits that they had provided one month earlier. True self-concept traits were defined as “characteristics you would like to express socially, but are not always able to, for whatever reason”. Actual self-concept traits were defined as “characteristics you possess and are often able to express to others in social situations”. Participants then completed the MLQ-P and four items from the PIL. The four items of the PIL were identified by McGregor and Little (1998) to specifically assess meaning in life rather than positive affect and have been used in multiple meaning in life studies (Hicks and King, 2007; 2008; King et al., 2006). The authors also measured the ability of participants’ reaction times to words relevant to their true self to predict meaning in life ratings. The authors found a positive relationship between true self-concept and meaning in life, including higher levels of meaning in life after artificially increasing one’s cognitive accessibility of the true self, as compared to the actual self, via social cognitive techniques. Overall, Schlegel et al. suggested that priming the true self may serve as another possible means to enhance meaning in life.

In three studies, Schlegel, Hicks, King and Arndt (2011) investigated how perceived feelings of the true self (vs. the actual self) affect meaning in life. In Study 1, participants wrote a detailed essay describing their true self (i.e., “who you believe you really are”), their actual self (i.e., “who you are in your daily life”), and the campus bookstore. Next, participants completed the Meaning in Life Questionnaire-Presence (Steger et al., 2006), the Purpose in Life Test (Crumbaugh & Maholick, 1964), the Rosenberg Self-Esteem Scale (Rosenberg, 1965), and measures of positive affect and negative affect. Participants in Study 2 followed a procedure similar to Study 1. However, rather than writing detailed essays, they generated a list of twelve
words describing the characteristics, roles, and attributes defining their true self (six words) and actual self (six words). In the third study, the authors instructed participants to list 5 words (“easy condition”) or 18 words (“difficult condition”) that describe their true selves or actual selves and then rate the ease with which they derived their list of descriptor words on a 9-point scale. Participants then completed meaning in life and mood measures similar to those in the other two studies. In Study 1, four trained research assistants used a content analysis system proposed by Norman and Aron (2003) to rate the level of detail of each essay on a 7-point scale. In Study 2, a trained judge coded matching words on each participant’s true and actual self-concept lists as identical, nearly identical (e.g., supportive and somewhat supportive), or synonymous (e.g., thoughtful and considerate). This resulted in a possible score of zero to six, with higher scores indicating greater correspondence between participants’ true and actual self-concept. In Study 3, the authors used a 2 (true vs. actual self) x 2 (difficulty) ANCOVA, controlling for positive and negative affect, with meaning in life as the criterion variable.

Schlegel et al. (2011) found that true self-concept affected meaning in life judgments to a greater degree than did self-ratings of mood and self-esteem, while actual self-concept was unrelated to any of these outcome variables. The authors contended that perceived self-knowledge (e.g., ease of true or actual self-description task) and self-accuracy (e.g., accuracy of individual’s true self beliefs) are independent in affecting an individual’s well-being. Further, the authors suggested testing the role of culture in the relationship between the true self and meaning in life given existing theories about how cultural beliefs influence self-concept (Suh, 2000). For example, they noted that Neff and Suizzo’s (2006) finding that authenticity (i.e., “acting and expressing oneself in ways that are consistent with inwardly experienced values, desires, and emotions,” p. 441) is important in romantic relationships for both Euro-Americans and Mexican
Americans. This suggested that beliefs about the true self may not be isolated to Western cultures. Perhaps other cultural values or lay beliefs, such as dialecticism (Spencer-Rodgers et al., 2010), could be important determinants of meaning in life in East Asian cultures, which view the self as intertwined with one’s social environment. One prominent drawback of Schlegel et al.’s (2011) study is that the authors did not use the complete MLQ or another meaning in life measure (e.g., the PIL). The Search subscale of the MLQ could have provided some additional information about perceived true self-knowledge based on the degree to which an individual is actively searching for meaning.

Indeed, several studies have revealed consistent, positive relationships between meaning in life and various measures of well-being, including life satisfaction and positive affect (Steger et al., 2006; Steger & Kashdan, 2007; Zika & Chamberlain, 1987). For example, Steger and Kashdan (2007) investigated the stability of ratings for meaning in life and life satisfaction in Euro-Americans. The authors found moderate stability over a 13-month period in participants’ (N = 82) ratings of life satisfaction (Satisfaction with Life Scale [SWLS]; Diener et al., 1985), presence of meaning in life, and search for meaning in life (MLQ). Participants (N = 359), consisting of American undergraduate college students, completed the initial measures using a paper format (Time 1), with eighty-seven participants completing the follow-up measures 13 months later via email (Time 2). Correlation coefficients comparing Time 1 and Time 2 scores were .41 for the MLQ-P, .50 for the MLQ-S, and .40 for the SWLS. There was a significant negative relationship between MLQ-S and MLQ-P scores at both Time 1 (r = -.25) and Time 2 (r = -.22). This indicated that participants were less likely to be searching for meaning when they perceived that their lives were meaningful. Each measure also demonstrated good internal consistency reliability at initial (Time 1) and follow-up (Time 2) periods: MLQ-Presence (Time
Steger and Kashdan (2007) used multiple regression equations with Time 2 scores for each measure as the criterion variables in three separate analyses and Time 1 scores as the predictor variables in each of the three analyses. Each analysis supported the specificity of each scale over the 13-month period. That is, Time 1 scores for each scale were the sole significant predictors of the scores for the corresponding scale at Time 2. This demonstrated that scores for each measure summarized unique variance outside of that summarized by the other two measures in a 13 month span. In other words, Time 1 MLQ-P, MLQ-S, and SWLS measures specifically predicted corresponding Time 2 MLQ-P, MLQ-S, and SWLS measures, respectively. The proportions of variance shared by Time 1 MLQ-S scores with Time 2 MLQ-P and Time 2 SWLS scores were each 10%. This amount was much lower than for all other measures across time (e.g., Time 1 MLQ-P with Time 2 MLQ-S or Time 2 SWLS; Time 1 SWLS with Time 2 MLQ-S or Time 2 MLQ-P), which ranged from 54% to 75% shared variance. This suggested a large proportion of shared variance between presence of meaning and life satisfaction. When also taking into account the negative correlations between the MLQ-S with the MLQ-P and SWLS at both Time 1 and Time 2, participants were less likely to be searching for meaning in life when they perceived their lives to be meaningful or satisfying. Further, participants searching for meaning in life at Time 1 did not experience increases in life satisfaction or presence of meaning in life over time.

In two studies, Steger, Oishi, and Kesebir (2011) found that the relationship between meaning in life and life satisfaction was moderated by the extent to which the rater was searching for meaning in life. Participants (Study 1a: $N = 122$; Study 1b: $N = 151$; Study 2: $N = 151$) in
each study completed the MLQ and SWLS in order to test the authors’ hypothesis that ratings for the search for meaning would moderate the relationship between the presence of meaning and life satisfaction. As in previous studies (e.g., Steger et al., 2006; Steger & Kashdan, 2007), the MLQ Presence and Search scores were relatively independent in Study 1 and Study 2. While the MLQ and SWLS share minimal item overlap, correlations relating scores for the MLQ-P and SWLS were large (Study 1a: $r = .57$; Study 1b: $r = .35$; Study 2: $r = .45$). In both studies, the authors used hierarchal multiple regression to predict life satisfaction (SWLS scores), with standardized MLQ-P and MLQ-S scores entered in the first step and the interaction of the two subscales in the second step. In addition, prior to completing the measures in Study 2, participants read a scenario about a fictional person, who either enjoyed or did not enjoy his or her life and either had or did not have meaning in their life. The authors then used two hierarchical multiple regressions in Study 2, which assessed whether search for meaning moderated the relationship between the meaning manipulation and ratings of the fictional person’s life satisfaction and happiness.

Both studies showed that presence of meaning was more strongly related to life satisfaction for those individuals who were actively searching for meaning in life than for those who were not. The second study extended this moderator effect to evaluations of others’ well-being. That is, presence of meaning had a greater impact on others’ life satisfaction and happiness for participants with higher search for meaning. Overall, the results indicated that the role of meaning in life in judgments of life satisfaction varies across individuals depending on the level of their search for meaning in life. Further, one’s search for meaning appears to increase the salience of meaning-relevant information. This suggests that individuals with lower levels of life satisfaction and meaning in life will be more satisfied if they do not search for meaning in
life. Limitations of this study included the limited age range of the participants and the fact that they were all American college students. This limits the generalizability of the findings. For example, it is possible that there are cultural differences in how MLQ-P and MLQ-S scores interact in the prediction of well-being (Steger, Kawabata, et al. 2008). Another limitation was that the study was not longitudinal, as both the presence and search for meaning may develop over time.

King et al. (2006) examined the influence of positive and negative affect on one’s experience of life as meaningful. The authors contended that positive moods may predispose individuals to feel that their life is meaningful because positive moods increase their sensitivity to the meaning-relevance of a situation. In essence, they posited that positive affect may influence cognitions that facilitate the discovery or construction of meaning by allowing for greater psychological flexibility (Fredrickson, 1998). In addition, positive affect might serve as an indicator of progress toward one’s goals, signaling to some degree that one’s life is purposeful. In Study 1, participants ($N = 568$) completed the SOC, the PIL, a daily meaning in life measure, the Positive and Negative Affect Schedule (PANAS; Watson, Clark, & Tellegen, 1988), the Extraversion scale from the NEO Personality Inventory-Revised (Costa & McCrae, 1992), and goal appraisal measures. Participants’ scores on affect, daily and general meaning in life, and goal appraisals were strongly related ($rs$ ranged from .28 to .53). The correlation between extraversion and general meaning in life was also strong ($r = .62$). In Study 2, participants ($N = 86$) completed the same measures as in Study 1 and were also instructed to complete meaning in life measures once each day as well as thought/behavior reports and mood ratings twice each day over a 5-day period. Multilevel modeling analyses showed that positive affect was the strongest predictor of both daily estimates and general or global estimates of
meaning in life. The authors next addressed the possible causal direction of the relationship between positive affect and meaning in life in Study 3.

In Study 3, participants \( (N = 266) \) initially completed the PANAS and SOC. The researchers contacted the participants two years later and readministered the PANAS and SOC with 55% of the original participants \( (N = 145) \) completing the forms. Correlations between meaning in life and positive affect were strong at both time points \( (r_s \text{ ranged from } .47 \text{ to } .71) \). However, in multiple regression analyses, Time 1 positive affect (PANAS-PA) did not predict Time 2 meaning in life (SOC) and Time 1 meaning in life did not predict Time 2 positive affect. In other words, positive affect did not enhance meaning in life and meaning in life did not enhance positive affect over a 2 year span. Given the strong relationship established in Studies 1 and 2, the authors suggested that the effects between positive affect and meaning in life may therefore be more immediate than long-term. For example, an individual’s experience of daily positive mood may enhance their daily experience of meaning in life by making their personal meaning structures more salient or available. The authors examined the possible role of cognitive biases in Studies 4 and 5.

In Study 4, King et al. (2006) used a 2 (mood induction vs. priming of mood concepts) × 2 (positive vs. neutral valence) design to determine whether the relationship between positive affect and meaning in life could be explained by the cognitive effects of positive affect (i.e., mood induction) or by activating positive emotional concepts (i.e., priming of mood concepts). Participants \( (N = 76) \) were randomly assigned to one of the four conditions and then completed a questionnaire containing 32 mood and meaning in life items selected by the researchers. The mood induction failed in this study and the researchers were only able to test the effects of activating (priming) concepts of positive affect on one’s experience of meaning in life.
Controlling for positive and negative affect, ANCOVA analyses showed that priming of positive mood concepts enhanced meaning in life ratings. In Study 5, the authors used an alternate mood induction method, which included conditions of positive, negative, or neutral mood induction. Following mood induction, participants ($N = 194$) completed self-ratings for a list of adjectives, with half of the participants receiving a cue to mood attribution prior to responding to three meaning in life items taken from the PIL and SOC. Participants in the positive mood/no cue condition had significantly higher meaning in life ratings than all other groups except for the neutral mood/cue condition. This suggests that individuals assess their meaning in life differently when experiencing positive affect because they use their positive feelings as information. However, this leads to a concern that an individual’s report of meaning in life may be distorted by positive affect. The authors attempted to address this issue in Study 6.

In Study 6, participants ($N = 99$) completed mood measures similar to those in Study 4 and 5 and then engaged in either a meaningless (e.g., counting the number of letters in a passage) or meaningful (e.g., instructed to read and think carefully about a passage) activity. The participants then completed a 6-item task meaningfulness measure. A hierarchical regression analysis showed a two-way interaction between positive mood and task meaning, with positive mood associated with higher meaning judgments when the task was meaningful.

Indeed, King et al. (2006) found in these six studies that experiencing life as meaningful was positively related to positive affect and negatively related to negative affect. The authors demonstrated the strong relationship between an individual’s experience of positive affect and meaning in life. The researchers proposed a tentative model of positive affect and meaning in life, in which positive affect causes increased psychological flexibility, creativity, and focus. Thus, positive mood seemed to enhance the feeling that life is meaningful. Overall, the authors
suggested that one’s system of personal meaning becomes more readily available as levels of positive affect increase. Further, the studies showed that one’s experience of positive affect, both when activated by concepts and when feeling positive mood, can enhance one’s sense of having meaning in life.

There were several limitations to the King et al. (2006) study. One limitation was that it primarily focused on the cognitive rather than motivational consequences of affect. For example, one might test the effect of positive affect on search for meaning in life in two ways. One method would examine an individual’s capacity to solve problems and perceive meaning (i.e., cognitive consequences of affect). A second approach would investigate the levels of personal satisfaction and fulfillment that emerges from meaningful experiences (i.e., motivational consequences of affect). Another issue was the uncertain validity of the ratings in Study 3, which were obtained with a two-year interval between administrations of the affect and meaning measures. Many significant events may have arisen during this timeframe, which may have influenced the relationship between affect and meaning in life over time. Third, the authors’ inconsistent use of meaning in life items from the PIL and SOC both within studies and across studies (e.g., Studies 1 to 3 vs. Studies 4 and 5) complicates the generalizability of their findings. The authors were vague as to which items they selected and the reasoning behind their selection. Finally, with the exception of the longitudinal study (Study 3), the study leaves open questions about the direction of causality between meaning in life and levels of affect.

Summary

As researchers attempt to distinguish and/or establish links between hedonic and eudaimonic well-being, meaning in life has shown strong relationships with aspects of well-being, including positive affect and life satisfaction. Earlier studies found that individuals
perceive that meaning in life and happiness are the main factors in experiencing the “good life.” A number of studies have demonstrated that experiencing life as meaningful is positively related to positive affect and negatively related to negative affect. Thus, positive mood seems to enhance the feeling that life is meaningful. Some researchers have suggested that being in tune with one’s true self can facilitate one’s perception of experiencing meaning in life. Other studies explored the possible moderating effect of the search for meaning in life on the relationship between having meaning in life with positive affect or life satisfaction. These findings point to how contextual and developmental factors influence individuals’ experience of meaning in life and the various components of well-being. One possibility for future research might be to explore eudaimonic well-being from the lens of universal basic needs (i.e., Self-Determination Theory), which may elucidate how well-being is fostered. Finally, it is important to investigate whether the relationships between meaning in life and well-being, as well as their determinants, are universal across cultures or relatively unique.

Cultural Universals and Differences

While a number of studies have addressed the association between meaning in life and well-being, relevant theories and empirical research have originated primarily in Western cultures (Steger, Kawabata, et al., 2008). Thus, questions remain about the universal implications of meaning in life and whether there are cultural differences in the degree to which meaning in life influences one’s sense of well-being. In this section of the paper, I first address theoretical perspectives regarding cultural universals and differences in meaning in life, well-being, and their relationship. Subsequently, I review relevant cross-cultural empirical research.
Theoretical Perspectives

In general, there has been some support for both cultural universality and variation in meaning in life and well-being studies, yet few studies integrate both concepts. For example, theories that link well-being to the satisfaction of universal psychological needs (e.g., Self Determination Theory) suggest that levels of meaning may be similar across cultures (Deci & Ryan 2000). On the other hand, some research suggests that meaning in life and well-being may vary across cultures. For example, participants in the United States have been found in some studies to average higher on psychological well-being than those in Korea (Ryff, 1999) and Sweden (Lindfors, Berntsson, & Lundberg, 2006). In addition, participants in Japan have been found to search for meaning in life to a greater degree than those in the United States, who were more likely to rated themselves as having meaning in their lives (Steger, Kawabata, et al., 2008). Theory regarding cultural differences has generally involved the cultural dimensions of individualism-collectivism (and related self-construals) and dialecticism.

Individualism-collectivism and self-construals. One theoretical perspective links levels of meaning in life and well-being to the cultural dimension of individualism-collectivism, and associated differences in independent versus interdependent self-construals (Markus & Kitayama, 1991). In individualistic cultures, the self is viewed as independent, unique, and relatively immutable, leading to greater motives or tendencies to express and positively evaluate one’s internal attributes or traits. As such, researchers have suggested that people from individualistic cultures tend to self-enhance in their evaluations of their attributes in order to increase positive affect or subjective well-being (Heine & Hamamura, 2007; Heine, Kitayama, & Lehman, 2001). In addition, because people in individualistic cultures are hypothesized to be freer to pursue personal goals and strivings and choose their own life course, they may
experience a greater sense of meaning in life than people in collectivistic cultures (Diener et al., 1995). In contrast, people in collectivistic cultures are thought to view the self as relatively interdependent, socially embedded, and malleable (Heine et al., 2001), leading to behavior that is more determined by the expectations and demands of social roles and relationships than personal goals (Kanagawa, Cross, & Markus, 2001; Suh, 2002). In addition, because modesty is hypothesized to be more valued in collectivistic cultures (Kurman, 2002), people in collectivistic cultures may be less likely to self-enhance in their evaluations of meaning in life and well-being. Further, Diener and Diener (1995) found that family satisfaction and life satisfaction was not stronger in collectivistic cultures as suggested by Triandis (1989). In fact, satisfaction with friends for participants in individualistic cultures correlated higher with life satisfaction compared to those in collectivistic cultures. Therefore, the potential influence of culture on meaning in life and well-being—via social roles and corresponding motivations to pursue group goals—may not be clarified by the individualism-collectivism dimension.

**Cultural dialecticism.** Dialecticism is a thought system that is believed to characterize East Asian groups. Because of their dialecticism, East Asians are thought to have a higher tolerance for contradiction, expectations of cognitive and behavioral change, and holistic thinking (Peng & Nesbitt, 1999). Spencer-Rodgers et al. (2009) summarized the three concepts that comprise dialecticism. The theory of contradiction holds that two ostensibly contradictory propositions may both be true simultaneously (yin–yang). The theory of change asserts that the universe is unpredictable, dynamic, and in constant flux. Finally, in holistic thinking, the part cannot be understood except in relation to the whole. Spencer-Rodgers, Williams, and Peng (2011) suggested that dialectical thinking operates at different levels across cultures, which may lead to lower psychological well-being because of the simultaneous experience of positive and
negative events. For example, Spencer-Rogers, Williams, and Peng (2004) found that participants in China reported higher levels of dialecticism and lower self-esteem and life satisfaction (as well as greater depression and anxiety) than Euro-American participants. From this perspective, the tendency for dialectical thinkers to experience contradiction and the associated negative aspects of their experiences, one might expect dialectical individuals to report lower levels of meaning in life and subjective well-being.

Spencer-Rodgers et al. (2011) provided a comprehensive contrast between dialectical thinking, a domain-general thinking style (Peng & Nesbitt, 1999), and naïve dialecticism, which is similar to a set of lay beliefs about the nature of the world. In essence, naïve dialecticism is reflected contextually in situation-specific beliefs rather than as a tendency to perceive the world in general in a dialectical manner. The authors noted that numerous studies have demonstrated cultural differences in perceptions of dialecticism in samples of East Asian and Western cultures and that naïve dialecticism can be reliably measured and experimentally manipulated across cultures (Alter & Kwan, 2009; Chen, English, & Peng, 2006; Cheng, 2009; English & Chen, 2007; Paletz & Peng, 2009; Spencer-Rodgers, Boucher, Mori, et al., 2009; Spencer-Rodgers et al., 2004). For example, Alter and Kwan (2009) showed that European Americans familiar with East Asian culture were more likely to anticipate greater levels of change in forecasting the weather and stock market when primed with the yin/yang symbol as compared to European Americans unfamiliar with East Asian culture. This finding suggests that naïve dialecticism might operate in similar ways in different cultural groups.

Finally, although the individualism-collectivism and dialecticism dimensions may overlap to some extent (e.g., Campbell, 2000; Nisbett et al., 2001), they can also be distinguished (Spencer-Rodgers, Williams, & Peng, 2010). For example, Spencer-Rodgers, Srivastava, et al.
(2010) found weak correlations between measures of dialecticism and interdependent self-construals in American \( r = .08 \) and Chinese \( r = .06 \) college students. Thus, at this point in cross-cultural research on meaning in life and well-being, it makes sense to examine the potential independent influence of these two dimensions.

**Cross-cultural Studies**

**Individualism-collectivism as a determinant of hedonic and eudaimonic well-being.**

In this section, I review studies that have examined well-being in individualistic (or Western) cultures and collectivistic (or non-Western cultures). Although not all studies specifically measured individualism-collectivism or self-construals, their results can be interpreted in terms of individualism-collectivism because of the countries involved. Consistent with individualism-collectivism theory, cross-cultural studies have shown that wellbeing is often higher in individualistic cultures as compared to collectivistic cultures (e.g., Diener et al., 1993; Veenhoven, 1993). Diener and Diener (1995) reported a number of cross-cultural factors associated with subjective well-being, including satisfaction with self, family, friends, and finances. Across 31 cultures, the authors found that these factors were strong predictors of life satisfaction. Self-esteem and friendship satisfaction were stronger predictors of life satisfaction in individualistic cultures. In addition, financial satisfaction was a stronger predictor of life satisfaction in less wealthy nations. Similarly, Diener et al. (1995) found that individualism and wealth are highly correlated predictors of well-being. Zhang, Yang, and Wang (2009) found that Chinese participants reported lower levels of subjective well-being than American participants and that household income was more strongly positively correlated with subjective well-being in China. In addition, Oishi et al. (1999) found that wealth was a stronger predictor of life satisfaction in poorer countries (most of which were non-Western or collectivistic) and
satisfaction with home life was a better predictor in wealthier (mostly Western) nations, possibly suggesting a hierarchy of needs (Maslow, 1971). It has been suggested that cross-cultural studies using immigrant samples may help to distinguish socioeconomic and cultural variables that relate to well-being (Kim, Schimmack, & Oishi, 2012). Finally, Asian American college students have reported lower levels of life satisfaction compared to European-American college students (Benet-Martinez & Karakimatoglu-Aygun, 2003; Oishi & Sullivan, 2005).

In addition to life satisfaction, positive and negative affect are important components of subjective well-being. Some cross-cultural studies have found that participants in Western cultures report a higher frequency of positive experiences, which, in turn, can lead to higher levels of life satisfaction than in East Asian cultures. For example, Oishi, Diener, Choi, Kim-Prieto, and Choi (2007) found stronger relationships between daily positive experiences and daily life satisfaction judgments in collectivistic cultures as compared to individualistic cultures, which reported higher levels of global well-being and more frequent positive experiences than collectivistic cultures. This suggested that individuals high in global well-being will experience reduced effects of positive events on their daily well-being. The authors proposed that individuals in interdependent cultures might be more sensitive to the influence of daily positive experiences than those in independent cultures. In another study, Uchida and Kitayama (2009) found that American participants tended to associate happiness with personal achievement and positivity, while Japanese participants perceive happiness as consisting of social harmony and a holistic view incorporating both positive and negative components. These findings were consistent with the view of American culture as independent (Hochschild, 1995; Sanchez-Burks, & Lee, 2007) and Japanese culture as interdependent (Kitayama & Markus, 2000). Japanese participants were also more likely than their American counterparts to report social disruption
and transcendental reappraisal as elements of happiness. The authors related this finding to the Japanese participants’ view of happiness as relative to a given context and the contextual changes and variations of an individual’s daily experience. The authors also found cultural differences in coping behaviors between the two groups. American participants tended to prefer to externalize blame for their unhappiness and utilize coping behaviors like anger and aggression. Japanese participants preferred to use internalized solutions to restore harmony and interdependence with their environment via transcendental reappraisal or self-improvement strategies (i.e., fitting in with societal standards). This supported a previous study by Suh et al. (1998), who related emotions and social norms to life satisfaction in 61 countries and found that emotions were a stronger predictor than social norms of life satisfaction in individualistic cultures, while social norms and emotions were similarly predictive within collectivistic cultures.

Cheng et al. (2011) tested four cultural models (i.e., independence, interdependence, conflict, integration) while relating self-construal and subjective well-being in samples from four Western countries ($N = 791$), three East Asian countries ($N = 749$), and three African countries ($N = 443$). The independence model posited that independent self-construal directly influences levels of subjective well-being. The interdependence model proposed that interdependent self-construal predominantly affects subjective well-being. The conflict model proposed that bicultural individuals suffer from a self-actualization-versus-others dilemma, where they must identify with two competing value systems (i.e., traditional vs. modern) and thus experience less subjective well-being. The integration model posited that both independent and interdependent self-construal influence subjective well-being. Participants from East Asian and African countries showed differences in levels of independent self-construal, interdependent self-construal, positive affect, and negative affect. The authors suggested that varying levels of
societal modernization within these countries might account for differences across collectivistic
countries. The authors found support for the independence model in Western countries and the
integration model in East Asian countries, while the interdependence and integration models
were differentially supported in different regions in Africa. The authors did not find support for
the conflict model. The associated model for each group of countries demonstrated that the
relevant self-construal (e.g., independent self-construal in Western countries, interdependent
self-construal in African countries, and both independent and interdependent self-construal in
East Asian countries) was related to positive affect and life satisfaction, but not negative affect.

In a daily diary study comparing Asian and Euro-American students, Oishi, Akimoto, Richards, and Suh (2013) found that Asian students, as compared to Euro-American students,
showed lower levels of life satisfaction and felt understanding (i.e., the feeling that one is
accurately perceived, understood, appreciated, and cared for). The authors tested felt
understanding as a possible mediator of ethnic group differences in life satisfaction. They found
that felt understanding mediated cultural differences in life satisfaction when controlling for
extraversion and neuroticism, which have been shown to be the two strongest personality
predictors of life satisfaction (Diener et al., 1999). Oishi et al. posited that Asians may tend to
feel less understood by others than Americans because of a stronger need to be accepted,
understood, and validated by others. This may partially explain why Asians feel their needs are
not as easily satisfied as Americans. Alternatively, the authors considered cultural differences in
communication (e.g., Asians are less expressive), consistency in self-concept (e.g., Asians are
less consistent), and ambivalence (e.g., Asians are more ambivalent) as possible influences on
levels of felt understanding.
Although most cross-cultural studies, as reviewed above, have examined cultural differences in subjective well-being, a few have investigated cultural differences in aspects of eudaimonic well-being, including meaning in life. For example, Church et al. (2013) tested whether satisfaction of Self-Determination Theory (SDT) needs in various social roles, as well as needs for self-actualization and pleasure-stimulation, predicted hedonic and eudaimonic well-being in eight cultures. They also tested for cultural differences in both hedonic and eudaimonic well-being. The authors used the MLQ and a modified version of the PWB to assess meaning in life and psychological well-being. Positive and negative affect, aspects of hedonic well-being, were measured using 20 items from the PANAS-X (Watson & Clark, 1994). Dialecticism was measured with the Dialectical Self Scale (DSS; Spencer-Rodgers, Srivastava, Boucher, English, Paletz, Wang, et al. ..., 2010). Self-construals were assessed with selected items from Singelis’s (1994) Independent Self-Construal scale, Cross, Bacon, and Morris’s (2000) Relational Self-Construal Scale, Kashima and Hardie’s (2000) Relational, Individual, and Collective Self-Aspects Scale, and Yamaguchi’s (1994) Collectivism scale. Finally, participants rated the extent to which their needs for autonomy, relatedness, competence, self-actualization-meaning, and pleasure-stimulation were satisfied in various social roles.

Church et al. (2013) found that participants in the four Asian countries (the Philippines, Malaysia, China, and Japan) scored lower, on average, than participants in the four non-Asian countries (the United States, Australia, Mexico, and Venezuela) on the PWB Purpose in Life subscale (as well as the PWB Autonomy, Personal Growth, and Self-Acceptance scales) and higher on the MLQ-Search subscale. There were no cultural differences for positive affect, negative affect, or the MLQ-Presence subscale. The Asian samples also reported lower satisfaction of needs for autonomy, competence, and self-actualization-meaning. Thus, there
were no cultural differences in hedonic well-being, but Asians reported lower meaning or
purpose in life with two of the three relevant measures (i.e., the PWB Purpose in Life scale and
needs for self-actualization-meaning in social roles, but not the MLQ-Presence scale). Consistent
with SDT, satisfaction of the various needs generally predicted both hedonic and eudaimonic
well-being, including the measures of meaning and purpose in life. Consistent with cultural
psychology theory, the mean differences between Asians and non-Asians in need satisfaction and
overall well-being were partially mediated by dialecticism and independent self-construals. The
authors did not analyze the MLQ as a predictor of positive and negative affect.

In samples of middle-aged and older adults in Japan (N = 482) and the United States (N =
3,032), Karasawa et al. (2011) tested for age and cultural differences in ratings of hedonic and
eudaimonic well-being. Although Karasawa et al. (2011) did not directly measure individualism-
collectivism, I review the study here because Japan is typically viewed as relatively collectivistic
as compared to the individualistic United States (e.g., Hofstede, 2001). Participants completed
the PWB and a measure of positive and negative affect. The authors used a 2 (culture) x 2
(gender) x 4 (age group) ANOVAs to analyze the data. The authors found that older adults in
both cultures had lower purpose in life than their middle-aged counterparts. Older adult Japanese
participants had higher personal growth than middle aged Japanese participants, while American
participants showed the reverse relationship (e.g., middle aged participants had higher personal
growth). Japanese middle-aged participants had significantly higher interpersonal well-being
than American middle-aged adult participants. The authors noted the pattern of lower purpose in
life with age was also demonstrated in a Canadian sample (Clarke et al., 2000). They suggested
that purposeful and meaningful life engagement could be attributed to difficulties in adjusting to
technological advancements due to insufficient resources for the aging population.
One major issue with the study was Karasawa et al.’s (2011) use of well-being measures developed in Western cultures that were not culturally balanced to account for the Japanese culture. The measures did not include some dimensions of interdependent well-being or aspects of happiness that are particular to East Asian philosophy (e.g., happiness as momentary, incomprehensible). Also, many of the items used “I”, which may have affected the responses of the more socially oriented Japanese participants. A second limitation was the difference in sample size and composition. The authors derived their American sample from archival data from the 1995-1996 MIDUS national survey. The Japanese sample was recruited from adult education classes and an undergraduate university in two major cities in Japan. Overall, the Japanese participants were more likely to be married and have lower education than the American participants. A third issue with the study was that longitudinal data is necessary to help clarify developmental, contextual, and cultural influences. Other longitudinal studies using samples from the United States have shown that purpose in life decreases with age (Springer, Pudrovska, & Hauser, 2011). A fourth limitation was that the authors did not use direct measures of cultural dimensions (e.g., independent-interdependent self-construals, dialecticism), so they could not conduct formal mediation tests.

In summary, studies of cultural differences in well-being along the individualism-collectivism dimension tend to show that individualistic cultures experience greater levels of subjective well-being than those in collectivistic cultures. However, individuals in collectivistic cultures may be more sensitive to the influence of daily experiences affecting their daily well-being. The individualism-collectivism distinction may underlie cultural differences in how individuals think about their discomfort (e.g., externalizing vs. internalizing blame) or respond to it (e.g., anger toward others vs. self-improvement), thus impacting their experience of well-
being. However, the relevant studies have been largely limited to comparisons of the United States and East Asian countries. In addition, few studies have directly examined cultural differences in meaning in life, including from the perspective of individual-collectivism. Therefore, further investigation of the interplay of individual-collectivism, well-being, and meaning in life across a greater number of countries is warranted.

**Naïve dialecticism as a determinant of hedonic and eudaimonic well-being.** Most cross-cultural studies involving the dialecticism dimension have applied the Dialectical Self Scale (DSS; Spencer-Rodgers, et al., 2010). Therefore, I will begin this section by providing an overview of that measure. The DSS is the most validated and widely used measure of dialecticism. It is a 32-item measure assessing the three dimensions of contradiction, cognitive change, and behavioral change. Items are rated using a 7-point scale, ranging from 1 (strongly disagree) to 7 (strongly agree). Sample items include: “When I hear two sides of an argument, I often agree with both.” and “I am constantly changing and am different from one time to the next.” The authors also developed a 14-item Abbreviated DSS to reduce administration time. The DSS has demonstrated adequate cross-cultural validity and reliability across a number of studies in both Western and non-Western samples (Church, et al., 2012; Hamamura, 2004; Hamamura, Heine, & Paulhus, 2008; Keller, Loewenstein, & Jin, 2010; Ma et al., 2010; Morio, Yeung, & Peng, 2010; Sanchez, Shih, & Garcia, 2009; Spencer-Rodgers & Peng, 2010) In the rest of this section, I review cross-cultural studies that have utilized the DSS to relate dialecticism and well-being.

Peng and Nisbett’s (1999) seminal paper on dialectical thinking led to a substantial amount of cross-cultural empirical research supporting the premise that people differ in the degree to which they view the world as inherently contradictory and in constant flux (Spencer-
Recent empirical studies have shown differences in the expression of dialecticism across cultural groups. For example, Boucher (2011) noted the growing evidence that dialecticism operates to a greater degree in East Asian as compared to Western groups (Nisbett, Peng, Choi, & Norenzayan, 2001; Spencer-Rodgers, Williams, & Peng, 2010). In her own study, Boucher investigated the relationship between dialecticism and cross-role and within-role consistency, as well as whether dialecticism moderates the relationship between self-consistency and subjective well-being, self-concept certainty, and felt authenticity.

Participants (United States: \( N = 113 \), China: \( N = 129 \)) completed measures of subjective well-being, dialecticism, and a measure for global self-concept across and within two roles. Participants from China reported higher levels of dialectical thinking and lower levels of subjective well-being, self-concept certainty, and authenticity than participants from the United States. They also reported greater inconsistency across roles, within the global self-concept, and in the friend role. Boucher found support for earlier studies demonstrating that dialecticism fully or partially mediated national differences in subjective well-being, self-concept consistency, and authenticity (English & Chen, 2007; Spencer-Rodgers et al., 2009). She also used a series of hierarchal regressions to show that dialecticism moderated the relationships of self-consistency with subjective well-being and self-concept certainty. Further, simple slopes analyses showed that the relationship between self-consistency and both subjective well-being and self-concept certainty was stronger for low-scoring DSS individuals than individuals with high DSS scores.

This study suggests that cultural differences in dialecticism and its impact on subjective well-being should be considered in future studies. One major limitation of this study was the sequence in which participants completed the measures of dialecticism and subjective well-being, which were completed after they filled out their self-concept and authenticity ratings. A second
limitation involves the generalizability of the findings because 75% of the Chinese participants and 73% of the American participants were female.

Spencer-Rodgers, Williams, and Peng (2010) reviewed over a decade of research on dialecticism to highlight possible cultural differences, including findings that dialectical thinkers tend to show greater expectations of change in tasks related to explanation and prediction and greater tolerance of contradiction in tasks involving the reconciliation of contradictory information (e.g., Choi et al., 2007). The authors also noted that dialectical thinkers are more likely to perceive emotional complexity (i.e., co-occurrence of positive and negative emotions) as natural and inevitable, thereby causing less psychological damage to dialectical thinkers than to non-dialectical thinkers. Overall, Spencer-Rodgers, Williams, and Peng showed that the effects of dialecticism are manifested in the domains of the self (Church et al., 2008; Spencer-Rodgers, Boucher, Peng, et al., 2009), emotional experience (Schimmack et al., 2002; Spencer-Rodgers, Peng, & Wang, 2010), psychological well-being (Hou, Zhu, & Peng, 2003; Ji, Zhang, Osborne, & Guan, 2004; Spencer-Rodgers, Peng, Wang, & Hou, 2004), attitudes and evaluations (Hamamura, 2004; Morio, Yeung, & Peng, 2010), social categorization and perception (Sanchez, Shih, & Garcia, 2009), and judgment and decision making (Keller, Loewenstein, & Jin, 2010; Maddux & Yuki, 2006). These studies demonstrate the utility of dialecticism in accounting for cultural differences across multiple psychological domains. Those studies investigating dialecticism in relation to subjective well-being, emotional experience, and psychological well-being are most relevant to the present review of dialecticism, meaning in life, and well-being. I address those studies in the following paragraphs.

Positive and negative affect comprise the affective components of subjective or hedonic well-being. Kitayama and Markus (2000) contended that a balance between positive and
negative emotions can help to promote subjective well-being. The authors found cultural differences between Japanese and American participants in the relationship between positive and negative affect. The relationship was positive in the Japanese sample and negative in the American sample. In the literature, the co-occurrence of positive and negative affect has been referred to as emotional complexity. A number of studies have revealed cultural differences in emotional complexity and some researchers have attributed these differences to cultural differences in dialecticism (Bagozzi et al., 1999; Kitayama et al., 2000; Schimmack et al., 2002; Spencer-Rodgers et al., 2004; Spencer-Rodgers, Peng, and Wang, 2010).

For example, Schimmack et al. (2002) investigated the relationship between four pleasant and unpleasant emotions in 38 countries, including China (e.g., collectivistic/dialectical), Peru (e.g., collectivistic/non-dialectical), and the United States (e.g., individualistic/non-dialectical), and found that emotional complexity was predicted better by dialectical thinking than by individualism/collectivism. However, Schimmack et al. classified the cultures as dialectical or non-dialectical without directly measuring dialecticism. Similarly, two other studies have shown that Asians tend to report higher levels of dialectical thinking and emotional complexity (Scollon, Diener, Oishi, & Biswas-Diener, 2005; Spencer-Rodgers, Peng, & Wang, 2010), with the latter study utilizing a direct measure of dialecticism (i.e., the DSS). The use of a direct measure of dialecticism can strengthen assertions about its potential influence on emotional complexity.

Spencer-Rodgers, Peng, and Wang (2010) used the DSS in two cultures to determine whether dialecticism mediates cultural differences in the presence of emotional complexity in mainland Chinese ($N = 53$) and European-American ($N = 54$) samples. The authors placed participants into two groups (prime and control). The prime group was asked to recall
experiences in which they were aware of advantages and disadvantages to a situation with no clear solution. All participants then completed the DSS, the SWLS, and a 20-item version of the PANAS. The authors found that individuals with higher levels of dialectical thinking exhibited greater levels of emotional complexity in both the prime and no prime (i.e., control) groups. In particular, Chinese participants showed greater levels of dialectical thinking and emotional complexity than did Euro-American participants. Euro-American participants showed a negative correlation between positive affect and negative affect, while no relationship between positive and negative affect was found for Chinese participants. There was no interaction of culture × condition (e.g., prime vs. no prime) for dialecticism or emotional complexity. Further, the authors used a mediation model with culture as the predictor, dialecticism as the mediator, and emotional complexity as the criterion. Nonparametric bootstrapping procedures showed that dialecticism mediated the influence of culture on emotional complexity.

Spencer-Rodgers et al.’s (2010) study was novel in being the first to test the premise that emotional complexity is more prevalent in East Asian than in North American cultures while applying a direct measure of dialecticism. There were three limitations of this study. First, the priming condition may not have elicited emotional complexity in the desired manner. Second, there was no specification of the duration of the participants’ experience of emotional complexity. Third, the sample size for each group was small ($N = 26-28$ per group). Spencer Rodgers et al. (2010) offered a variety of possible explanations that could explain differences in the presence and experience of positive and negative affect across cultures. These included possible cultural differences in the basic structure of emotion, trait-state tendencies, the relative occurrence of life events based on region, and a variety of cognitive biases. Finally, Hui, Fok, and Bond (2009) found that dialectical self-beliefs, but not interdependent self-construals, were
related to cultural differences in emotional complexity. This suggests that dialecticism may provide a useful mechanism for examining how culture influences the extent of variability in individuals’ thoughts, behaviors, and emotional experiences.

Steger and colleagues (Steger et al., 2006; Steger, Kawabata, et al. 2008; Steger, Oishi, & Kashdan, 2009; Steger et al., 2011) have conducted systematic studies of meaning in life and well-being in comparison of U.S. and Japanese samples. I briefly note these studies here because Steger has generally attributed the cultural differences found to greater dialecticism in Japan than America. These studies have shown that Americans with greater search for meaning have significantly less presence of meaning and are generally less satisfied with their lives. This finding was replicated in Australian (Cohen & Cairns, 2012) and Turkish (Dogan, Sapmaz, Tel, Sapmaz, & Temizel, 2012) samples. However, Steger, Kawabata et al. (2008) found cultural differences between American and Japanese samples in their levels of presence of meaning and in the relationship between presence and search for meaning in life. In the U.S. the relationship was negative, while in Japan the relationship was positive. Further, in Japan only, the presence of meaning in life was found to help mitigate the negative influence (e.g., lower levels of positive affect) of searching for meaning in life.

In summary, cultural differences in dialectical thinking appear to influence several aspects of well-being, including positive affect, negative affect, life satisfaction, and emotional experience. Potential links between emotional complexity and meaning in life and the possible moderating effect of dialecticism may provide insight into clinical applications, such as psychological assessment and therapeutic interventions. For example, the tendency for East Asians to report higher levels of emotional complexity and dialecticism may signify a greater affinity for contradiction and balance, resulting in greater psychological flexibility and well-
being. Culture also appears to influence the degree to which individuals may perceive search for meaning and how it impacts their sense of purpose in life and well-being. However, there are limited studies that relate dialecticism with the meaning in life construct and other aspects of well-being across cultures. In the following section, I review in more detail Steger, Kawabata, et al.’s (2008) proposed dialectical model of meaning in life, which has been applied across cultures.

Towards an Integrated Dialectical Model of Culture, Meaning in Life, and Well-being

Steger, Kawabata et al. (2008) adapted theories of self-concept and cognitive styles to develop a dialectical model of meaning in life, which predicts cultural differences in the interplay of search for meaning and presence of meaning in life. As noted earlier, initial correlational, factor analytic, and longitudinal evidence in U.S. samples suggested that the MLQ Presence and Search subscales are only marginally related (Steger et al., 2006; Steger & Kashdan, 2007). Subsequently, Steger, Kawabata, et al. (2008) sought to test these findings in two diverse cultures. They discussed a number of implications for the dialectical model of meaning in life in cultures traditionally viewed as individualistic, independent, and non-dialectical (e.g., United States) versus those typically viewed as collectivistic, interdependent, and dialectical cultures (e.g., Japan).

First, the researchers hypothesized that participants in the United States would report greater presence of meaning in life than participants in Japan. A second hypothesis was that relations between the presence of meaning in life and other indices of well-being would be similar in the United States and Japan. A third hypothesis was that the search for meaning in life would be more accessible and less distressing in Japan than in the U.S., resulting in higher levels of the search for meaning in life compared to independent, non-dialectical cultures. Fourth, it
was hypothesized that search for meaning in life would be positively related to both the presence of meaning in life and positive affect in Japan. In contrast, for participants in the United States, the authors hypothesized that search for meaning would be negatively related to presence of meaning in life and positive affect. A fifth hypothesis was that there would be a significant three-way interaction between search for meaning, presence of meaning, and culture in predicting positive affect. The authors proposed that participants in the United States with both high presence and search for meaning in life scores would show relatively high levels of positive affect. In contrast, they proposed that participants in the United States with higher search for meaning and lower presence of meaning scores would have relatively low levels of positive affect. Steger, Kawabata et al. (2008) did not directly state an application of this hypothesis to the Japanese sample, but the predicted three-way interaction would require a different pattern of relationships in the Japanese sample.

Steger, Kawabata et al. (2008) used multigroup confirmatory factor analysis to demonstrate acceptable metric (CFI = .93, RMSEA = .07, 90%CI from .06 to .07, SRMR = .06) and scalar (CFI = .97, RMSEA = .09, 90%CI from .09 to .10, SRMR = .07) equivalence for the MLQ in American and Japanese samples. Indeed, Steger, Kawabata et al. (2008) found that Americans participants (N = 1183) reported greater presence of meaning, while Japanese participants (N = 982) reported greater search for meaning. The authors found support for their dialectical model of meaning in life. As predicted, search for meaning in life was negatively related to presence of meaning in life and well-being in the United States and positively related to the same variables in Japan. As such, the search for meaning appeared to be influenced by culture and moderated the influence of culture on the presence of meaning in life.
This study was novel in (a) utilizing meaning in life as a predictor of well-being rather than as a dependent variable, and (b) applying tests of the model in a non-Western culture. It also had several limitations. For example, the model was not a true dialectical model as no dialectical measures (or any other cultural dimensions) were actually measured and tested as mediators. Although Steger, Kawabata et al. (2008) focused on a dialectical model of meaning in life, they also referred to other cultural dimensions (i.e., independent-interdependent, cultural tightness-looseness) without explicitly incorporating them in the model. Another limitation was the sole use of a 4-item Subjective Happiness Scale to measure well-being. Without a life satisfaction and negative affect measure, this was insufficient to comprehensively measure subjective well-being. A third limitation was the possibility of cultural differences in response tendencies. For example, the Japanese participants may have exhibited moderate response tendencies. The authors suggested using experimental methods to induce states of meaning or searching for meaning to lessen such cultural effects.

Another study extended Steger, Kawabata, et al.’s (2008) model of meaning in life and well-being to another Western culture. Cohen and Cairns (2012) replicated in an Australian sample \((N = 500)\) the negative relationship between search for meaning and well-being and the positive relationship between presence of meaning and well-being. The authors also found that presence of meaning and self-actualization each moderated the relationship between search for meaning and happiness. For example, the negative effect of search for meaning on happiness was reduced as presence of meaning or self-actualization increased. Overall, these results suggested that higher levels of presence of meaning in life (or self-actualization) could help to buffer the potentially harmful effects of searching for meaning in life for individuals in some cultures. As suggested by Steger, Kawabata et al. (2008), one’s search for meaning may be perceived
differently by individuals with and without the presence of meaning. For individuals with a high level of presence of meaning, the search for meaning may be viewed as a joyous, enriching experience. Further, high levels of self-actualization may also reduce the psychological distress that comes with searching for meaning. This phenomenon also points to individual differences in attitudes toward searching for meaning in life, which can be attributed, at least in part, to cultural differences.

Finally, in establishing a model integrating meaning in life, dialecticism, and well-being across cultures, it may be important to consider the potential role of mediator variables in addition to moderator variables. For example, Kim et al. (2012) proposed that a broader understanding of national differences in well-being will be attained by testing possible mediators, rather than moderators, at the level of individuals (see also Oishi & Sullivan, 2005). While individual level mediators do not explain cultural influences, they establish cultural effects specific to individuals from the same region or country. As suggested by Baron and Kenny (1986), cultural mediator variables have at least three requirements: to vary across cultural groups; to predict variation in well-being both across and within cultural groups; and to significantly reduce the group differences in well-being when inserted into the model. While Steger et al.’s (2006) dialectical model of meaning in life tested for moderators, it is important to consider cultural mediator variables as well.

Summary

This review addressed research on meaning in life, well-being, and culture and their interrelationships as a means to guide inquiries about optimal human functioning. The determinants of optimal human functioning are complex and multifaceted. Researchers have shown that some combination of aspects of hedonic and eudaimonic well-being can contribute
toward optimal human functioning. However, the debate about the potential influence of contextual, developmental, and cultural factors endures.

Despite the varying models and theories about what constitutes meaning in life, Steger (2012) contended that comprehension and purpose comprise the two primary dimensions of meaning. Comprehension refers to the ability to make sense of and understand life, which includes how an individual meshes and operates within his/her external world. Purpose denotes a set of long-term life goals that are congruent with one’s values and motivate the pursuit of such goals. This conceptualization leaves open the potential impact of culture and individual differences in one’s experience of meaning in life. A number of measures of meaning in life have been empirically studied for more than six decades without a standard or consensus instrument. It is not surprising that existing measures of meaning in life have limitations, given that there is no universally recognized definition of meaning in life. The MLQ appears to be the best available measure for application across cultures. The MLQ provides a convenient way to test for cultural differences in the relationship between well-being and the experience of having versus searching for meaning in life. Previous investigations of cultural differences in the relationship between meaning in life and well-being have been limited to a small number of cultures, primarily the United States and East Asian countries. Individualism-collectivism and dialecticism appear to be particularly applicable cultural dimensions in testing for cultural differences in meaning in life and well-being.

A broader understanding of meaning in life as it relates to well-being has emerged in recent years based on the emergence of positive psychology (Seligman & Csikszentmihalyi, 2000) and has led to a wealth of studies that incorporate personality, self, motivational, and cultural variables (Cohen & Cairns, 2012; Lavigne et al., 2013; Steger et al. 2013; Trent et al.,
2013). Similarly, successful development and application of theories and interventions based on cultural differences has led to increased awareness and acceptance of concepts such as dialecticism, even in Western cultures. Nevertheless, relevant studies have enhanced our knowledge in these areas in a somewhat piecemeal fashion, leaving open many questions, such as the following: How are meaning in life and well-being perceived or manifested in various cultures? What are the antecedents and consequences of meaning in life and well-being in different cultures? How do search and presence of meaning interact in the prediction of well-being and other outcomes in various cultures? What are the cultural dimensions (e.g., individualism-collectivism, dialecticism) that mediate any cultural differences?

A limited number of studies have been able to coherently integrate culture, meaning in life, and well-being to some degree (e.g., Steger, Kawabata, et al., 2008). However, no study to date has been able to successfully do so across a range of cultures, while being free of non-trivial methodological concerns. Future studies seeking to integrate culture, meaning in life, and well-being would likely benefit from a variety of considerations. These include administration of direct measures of cultural dimensions, using both global ratings and experience sampling methods, utilizing longitudinal designs to better determine the direction of causality between key constructs (e.g., meaning in life and well-being), inclusion of broader samples within cultures (e.g., non-college students), and testing theoretical hypotheses in a greater diversity of cultures.
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doi:http://dx.doi.org/10.1037/0022-3514.72.6.1245


doi:http://dx.doi.org/10.1037/0033-2909.131.6.803


EMPIRICAL STUDY

INTRODUCTION

In the present study, I address how culture might influence individuals’ experience of meaning in life and subjective well-being. It is well established that subjective well-being is strongly influenced by genetic factors and is relatively stable, with individuals maintaining characteristic levels over time (Diener, Diener, & Diener, 1995; Diener, Suh, Lucas, & Smith, 1999; Lymbomirsky, Sheldon, & Schkade, 2005). At the same time, cultural, self, motivational, and trait variables have also been shown to have independent effects on subjective well-being (Church, Katigbak, et al., 2012; Kitayama & Markus, 2000; Otake, Shimai, Tanaka-Matsumi, Otsui, & Fredrickson, 2006; Sheldon, Cheng, & Hilpert, 2011). Subjective well-being, as typically defined, is comprised of both cognitive (i.e., life satisfaction) and affective or hedonic components (i.e., positive and negative affect).

In addition to subjective well-being, a number of researchers have addressed meaning or purpose in life as an important component of optimal psychological functioning (Debats, 1996; Frankl, 1984; Scannell, Allen, & Burton, 2002; Sheldon et al., 2011; Zika & Chamberlain, 1992). Several studies have investigated the association between meaning in life and well-being, distinguished them as separate constructs, and supported the importance of having a sense of meaning or purpose in life for well-being (Chamberlain & Zika, 1988; Steger & Frazier, 2005; Steger, Kawabata, Shimai, & Otake, 2008; Zika & Chamberlain, 1987). Other studies have implied an alternative direction of causality, with well-being seen as important in developing a sense of meaning in life (King, Hicks, Krull, & Del Gaiso, 2006; Scannell et al. 2002; Trent & King, 2010; Trent, Lavelock, & King, 2013). Whatever the (likely reciprocal) direction of causality, research on meaning in life can enhance our understanding of mental health or well-
being and facilitate the design of effective psychological interventions aimed at increasing individuals’ “happiness” (Seligman, 2002) and attainment of the “good life” (King & Napa, 1998).

Another important but unanswered question is whether meaning in life and well-being are manifested, and related to each other, in similar ways across cultures. Indeed, some research suggests that meaning in life, well-being, and their relationship, may vary across cultures (Ryff & Singer, 1998; Steger, Kawabata, et al., 2008). Although meaning in life has shown promise as a predictor of well-being in different cultures (Cohen & Cairns, 2012; Dogan, Sapmaz, Tel, Sapmaz, & Temizel, 2012; Steger, Kawabata, et al., 2008), few studies have investigated non-western cultures. The purpose of the present study was to investigate the relationship between meaning in life and well-being in four diverse cultures (the United States, Australia, China, and Japan). Specifically, I tested Steger, Kawabata, et al.’s (2008) dialectical model of meaning in life in a cross-cultural context using two cultural dimensions elaborated by cultural psychologists (i.e., individualism-collectivism and dialecticism) to address cultural differences.

Meaning in Life

Although various definitions of meaning in life have been offered, Baumeister and Vohl (2007) asserted that the most generally recognized definition involves the possession of both self-awareness (e.g., making sense of one’s life) and purpose (e.g., seeking wisdom and/or self-actualization). Most researchers of meaning in life have been influenced by Frankl’s (1963) writings about his experiences in a Nazi concentration camp during World War II. Frankl’s experiences prompted his consideration of the significance of personal meaning in one’s life as an aspect of healthy psychological functioning. Indeed, having meaning in one’s life has been widely viewed as a primary requirement of human existence and universally important in
achieving subjective well-being and avoiding distress (Frankl, 1963; King & Napa, 1998; Ryff & Singer, 1998; Scollon & King, 2004). For example, in a study of young mothers and elderly men and women in the United States, Zika and Chamberlain (1992) found that meaning in life was strongly related to positive affect, although less so (inversely) to negative affect. More recently, in six studies with U.S. college students, King et al. (2006) found that experiencing life as meaningful was positively related to positive affect and negatively related to negative affect. Steger, Kawabata et al. (2008) found that the presence of meaning in life was positively associated with subjective happiness in both the United States and Japan. According to recent studies, meaning in life serves as one of the primary factors contributing to higher levels of subjective well-being through achieving a balanced life (Sirgy & Wu, 2009), obtaining authentic happiness (Peterson, Park, & Seligman, 2005) or fulfilling psychological needs (Church, Katigbak, et al., 2012).

**Presence versus search for meaning.** In addition to purpose or meaning in life, Steger et al. (2006) noted that searching for meaning is another key aspect of the meaning in life construct. Accordingly, these researchers developed the Meaning in Life Questionnaire (MLQ) to assess both presence and search for meaning in life, whereas previous measures had assessed only presence of meaning. Steger et al. (2006) argued that the MLQ also addresses the item-content limitations of earlier meaning in life measures, such as the Purpose in Life Test (PIL; Crumbaugh and Maholick, 1964), the Life Regard Index (LRI; Battista & Almond, 1973), the Purpose in Life subscale of the Psychological Well-Being Scale (PWB-P; Ryff 1989), and the Sense of Coherence—Meaning Scale (SOC-M; Antonovsky 1987), whose content is confounded by other constructs such as mood and life satisfaction. Steger, Kawabata et al. (2008) defined the presence of meaning in life as the degree to which people perceive their lives as comprehensible.
and significant, and feel a sense of purpose or mission in their lives that transcends typical daily life concerns. In contrast, they defined the search for meaning dimension as the strength, intensity, and activity associated with one’s desire and efforts to acquire or enrich one’s understanding of the meaning and purpose in one’s life. To date, the process of searching for meaning has received considerably less research attention than the presence of meaning, despite assertions that search for meaning is a natural, fundamental human motivation (Frankl, 1963; Maddi, 1970; Steger, Kashdan, et al., 2008).

The significance of the distinction between the presence and search for meaning is indicated by research that has related the two dimensions to physical health and psychological wellbeing. In empirical research with the MLQ, the presence of meaning subscale has shown positive relationships with positive affect, self-esteem, life satisfaction, optimism, hope, happiness, curiosity, self-actualization, daily positive social interactions, and perceived positive health (e.g., Kashdan & Breen, 2007; Steger et al., 2006; Steger, Kashdan, et al., 2008; Steger, Mann, Michels, & Cooper, 2009). Conversely, in the same studies, the presence subscale has shown negative relationships with depression, anxiety, perceived and experienced stress, negative affect, and PTSD symptoms. In contrast, several studies have found positive correlations relating greater search for meaning in life to depression and rumination, open-mindedness, motivation, and absorption and, conversely, negative correlations with relatedness, self-acceptance, and perceived well-being (Park, Park, & Peterson, 2010; Steger, Kawabata, et al., 2008; Steger, Oishi, & Kesebir, 2011).

Consistent with these findings, Baumeister (1991) suggested that higher levels of search for meaning may indicate that presence of meaning has been lost to some degree, thereby signaling a likelihood of higher levels of distress and discontent. This idea appears to have
informed recent studies that have found an inverse relationship between presence and search for meaning and that greater search for meaning is associated with lower life satisfaction (Cohen & Cairns, 2012; Steger & Kashdan, 2007; Steger, Kashdan, et al., 2008). Nonetheless, some individuals who are searching for meaning may still perceive their lives to be meaningful. A limitation of available studies is that they were largely performed in Western cultures (e.g., the United States, Australia). Indeed, only one study has tested the relationship between presence and search for meaning across cultures (Steger, Kawabata, et al., 2008). It is possible that there are cultural differences in the relationship between the presence and search for meaning and how they interact to influence well-being.

**Cultural Dimensions, Meaning in Life, and Well-being**

There is support for both cultural universals and differences in cross-cultural studies of meaning in life and well-being. However, few studies have integrated both concepts. One theoretical perspective links levels of meaning in life and well-being to the cultural dimension of individualism-collectivism (Diener et al., 1995; Triandis, 1995) and associated differences in independent and interdependent self-construals (Markus & Kitayama, 1991). Researchers have suggested that people from individualistic cultures tend to self-enhance in their evaluations of their attributes in order to increase positive affect or subjective well-being (Heine & Hamamura, 2007; Heine, Kitayama, & Lehman, 2001). In addition, because people in individualistic cultures are hypothesized to be freer to pursue personal goals and strivings, and choose their own life course, they may experience a greater sense of meaning in life than people in collectivistic cultures (Diener et al., 1995). In contrast, people in collectivistic cultures are thought to view the self as relatively interdependent, socially embedded, and malleable (Heine et al., 2001), leading to behavior that is more determined by the expectations and demands of social roles and
relationships than personal attributes or goals (Kanagawa, Cross, & Markus, 2001; Suh, 2002). In addition, because modesty is hypothesized to be more valued in collectivistic cultures (Kurman, 2002), people in collectivistic cultures may be less likely to self-enhance in their evaluations of meaning in life and well-being.

Consistent with individualism-collectivism theory, cross-cultural studies have shown that well-being is typically higher in individualistic cultures than in collectivistic cultures (e.g., Diener et al., 1995; Oishi, Diener, Choi, Kim-Prieto, & Choi, 2007; Veenhoven, 1993; Zhang, Yang, & Wang, 2009). Cross-cultural studies also indicate that the determinants of well-being may differ across cultures. For example, Uchida and Kitayama (2009) found that American participants tended to associate happiness with personal achievement and positivity, while Japanese participants perceived happiness as consisting of social harmony and a holistic view incorporating both positive and negative components. Across 61 countries, Suh et al. (1998) found that emotions, as compared to following social norms, were a stronger predictor of life satisfaction in individualistic cultures, whereas social norms and emotions were similarly predictive of life satisfaction in collectivistic cultures. These studies suggest that levels and determinants of well-being and meaning in life may differ across cultures and that some of these differences might be associated with the distinction between individualistic and collectivistic cultures.

Dialecticism has also been proposed as a cultural dimension that may impact meaning in life, well-being, or their relationship. Dialecticism is a thought system that is believed to characterize East Asian groups (Peng & Nisbett, 1999). Because of their dialecticism, East Asians are thought to have a higher tolerance for contradiction, expectations of cognitive and behavioral change, and holistic thinking. Spencer-Rodgers, Williams, and Peng (2010) suggested
that dialectical thinking in East Asian cultures may lead to lower psychological well-being because of the simultaneous experience of positive and negative events, or positive and negative affect. Indeed, a number of studies have found that the correlation between positive and negative affect, which is generally negative in Western studies, is less so if at all in East Asian cultures (Bagozzi, Wong, & Yi, 1999; Miyamoto & Ryff, 2011; Schimmack, Oishi, & Diener, 2002; Scollon, Diener, Oishi, & Biswas-Diener, 2005; Steger, Kawabata, et al., 2008). For example, Spencer-Rodgers et al. (2010) found that Chinese participants, as compared to Euro-American participants, showed greater levels of dialectical thinking and emotional complexity (i.e., co-occurrence of positive and negative affect). Euro-American participants showed a negative correlation between positive affect and negative affect, while no relationship between positive and negative affect was found for Chinese participants. The researchers also showed that dialecticism mediated the influence of culture on emotional complexity. These results suggest a degree of emotional ambivalence in dialectical cultures, which could underlie lower evaluations of well-being or meaning in life. Indeed, studies have found that East Asians report lower levels of self-esteem and hedonic well-being than Euro-Americans (Hamamura, Heine, & Paulhus, 2008; Spencer-Rodgers, Williams, & Peng, 2004; Steger, Kawabata, et al., 2008). In a similar but more nuanced finding, Miyamoto and Ryff (2011) found that Japanese were more likely than Americans to retrospectively report a balance of positive and negative emotions over the past 30 days, but with moderate rather than high frequency for both positive and negative emotions (i.e., a moderate dialectical type). In contrast, Americans were more likely to report positive emotions with greater frequency that negative emotions (a positive non-dialectical type). Furthermore, participants classified into the moderate dialectical type in Japan reported fewer physical health symptoms than did Americans classified into the moderate dialectical type. The authors
attributed these differences to cultural scripts that emphasize a dialectical “middle way” in Japan and maximization of positive emotions relative to negative emotions in the U.S. Overall, these findings suggest that the tendency for dialectical thinkers to experience contradiction and emotional ambivalence will lead to lower assessments of subjective or hedonic well-being and meaning in life in dialectical cultures than in non-dialectical cultures, and that the cultural dimension of dialecticism may account for these cultural differences. These predictions have recently been incorporated into an integrated dialectical model of culture, meaning in life, and well-being proposed by Steger, Kawabata, et al. (2008).

An Integrated Dialectical Model of Culture, Meaning in Life, and Well-being

Steger, Kawabata et al. (2008) adapted theories of self-concept and cognitive styles to develop a dialectical model of meaning in life, which predicts cultural differences in the interplay of search for meaning and presence of meaning in life in the prediction of well-being. Initial correlational, factor analytic, and longitudinal evidence in U.S. samples suggested that the MLQ Presence and Search subscales are only marginally related (Steger et al., 2006; Steger & Kashdan, 2007). Subsequently, Steger, Kawabata, et al. (2008) investigated their model in two diverse cultures. They discussed a number of predictions of the dialectical model of meaning in life in cultures traditionally viewed as individualistic, independent, and non-dialectical (e.g., United States) versus collectivistic, interdependent, and dialectical (e.g., Japan).

Specifically, they expected that (a) participants in the United States would report greater presence of meaning in life than participants in Japan; (b) relations between the presence of meaning in life and other indices of well-being would be similar in the United States and Japan; (c) search for meaning in life would be more accessible and less distressing in Japan, resulting in higher levels of search for meaning in Japan than in the United States; (d) search for meaning
would be positively related to both the presence of meaning in life and positive affect in Japan, but negatively related to presence of meaning in life and positive affect in the United States; and (e) there would be a significant three-way interaction between search for meaning, presence of meaning, and culture in predicting positive affect. Regarding, the three-way interaction, the authors proposed that participants in the United States with both high presence and search for meaning in life scores will show relatively high levels of positive affect. In contrast, they proposed that participants in the United States with higher search for meaning and lower presence of meaning scores will have relatively low levels of positive affect. Steger, Kawabata et al. (2008) did not directly describe the expected pattern of results in the Japanese sample, but the predicted three-way interaction would require a different pattern of relationships in that sample.

Steger et al. (2008) found support for each of these predictions in their American and Japanese samples. In another individualistic culture, Australia, Cohen and Cairns (2012) replicated Steger et al.’s U.S. findings, including the positive versus negative effects of presence and search for meaning on well-being, respectively, and the moderation by presence of meaning of the negative relationship between search for meaning and well-being. Overall, these results suggest that higher levels of presence of meaning in life can help to buffer against the potentially harmful effects of searching for meaning in life, at least for individuals in individualistic cultures.

The dialectical model proposed by Steger, Kawabata, et al. (2008) is novel in integrating meaning in life, well-being, and their relationship across cultures. However, the study also had several limitations. First, dialecticism was not actually measured and tested as a mediator of the cultural differences, nor were any of the other cultural dimensions referred to by the authors. Although Steger, Kawabata, et al. focused on dialecticism, they referred to additional cultural
dimensions (i.e., independent-interdependent or individualism-collectivism) in justifying their predictions, but without explicitly incorporating them into the model. Second, the researchers used only a 4-item measure of subjective happiness to measure well-being. Thus, they lacked a comprehensive assessment of subjective or hedonic well-being. Third, the researchers acknowledged that some of the cultural differences they found may have been due to moderate response tendencies in the Japanese sample. Fourth, they only tested their model in one individualistic/non-dialectical culture and one collectivistic/dialectical culture. In the proposed study, I addressed each of these limitations.

**Overview of the Present Study**

The data analyzed for this study were collected as part of a larger study for which some results have been published previously (Church, Alvarez, et al., 2012; Church, Katigbak, et al., 2012, Church et al., 2013). I was a co-author on each of the previous studies and will use a portion of these data to investigate new research questions for the proposed study. Participants in eight cultures (i.e., the United States, Australia, Mexico, Venezuela, the Philippines, Malaysia, China, and Japan) rated the extent to which their needs were satisfied in various roles (i.e., with close friends, parents, professors, younger siblings or relatives, and strangers) and completed measures of hedonic and eudaimonic well-being, the Big Five traits, and three cultural dimensions (i.e., individualism-collectivism, dialecticism, tightness-looseness). In the present study, I tested Steger, Kawabata, et al.’s (2008) dialectical model of meaning in life and well-being in the four cultures that can be most definitively classified as dialectical (China, Japan) versus non-dialectical (U.S., Australia) and/or collectivistic (China, Japan) versus individualistic (U.S., Australia). I sought to replicate Steger, Kawabata, et al.’s findings in the U.S. and Japan, the two cultures included in their study. This replication included measures of meaning in life
and well-being that go beyond those used by Steger, Kawabata, et al., as well as direct measures of the hypothesized mediating constructs (i.e., dialecticism, individualism-collectivism). The present study also extended Steger et al.’s work by testing the dialectical model in additional dialectical/collectivistic (China) and non-dialectical/individualistic (Australia) cultures. Although the dialecticism and individualism-collectivism distinctions were potentially correlated in these cultural samples, inclusion of the cultural measures might enable me to determine which dimension best accounts for any cultural differences identified.

Two of the hypotheses in Steger, Kawabata et al.’s (2008) model have already been tested using raw scores on the relevant scales (predictions a and b above). Church, Katigbak, et al. (2012) compared the U.S., Australia, China, and Japan (as well as four other cultures) on three measures that can be considered indicators of meaning in life: the MLQ-Presence scale, Ryff’s PWB Purpose in Life scale (Ryff, 1989), and an aggregate measure of satisfaction across roles of self-actualization/meaning needs. Results partially conformed to the hypotheses. MLQ-Presence scores were significantly higher in the United States and Australia than in Japan, but not in China. PWB-Purpose in Life scores were higher in the United States and Australia than in China and Japan, but only significantly so for Japan. Satisfaction of self-actualization/meaning needs was significantly higher in the United States and Australia than in Japan, but only the United States sample averaged significantly higher self-actualization/meaning scores than did China. Finally, as predicted, MLQ-Search was higher, but not significantly so, in China and Japan than in the United States and Australia. Cultural differences in well-being—as indexed by positive affect, negative affect, and an aggregate measure of satisfaction of pleasure-stimulation needs across roles—did not conform as well to theory. Japanese participants did average lower positive affect and higher negative affect than the American and Australian participants, but also
the Chinese participants. Participants in Japan and China also averaged lower pleasure-stimulation than those in the United States, but the Australian results for pleasure-stimulation did not conform to expectations. In the present study, I retested hypotheses about cultural mean differences in presence of meaning in life and hedonic well-being using mean and covariance structures analysis (MACS), which correct for unreliability of measurement.

Thus, in the present study, the following hypotheses were newly tested, either because they were tested only with raw scores previously (Hypotheses 1 and 2 below) or because they were not addressed in previous studies with this data set (Hypotheses 3-6). Each hypothesis was tested with multiple indicators of meaning in life (MLQ-Presence, PWB-Purpose in Life, satisfaction of self-actualization/meaning needs) and multiple indicators of hedonic well-being (positive affect, negative affect, and satisfaction of pleasure-stimulation needs).

**Hypothesis 1:** Participants in the U.S. and Australia will average higher in presence of meaning in life and lower in search for meaning in life than will participants in China and Japan.

**Hypothesis 2:** Participants in the U.S. and Australia will average higher on indices of hedonic well-being than will participants in China and Japan.

**Hypothesis 3:** Cultural differences in presence and search for meaning in life and specific indicators of hedonic well-being will be mediated by measures of individualism-collectivism (i.e., independent and collective self-construals) and dialecticism.

**Hypothesis 4:** The presence of meaning in life will be positively related to hedonic well-being to an equivalent degree in all four cultures (i.e., U.S., Australia, China, and Japan).

**Hypothesis 5:** Search for meaning in life will be positively related to presence of meaning and hedonic well-being in dialectical cultures (i.e., China and Japan) and negatively related to presence of meaning and hedonic well-being in non-dialectical cultures (i.e., U.S. and Australia).
**Hypothesis 6:** There will be a significant three-way interaction between culture, presence of meaning, and search for meaning in the prediction of hedonic well-being. Specifically, in non-dialectical cultures (i.e., U.S. and Australia), hedonic well-being will be relatively high for participants with both high presence and search for meaning in life, and relatively low for participants with low presence and high search for meaning in life. In dialectical cultures, search for meaning will not moderate the impact of presence of meaning on hedonic well-being.

As noted earlier, I expected the United States and Australia to be relatively individualistic and China and Japan to be relatively collectivistic, consistent with the traditional view of these cultures (Church, 1987; Diaz-Loving & Draguns, 1999; Hofstede, 2001). For example, based on a cross-national study of values, Hofstede ranked 53 countries and regions on individualism. The U.S. ranked 1st; Australia, 2nd; and Japan, 22nd. China was not included but other Chinese countries (Taiwan, 43rd; Singapore, 40th) were ranked as relatively collectivistic. Dialecticism has been associated primarily with East Asian cultures such as China and Japan (Peng & Nisbett, 1999; Spencer-Rodgers, Williams, et al., 2010). Indeed, Church, Alvarez, et al. (2012) examined cultural mean differences on these dimensions in the present samples and found that the United States and Australia averaged higher than China and Japan on a self-report measure of dialecticism (Spencer-Rodgers, Srivastava, et al., 2010). Scores on measures of independent and collective self-construals (Kashima & Hardie, 2000; Singelis, 1994) were partially supportive of expectations. The American and Australian samples exhibited scores that were relatively individualistic (i.e., high independent self-construals and low collective self-construals) and the Chinese sample had scores indicative of collectivism. The Japanese sample averaged low in collective self-construal, as expected, but also low in independent self-construal. It should be noted that scores on self-report measures of individualism-collectivism frequently depart from
expectations (Oyserman, Coon, & Kemmelmeier, 2002), probably due, in part, to the use of different reference or comparison groups by participants when rating themselves on Likert scales (Heine, Lehman, Peng, & Greenholtz, 2002). Therefore, I planned to retain the a priori classification of Japan as collectivistic for the present study.

**Method**

**Participants**

**United States.** The U.S. sample was comprised of 153 college students (58 men, 95 women) from the University of Idaho. Mean age was 19.95 years ($Mdn = 19; SD = 2.91$). Students represented all year levels and a variety of major fields of study. Self-reported ethnic backgrounds were as follows: White/Caucasian ($n = 131$), Latino ($n = 6$), Asian ($n = 3$), African American ($n = 2$), Native American ($n = 1$), Native Hawaiian ($n = 1$), multiracial ($n = 4$), and other or not reporting ($n = 5$).

**Australia.** The Australian sample was comprised of 122 college students (20 men, 102 women) from Murdoch University in Perth. Mean age was 26.09 ($Mdn = 22; SD = 9.41$). All year levels were represented and most students (92.6%) were majoring in social sciences. Participants reported the following ethnic backgrounds: Anglo-Celtic or European ($n = 92$), Asian ($n = 8$), multiracial ($n = 6$), African ($n = 5$), Middle Eastern ($n = 1$), and other or not reporting ($n = 10$).

**China.** The Chinese sample was comprised of 223 college students (107 men, 116 women) from Beijing Normal University ($n = 98$), Beihang University ($n = 48$), and Tsinghua University ($n = 28$), all in Beijing, and Henan University ($n = 49$) in Kaifeng. Mean age was 21.06 years ($Mdn = 21; SD = 1.15$). All year levels and a variety of major fields of study were represented. Most participants reported their ethnicity as Han Chinese ($n = 207$), with several
other ethnic groups represented by only 1 to 4 participants. A few participants did not report their ethnicity.

**Japan.** The Japanese sample was comprised of 191 college students (111 men, 80 women) from Kwansei Gakuin University in Nishinomiya. Mean age was 20.32 (\(Mdn = 20; SD = 1.34\)). All year levels were represented. Most students were majoring in psychology or other social science fields (63.9%) or business/economics (21.5%). Because Japanese samples are typically very homogeneous in ethnicity, we did not ask about ethnicity, but did verify that none were international students.

**Instruments**

**Translation.** All instruments were translated from English into Chinese and Japanese using the backtranslation method. Translations were made by doctoral level graduate students or psychologists who are native speakers of the respective languages. Minor modifications to the translations were made, in consultation with the original translators, based on comparisons of the original English, backtranslated English, and target language versions.

**Measures of cultural dimensions.**

**Dialectical Self Scale.** The Dialectical Self Scale (DSS; Spencer-Rodgers, Srivastava, et al., 2010) is the most widely used and validated measure of dialecticism (Spencer-Rodgers, Williams, et al. 2010). To reduce administration time, the 14-item Abbreviated DSS scale was administered (Spencer-Rodgers, Peng, et al. 2010). However, to ensure acceptable reliability six additional items from the original 32-item DSS scale were administered. These items had performed best in a previous study (Church, Wilmore, et al., 2012). Items assess acceptance of contradiction (e.g., believing that opposing sides of an argument can both be correct), tolerance of cognitive change (e.g., being willing to change one’s beliefs), and willingness to adapt one’s
behavior to fit circumstances. Participants rated their level of agreement on a 7-point scale that ranged from 1 = strongly disagree to 7 = strongly agree. Across the four countries, α reliabilities for the DSS were as follows: U.S., α = .77; Australia, α = .80; China, α = .78; and Japan, α = .73.

Spencer-Rodgers, Williams, et al. (2010) reported extensive validity evidence for the DSS.

**Individualism-collectivism.** Self-construals are a central aspect of the individualism-collectivism dimension (Markus & Kitayama, 1991; Triandis, 1995). To measure independent self-construal, which is expected to be predominant in individualistic cultures, 14 items from Singelis’ (1994) 15-item Independent Self-construal scale were administered (one item that has performed poorly in previous studies was eliminated). To measure interdependent or collective self-construal, which is expected to be predominant in collectivistic cultures, the 10 collective items from Kashima and Hardie’s (2000) RIC Self-aspects Scale and 3 items from Yamaguchi’s (1994) Collectivism scale were administered. The 13 collective items were averaged to ensure adequate reliability. Participants indicated their level of agreement using a 6-point scale that ranged from 1 = *strongly disagree* to 6 = *strongly agree*. Alpha reliabilities for the four cultures were as follows: for independent self-construal, U.S., α = .68; Australia, α = .76; China, α = .64; and Japan, α = .74; for collective self-construal, U.S., α = .79; Australia, α = .75; China, α = .79; and Japan, α = .73. Singelis (1994), Kashima and Hardie (2000), and Yamaguchi (1994), among others, have reported validity evidence for these instruments.

**Measures of meaning in life.**

**Meaning in Life Questionnaire (MLQ; Steger et al., 2006).** This 10-item scale is comprised of two 5-item subscales, MLQ-Presence and MLQ-Search. The Presence subscale measures the extent to which one has a sense of meaning in one’s life. The Search subscale measures the extent to which one is searching for meaning in one’s life. Ratings are made on a 7-
point scale that ranges from 1 = absolutely untrue to 7 = absolutely true. Alpha reliability estimates for the Presence subscale in the four cultures are as follows: US, α = .89; Australia, α = .91; China, α = .87; and Japan, α = .89. For the Search subscale, α reliabilities in the four cultures were as follows: US, α = .91; Australia, α = .90; China, α = .84; and Japan, α = .92. Validity evidence for the MLQ was reported by Steger et al. (2006).

**Scales of Psychological Well-being (PWB; Ryff, 1989).** The 6-item Purpose in Life subscale from a 39-item version of Ryff’s (1989) PWB measure was used as a second index of meaning in life. The 39-item measure has been shown to have acceptable factorial validity and internal consistency reliability in Dutch, Spanish, and Columbian samples (Van Dierendonck, 2005; Van Dierendonck, Díaz, Rodríguez-Carvajal, Blanco, & Moreno-Jiménez, 2008). Participants indicate their level of agreement with each item using a six-point scale ranging from 1 = strongly disagree to 6 = strongly agree. Alpha reliability estimates for the Purpose in Life subscale in the four cultures are as follows: US, α = .79; Australia, α = .82; China, α = .76; and Japan, α = .81.

**Satisfaction of self-actualization/meaning needs.** The larger instrument which contains this measure assesses the extent to which each of five needs (autonomy, competence, relatedness, self-actualization/meaning, and pleasure-stimulation) is satisfied in each of five social roles: with close friends, parents, professors, younger siblings or relatives, and strangers. Participants rated how much each need was satisfied in each role using a 5-point scale (1 = The need is not at all satisfied to 5 = The need is completely satisfied). For the purposes of the present study, the self-actualization/meaning need satisfaction scores were used as a third index of meaning in life. The definition of the self-actualization/meaning need, which was adapted from Sheldon et al. (2001), was as follows: Feeling that you are developing your best potentials and making life meaningful.
For each participant, I computed a composite score for the need by averaging the participant’s ratings across the five roles. The α reliabilities for the scale in the four cultures were as follows: U.S., α = .63; Australia, α = .65; China, α = .63; and Japan, α = .75. These estimates are acceptable for short (5-item) scales. Church, Katigbak, et al. (2012) reported validity evidence for the five need variables as predictors of well-being.

**Measures of hedonic well-being.**

**Positive and Negative Affect Schedule—Expanded Form (PANAS-X) (Watson & Clark, 1994).** Twenty items were selected from the PANAS-X, including items from the Negative Affect, Positive Affect, Joviality, and Sadness scales. Participants rated each item on a 5-point scale (1 = *very slightly or not at all* to 5 = *extremely*) to indicate how they generally or usually feel. In each of eight cultures, including the four cultures included in the present study, Church, Katigbak, et al. (2012) conducted principal-axis factor analyses and identified clear two-factor solutions defined by the positive and negative emotion items, respectively. Therefore, two scores were computed by averaging all positive emotion terms (hereafter referred to as Positive Affect or PA) and all negative emotion terms (Negative Affect or NA). Across the four countries, α reliabilities for positive affect were as follows: U.S., α = .81; Australia, α = .84; China, α = .81; Japan, α = .77. The α reliabilities for negative affect were as follows: U.S., α = .83; Australia, α = .88; China, α = .84; and Japan, α = .84. Extensive validity data for the PANAS-X scales has been reported (e.g., Watson & Clark, 1994).

**Satisfaction of pleasure-stimulation needs.** From the need satisfaction measure described above, I obtained an aggregate score of pleasure-stimulation need satisfaction across five social roles. This score served as a third index of hedonic well-being. The definition of pleasure-stimulation need, which was adapted from Sheldon, Elliot, Kim, and Kasser (2001),
was as follows: Feeling that you get plenty of enjoyment and pleasure. The α reliabilities for this scale in the four cultures were as follows: U.S., α = .46; Australia, α = .56, China, α = .66, and Japan, α = .70.

**Procedure**

All participants filled out the Need Satisfaction measure first. Approximately half the participants then filled out the remaining instruments in the following order: PWB, PANAS-X, the individualism-collectivism (self-construal) scales, MLQ, and DSS. The other half of the participants completed these instruments in reverse order. In the United States and Australia, research participants were recruited in classes or research participant pools and completed the questionnaires outside class. In China and Japan, the questionnaires were filled out by volunteers during regular classes.

**Measurement Invariance Analyses**

The α reliability estimates provide one indication of how well the measures functioned across cultures. Using the Feldt (1960) significance test to compare two independent Cronbach alphas, I found that the reliabilities were not significantly different (p > .01) across the four cultures for any of the measures in the present study. Multi-group mean and covariance structures (MACS) analyses provide a more rigorous test of measurement invariance. Church, Katigbak, et al. (2012) summarized the results of separate measurement invariance analyses across eight cultures for the self-construal and dialecticism measures, the MLQ-Presence and Search scales, the PWB scales, the PANAS-X measure, and the measure of five needs. For the present study, I conducted new MACS analyses to test the metric (loading) and scalar (intercept) equivalence of the measures that are relevant to the present study. There are two reasons for doing so. First, measurement invariance was worse in some of the cultures not included in the
present study (e.g., Malaysia). Second, not all of the PWB and need scales were included in the present study. In the previous analyses, it is possible that sources of measurement noninvariance applied primarily to scales or cultures that are not relevant to the present study. Thus, my new analyses provide a better indication of the measurement equivalence of the variables actually used in the present study. In the MACS analyses, each of the constructs was treated as a latent variable with either scale items (for MLQ-Presence and Search, PWB Purpose in Life, and the need satisfaction constructs) or three item parcels (i.e., for the self-construal and dialecticism measures and the PA and NA measures) used as observed indicators. For instruments measuring more than one construct (i.e., MLQ Presence and Search; independent and collective self-construals; PANAS positive and negative affect; and Satisfaction for Pleasure-Stimulation and Self-actualization/meaning needs), the covariances between the two latent variables were freely estimated in each culture. The MACS analyses for the individualism-collectivism (self-construal) and dialecticism measures also enabled me to determine whether the cultures differ in the expected manner on these cultural dimensions.

Table 1 shows the summary of fit indices for the tests of measurement invariance across the four cultures. The freely estimated model for the DSS is saturated (i.e., just-identified) so that perfect fit is expected. In the tests for metric (loading) invariance, the $\chi^2$ difference tests were statistically significant ($p < .01$) for three of six instruments, but it is well-known than these tests are overly stringent. Differences in CFI indices ($\Delta$CFI) between the freely estimated and invariant loading models were greater than .01 for the PWB Purpose in Life and Need Satisfaction models, suggesting that the loadings for these two models cannot be considered strictly invariant across cultures (Cheung & Rensvold, 2002). However, the overall fit indices for the models with invariant loadings ranged from acceptable to very good (e.g., CFI range = .90 to
Therefore, metric invariance across cultures was generally acceptable, with the possible exceptions of the PWB Purpose in Life and Need Satisfaction models.

Although metric (loading) invariance is sufficient for comparisons of correlational relationships across cultures, scalar (intercept) equivalence is preferred when scale means will be compared (Church, 2010; Church et al., 2012; Steenkamp & Baumgartner, 1998). Table 1 shows the fit of the initial constrained intercept models for each instrument. The overall fit of the initial constrained intercept models were generally only fair (e.g., CFI range = .81 to .92; RMSEA range = .05 to .08; SRMR range = .03 to .10). In addition, differences in CFI indices between the constrained loading models and the constrained intercept models ranged from .03 to .12, suggesting that at least some intercepts could not be considered invariant across cultures. Indeed, for each instrument, it was necessary to freely estimate (rather than constrain to equality) at least one intercept across all cultures and in some cases an additional intercept in order to obtain acceptable model fit. I freely estimated one of the three intercepts for the DSS, one of ten intercepts for the MLQ, two of six intercepts for each of the PANAS-X, SCS, and PWB-PiL models, respectively, and three of ten intercepts for the Need Satisfaction measure. After doing so, model fit ranged from acceptable to very good (CFI range = .89 to .97; RMSEA range = .04 to .06; SRMR range = .03 to .10), although the CFI differences between the invariant loading and final intercept models differed by more than .01 for the majority of the instruments. Thus, since only partial scalar invariance was demonstrated, some caution is warranted in interpreting the cultural mean differences for these measures.
Results

Descriptive Statistics

The appendix shows the intercorrelations for the scales in the study. The raw means and standard deviations for the scales were reported previously by Church, Katigbak, et al. (2012). In the tables shown in the present article, I report mean deviations from the U.S. reference group estimated in the MACS analyses, which have not been previously reported and will be discussed in subsequent sections.

As seen in the appendix, the intercorrelations among the presence of meaning measures ranged from .61 to .70 for MLQ-Presence with PWB-Purpose in Life, .26 to .46 for MLQ-Presence with self-actualization need satisfaction, and .30 to .49 for PWB-Purpose in Life with self-actualization need satisfaction across the four cultures. This indicates that the three measures are at least moderately related in all four cultures, although self-actualization need satisfaction, which was measured somewhat differently (e.g., across roles), converged less well with the other two measures. For the hedonic well-being measures across the four cultures, the intercorrelations ranged from -.21 to -.52 for positive affect with negative affect, .24 to .53 for positive affect with pleasure-stimulation need satisfaction, and -.21 to -.39 for negative affect with pleasure-stimulation need satisfaction. This indicates that the three measures of hedonic well-being were modestly to moderately related in all four cultures. With a few isolated exceptions, the three measures of meaning (MLQ Presence, PWB Purpose in Life, self-actualization need satisfaction) were moderately correlated with the three measures of hedonic well-being, as expected, although MLQ Presence and PWB Purpose in Life were more strongly related to PA and NA than to pleasure-stimulation need satisfaction. In contrast, and as expected, MLQ Search for Meaning was not consistently related to hedonic well-being across cultures.
Cultural Differences in Dialecticism and Self-Construals

To compare the four cultures on the cultural dimensions—dialecticism, independent self-construal, and collective self-construal—I examined the latent means estimated in the final intercept models for the relevant instruments described earlier (see Table 2). The U.S. was the reference group in these comparisons (i.e., with mean set to zero) and the latent means for the other three cultures represent deviations from the U.S. mean. Shared subscripts within each row in Table 2 indicate means that are not significantly different ($p > .05$) from each other in the MACS analyses. To obtain significance tests for all paired comparisons, it is necessary to run the analysis with each culture as the reference group. Recall that only partial scalar invariance was demonstrated for these variables, so some caution is needed in interpreting the findings.

For dialecticism, results were similar to those found by Church, Katigbak, et al. (2012) in their comparison of raw scores, but this was not the case for independent and collective self-construals. As expected, participants in the United States and Australia averaged higher in dialecticism than did participants in China and Japan. All four cultures differed significantly, with U.S. participants averaging lowest followed by participants in Australia, China, and Japan, in that order. The order of the cultures on independent self-construals was generally consistent with expectations (U.S. and Australia greater than China and Japan), although the Australia-China difference was not statistically significant. However, the order of the cultures on collective self-construal did not conform to expectations, with China averaging highest and Japan averaging lowest. As mentioned earlier, unexpected results may be due to the use of different reference or comparison groups by participants in different cultures when using self-report Likert scales (Heine, Lehman, Peng, & Greenholtz, 2002). The unexpected results for the self-construal measures will limit their usefulness in tests of mediation (e.g., in Hypothesis 3).
Cultural Differences in the Meaning in Life Dimensions (Hypothesis 1)

In Hypothesis 1, I predicted that participants in the United States and Australia would average higher in presence of meaning in life and lower in search for meaning in life than would participants in China and Japan. To test this hypothesis, I examined the latent means estimated in the final intercept models for the MLQ, PWB Purpose in Life, and self-actualization/meaning need satisfaction scales described earlier (see Table 2). Hypothesis 1 was supported for all comparisons of the U.S. and Australia with Japan. That is, participants from the United States and Australia, as compared to participants from Japan, averaged higher in all three measures of presence of meaning in life (i.e., MLQ-P, PWB Purpose in Life, and self-actualization/meaning need satisfaction) and lower in search for meaning in life. However, the Chinese sample only conformed to expectations for the PWB-Purpose in Life scale.

Cultural Differences in Hedonic Well-being (Hypothesis 2)

In Hypothesis 2, I predicted that participants in the United States and Australia would average higher ratings for hedonic well-being than participants in China and Japan. To test Hypothesis 2, I examined the latent means for PA, NA, and pleasure-stimulation need satisfaction, as estimated in the final intercept models described earlier (see Table 2). In these analyses, attention was focused on conceptually replicating Steger, Kawabata, et al.’s (2008) findings in U.S. and Japanese samples with a measure of happiness, and whether the anticipated cultural differences extend to the other non-dialectical and dialectical cultures in the study (i.e., Australia, China).

There was only mixed support for Hypothesis 2. As hypothesized, participants in the United States averaged higher positive affect, higher pleasure-stimulation need satisfaction, and lower negative affect than participants in Japan. In addition, the U.S. sample averaged higher
than the Chinese sample on positive affect and pleasure-stimulation need satisfaction, but were not lower in negative affect. The order of the means for positive affect conformed to prediction, although the difference between Australia and China was not statistically significant. Other comparisons involving the Australian sample did not conform to expectations. In sum, Steger, Kawabata, et al.’s (2008) findings for happiness were replicated for comparisons of hedonic well-being involving the United States and Japan, and possibly for positive affect in all four cultures. Comparisons involving the additional non-dialectical and dialectical cultures (i.e., Australia, China) did not consistently conform to expectations.

**Dialecticism as a Mediator of Cultural Differences in Meaning and Well-being (Hypothesis 3)**

In Hypothesis 3, I predicted that cultural differences in the presence of meaning in life, the search for meaning in life, and specific indicators of hedonic well-being would be mediated by measures of individualism-collectivism (i.e., independent and collective self-construals) and dialecticism. As noted above, cultural differences in independent and collective self-construals did not conform to expected cultural differences. Therefore, only dialecticism was tested as a possible mediator of cultural differences in meaning and well-being. To test for mediation, I used structural equations modeling (SEM). In each SEM model, a cultural variable was the predictor variable, dialecticism the mediator variable, and presence of meaning, search for meaning, or hedonic well-being the criterion or outcome variable. In each case, the cultural variable was dummy coded as 0 and 1 (e.g., representing the U.S. vs. Japan or non-dialectical vs. dialectical cultures). Dialecticism was modeled as a latent variable with three item parcels as indicators. Since the three measures of presence of meaning in life (MLQ-P, PWB Purpose in Life, and self-actualization/meaning need satisfaction) were sufficiently correlated (i.e., defined a single
coherent dimension), presence of meaning was modeled as a single latent variable with three indicators. However, because the three measures of hedonic well-being (positive affect, negative affect, and pleasure-stimulation need satisfaction) were less uniformly correlated they were modeled separately, each with three item parcels as indicators, as was the search for meaning variable. This also enabled me to examine whether either presence or search for meaning in life related differently to positive indicators (e.g., PA, pleasure-stimulation need satisfaction) versus negative (i.e., NA) indicators of hedonic well-being. Steger et al. only examined meaning in life in relation to a positive indicator (i.e., happiness). As a general strategy, I first tested the mediation models comparing the combined non-dialectical (i.e., the United States and Australia) samples with the combined dialectical (e.g., China and Japan) samples. Depending on those results, I tested alternative models with fewer cultures (e.g., U.S. versus Japan only).

**Presence of meaning.** In the initial model for the presence of meaning in life, I tested whether dialecticism mediated differences in the presence of meaning in life for the combined dialectical versus combined non-dialectical cultures. This model failed because an inadmissible (negative) error variance was estimated for PWB-Purpose in Life in the Chinese sample. Results for an alternative model, in which mediation was tested in the combined U.S.-Australian sample versus the Japanese sample, are shown in the first row of Table 3. The table shows the standardized path coefficients ($\beta$s) relating the cultural difference (U.S.-Australia vs. Japan) to dialecticism (path a), dialecticism to Presence of Meaning in life (path b), and cultural differences to Presence of Meaning in life before (path c) and after (path $c'$) dialecticism was included as a mediator in the model. Also shown is the standardized indirect effect ($a \times b$), which provides a formal test of mediation. Using the Amos program (Version 7; Arbuckle, 2006), the bootstrap method (1000 samples) was applied to derive bias-corrected 95% confidence intervals
for each parameter in the model. Note that the indirect effect was statistically significant, indicating that the differences in Presence of Meaning between the combined U.S.-Australia sample and the Japanese sample were mediated by dialecticism. Since the $c'$ path coefficient was still statistically significant, albeit modest in size, only partial mediation was supported in this case.

**Search for meaning.** The initial model, which tested for mediation of search for meaning differences between the combined dialectical and combined non-dialectical cultures, was successfully estimated (see second row of Table 3). The statistically significant indirect effect and the non-significant $c'$ path coefficient supports full mediation of the cultural differences in search for meaning by dialecticism.

**Positive affect.** The initial model, which tested for mediation of positive affect differences between the combined dialectical and combined non-dialectical cultures, was successfully estimated (see third row in Table 3). The indirect effect was statistically significant, indicating that the differences in positive affect between the combined non-dialectical and combined dialectical cultures were mediated by dialecticism. Since the $c'$ path coefficient was still statistically significant, only partial mediation was supported.

**Negative affect.** Recall that the pattern of cultural differences in negative affect did not conform to expectations for the Australian and Chinese samples. Therefore, the initial model for negative affect compared only the U.S. and Japanese samples. The indirect effect was statistically significant, but the $c'$ path coefficient was still statistically significant. Thus, only partial mediation by dialecticism of the U.S.-Japan difference in negative affect was supported.

**Pleasure-stimulation need satisfaction.** The initial model, which tested for mediation of cultural differences in pleasure-stimulation need satisfaction, did not provide clear support for
mediation by dialecticism because the cultural variable did not predict pleasure-stimulation need satisfaction before the mediator was included in the model (path c; i.e., there was no relationship to mediate). However, an alternative model involving only the U.S. versus Japan did support full mediation of cultural differences by dialecticism (see last row in Table 3).

In summary, cultural differences in the presence of meaning in life, the search for meaning in life, and specific indicators of hedonic well-being were generally fully or partially mediated by dialecticism, providing support for Hypothesis 3. In some cases, these mediation effects did not extend to dialectical (i.e., China) and non-dialectical (i.e., Australia) cultures beyond the U.S. and Japan comparison originally examined by Steger et al.

**Presence of Meaning Predicting Hedonic Well-being (Hypothesis 4)**

In Hypothesis 4, I predicted that presence of meaning in life would be positively related to hedonic well-being to an equivalent degree in all four cultures (i.e., U.S., Australia, China, and Japan). As in the preceding analyses, the Presence of Meaning variable was modeled as a single latent variable with three indicators (MLQ-P, PWB Purpose in Life, and self-actualization/meaning need satisfaction), while each hedonic well-being variable (i.e., PA, NA, pleasure-stimulation need satisfaction) was predicted separately. The top three rows of Table 4 show the standardized path coefficients (β) estimated freely in each culture when Presence of Meaning in life predicted the hedonic well-being variables in separate models. Presence of meaning was a strong predictor of PA and NA (inversely) in all four cultures and a moderately strong predictor of pleasure-stimulation need satisfaction.

The top half of Table 5 shows the fit of SEM models in which the path coefficients relating presence of meaning to the hedonic well-being variables were freely estimated, as well as constrained to be equal in all four cultures (i.e., the invariant models). When the path
coefficients were constrained to be equal across cultures, the model fit indices were all acceptable (CFI range = .94 to .97; RMSEA = .04; SRMR range = .05 to .07). In addition, constraining these path coefficients did not result in significant loss of model fit relative to the freely estimated models (range of $\chi^2_{\text{diff}}$ [12 to 18] = 14.80 to 25.27, all $p$s > .05). Therefore, after correcting for unreliability of measurement, the four cultures did not differ significantly in the strength of the relationship between presence of meaning in life and hedonic well-being. Thus, Hypothesis 4 was supported.

Relating Search for Meaning to Presence of Meaning and Hedonic Well-being (Hypothesis 5)

In Hypothesis 5, I predicted that search for meaning in life would be positively related to presence of meaning and hedonic well-being in dialectical cultures (i.e., China and Japan) and negatively related to presence of meaning and hedonic well-being in non-dialectical cultures (i.e., U.S. and Australia). To test this hypothesis I added a latent search for meaning variable as another predictor of the hedonic well-being variables into the SEM models tested for Hypothesis 4. This enabled tests of the cross-cultural equivalence of the path coefficients relating search for meaning to hedonic well-being and the covariances between presence and search for meaning. I was able to successfully estimate the models predicting positive and negative affect. However, it was not possible to obtain a good fitting model predicting pleasure-stimulation need satisfaction because of the large correlation representing shared method variance between self-actualization need satisfaction (an observed indicator of presence of meaning) and pleasure-stimulation need satisfaction (a latent criterion variable).

The bottom half of Table 4 shows the freely estimated path coefficients and the covariance between presence and search for meaning in the models predicting positive and
negative affect. As already tested in Hypothesis 4, presence of meaning is again seen as a strong predictor of both positive affect and (inversely) negative affect in all four cultures. The new information here involves search for meaning. As seen in the table, search for meaning generally provided non-significant incremental prediction of the hedonic well-being variables beyond that provided by presence of meaning. The statistically significant positive path coefficient in Japan relating search for meaning to positive affect is consistent with the positive Pearson correlation relating the raw scores for these variables, which was observed only in Japan (see appendix). However, when the path coefficients were constrained to be equal across cultures (see below), there was no support for cultural differences in the relationship between search for meaning and either positive or negative affect, at least when presence of meaning is also included in the model. Also noteworthy is the finding that search for meaning was not negatively related to positive affect when both presence and search for meaning are included in the same model.

At first glance, there appeared to be greater support for a differential relationship between presence and search for meaning across cultures. As hypothesized, in the freely estimated models, the covariance between presence and search for meaning was positive in Japan and negative in the U.S. and Australia. These results were consistent with the findings of Steger, Kawabata, et al. (2008) and the dialectical model of meaning in life. However, participants in China did not conform to expectations for a dialectical culture because, unlike in Japan, the relationship between search and presence of meaning in life was negative, not positive.

Importantly, there was no evidence of cultural differences when invariant models were tested. The bottom half of Table 5 shows the fit indices for the freely estimated and invariant path coefficients in the models involving search for meaning.

When the path coefficients (i.e., regression weights) relating search for meaning and presence of meaning to the hedonic well-
being indicators, and the covariance between presence and search for meaning, were constrained to be equal across cultures, the model fits were all acceptable (CFI range = .94 to .95; RMSEA = .04; SRMR = .08 to .09).

Overall, there is some suggestion that search for meaning may relate differently to presence of meaning and positive affect in Japan (but not China), as compared to the two non-dialectical cultures, particularly in the simple Pearson correlations. However, support for this hypothesis is weakened when measurement error is controlled and presence and search for meaning are both included in the models.

**Three-way Interaction between Culture, Presence of Meaning, and Search for Meaning in Predicting Hedonic Well-being (Hypothesis 6)**

In Hypothesis 6, I predicted that there would be a significant three-way interaction between culture, presence of meaning, and search for meaning in the prediction of hedonic well-being. Specifically, in non-dialectical cultures (i.e., U.S. and Australia), hedonic well-being was expected to be relatively high for participants with both high presence and search for meaning in life, and relatively low for participants with low presence and high search for meaning in life. In dialectical cultures, the search for meaning was not expected to moderate the relationship between the presence of meaning and hedonic well-being. To test for the three-way interaction, I used a series of hierarchical multiple regression analyses, using centered variables. For each of these regression analyses, a measure of hedonic well-being was the criterion variable and a measure of presence of meaning (i.e., MLQ-Presence, PWB-P, self-actualization-meaning need satisfaction), search for meaning (i.e., MLQ-Search), and culture (dummy coded as 0 and 1 representing, for example, the U.S. versus Japan) was entered in Step 1. In Step 2, I entered the relevant two-way interaction terms (i.e., MLQ-P × MLQ-S, MLQ-S × culture, and MLQ-P ×
Finally, I entered a three-way interaction term in Step 3 (e.g., MLQ-P × MLQ-S × culture). Nine separate analyses were run, representing all combinations of a hedonic well-being criterion variable and one of the three presence of meaning variables as a predictor. This enabled me to replicate the analysis conducted by Steger, Kawabata, et al. (2008) (i.e., with MLQ-Presence and Search), while conceptually replicating the analysis with alternative measures of presence of meaning and hedonic well-being. Given the number of models and statistical tests examined, a conservative alpha level ($p < .01$) was used.

I first tested cultural moderation with just the U.S. and Japan, directly testing replication of Steger et al.’s findings in these two cultures (see Table 6). As seen in Table 6, the three-way interaction effects were not significant in any of the nine analyses. The only consistent finding was a significant two-way Search × Culture interaction effect in predicting positive affect with all three presence of meaning predictors ($βs$ range = .37 to .52, $p < .01$). This is the same cultural moderation effect observed in the Pearson correlations between raw scores, in which the relationship between search for meaning and positive affect was negative in the U.S. and positive in Japan. However, I have already reported above that this cultural difference was not statistically significant when measurement error was controlled and presence and search for meaning were both included in the model predicting positive affect. Finally, because the hypothesized three-way interaction was not supported in the original U.S.-Japan comparison, I did not test for this interaction in non-dialectical versus dialectical cultures more generally. Overall, these results failed to support Hypothesis 6 and thus did not replicate Steger et al.’s results in the U.S. and Japan.
Discussion

The primary goal of the present study was to address questions regarding cultural differences in meaning in life, well-being, and their relationship by applying the dialectical model of meaning in life (Steger, Kawabata, et al., 2008) in four diverse cultures. I extended Steger, Kawabata, et al.'s (2008) findings in the U.S. and Japan in three ways. First, I tested the dialectical model in additional dialectical (i.e., China) and non-dialectical (i.e., Australia) cultures. Second, I included additional measures of meaning in life and well-being. Third, I directly measured dialecticism, the hypothesized mediating construct, which was not measured or directly tested as a mediator of the cultural differences in the study of Steger and colleagues.

Summary and Interpretation of Results

Preliminary findings. In the present study, I used additional measures of meaning in life and well-being, as compared to those used by Steger, Kawabata et al. (2008). Therefore, it was important to establish the concurrent validity of the respective measures of presence of meaning in life and hedonic well-being. The three presence of meaning measures were found to be at least moderately related in all four cultures. The three hedonic well-being measures were modestly to moderately related across the four cultures. As expected, the three measures of meaning in life were moderately correlated with the three measures of hedonic well-being. These results indicated that the alternative measures of presence of meaning and hedonic well-being were at least moderately equivalent and could be used for conceptual replication of Steger et al.’s findings.

In the MACS analyses, cultural differences in dialecticism were similar to those found by Church, Katigbak, et al. (2012) using raw scores, but this was not the case for independent and collective self-construals. As expected, American and Australian participants averaged higher
dialectical scores than Chinese and Japanese participants. The failure to find results consistent with theory for individualism-collectivism (i.e., self-construals) has been common in the cross-cultural literature (e.g., Oyserman et al. 2002). As noted earlier, this may due to the use of different reference or comparison groups by participants in different cultures when using self-report Likert scales (Heine, Lehman, Peng, & Greenholtz, 2002) or possibly cultural differences in response styles. As a result, I was not able to test individual-collectivism (i.e., self-construals) as a mediator of cultural differences in meaning and hedonic well-being. In addition, recall that only partial scalar equivalence was demonstrated for the DSS and SCS, so some caution was warranted in interpreting the cultural mean differences in dialecticism and independent and collective self-construals. Although valid measurement of cultural dimensions continues to be a challenge in cross-cultural research, most of the results using the dialecticism measure in this study were consistent with theory.

**Cultural differences in meaning in life and hedonic well-being.** In Hypotheses 1 and 2, I predicted that participants in the United States and Australia would average higher in presence of meaning in life and hedonic well-being and lower in search for meaning in life than would participants in China and Japan. Hypothesis 1 was supported for all comparisons of the U.S. and Australia with Japan. That is, participants from the United States and Australia, as compared to participants from Japan, averaged higher in all three measures of presence of meaning in life and lower in search for meaning in life. However, the Chinese sample only conformed to expectations for the PWB-Purpose in Life scale. In the test of Hypothesis 2, Steger, Kawabata, et al.’s (2008) findings for happiness were replicated for comparisons of hedonic well-being involving the United States and Japan, and possibly for positive affect in all four cultures. Comparisons involving the additional non-dialectical and dialectical cultures (i.e.,
Australia, China) did not consistently conform to expectations. Overall, these findings suggest that this aspect of Steger’s dialectical model is at least valid for his original comparisons of the U.S. with Japan, but may not generalize consistently to other dialectical and non-dialectical cultures.

**Dialecticism as a mediator of cultural differences.** In Hypothesis 3, I predicted that cultural differences in the presence of meaning in life, the search for meaning in life, and specific indicators of hedonic well-being would be mediated by measures of individualism-collectivism (i.e., independent and collective self-construals) and dialecticism. As previously noted, cultural mean differences did not conform to expectations for independent and collective self-construals, so only dialecticism was tested as a possible mediator. Consistent with Hypothesis 3, cultural differences in the presence of meaning in life, the search for meaning in life, and specific indicators of hedonic well-being were generally fully or partially mediated by dialecticism. The hypothesis was more consistently supported, however, for comparisons of the U.S. and Japan, again suggesting that Steger et al.’s dialectical model may not consistently generalize to additional dialectical and non-dialectical cultures.

**Presence of meaning as a predictor of well-being.** Hypothesis 4 was supported as the presence of meaning in life was positively related to hedonic well-being to an equivalent degree in all four cultures (i.e., U.S., Australia, China, and Japan). This finding is consistent with previous U.S. findings (e.g., Church, Katigbak, et al., 2012; Peterson, Park, & Seligman, 2005; Sirgy & Wu, 2009; Steger, Oishi, & Kesebir, 2011), and indicates that the positive relationship between meaning in life and hedonic well-being is robust across both cultures and alternative measures of the meaning and well-being constructs. The remaining debate around this finding seems to revolve around the direction of causality between these two constructs. Although
longitudinal studies will be needed to address this issue (e.g., Jacobson, 2002; Miyamoto & Ryff, 2011; Park, 2003; Schlegel, Hicks, King, & Arndt, 2009), it is likely that presence of meaning and hedonic well-being have a reciprocal influence on each other (Hicks, Cicero, Trent, Burton, & King, 2010; Keyes, Shmotkin, & Ryff, 2002; Shmotkin & Shrira, 2013). While there exists extensive research suggesting that positive affect predicts judgments of meaning in life to a greater degree than a number of other related factors, the relationship between negative affect and meaning in life, while consistently negative in the present study, remains less clear (e.g., Schlegel et al., 2009, 2011; Steger et al. 2009). Another opportunity to extend the vast research on the relationship between emotions and meaning in life would be to examine how individuals’ discrete emotional experiences contribute to one’s experience of meaning (Tang, Kelley, Hicks, & Harmon-Jones, 2013)

**Search for meaning as it relates to presence of meaning and hedonic well-being.**

In Hypothesis 5, I predicted that the search for meaning in life would be positively related to the presence of meaning and hedonic well-being in dialectical cultures (i.e., China and Japan) and negatively related to the presence of meaning and hedonic well-being in non-dialectical cultures (i.e., U.S. and Australia). In the present study I was able to successfully estimate models predicting positive and negative affect, but not pleasure stimulation need satisfaction. The search for meaning in life generally provided non-significant incremental prediction of hedonic well-being beyond that provided by the presence of meaning in life. Consistent with Steger, Kawabata, et al.’s (2008) findings and the dialectical model of meaning in life, I found some indication that the search for meaning may relate differently to the presence of meaning and positive affect in Japan, as compared to the U.S. and Australia, particularly in the raw score correlations. However, support for the model was weakened by the two findings. First, no
significant cultural differences were evident when measurement error was controlled in the SEM analyses. Second, the results in China did not conform to the model. Again, it is not clear whether there is something unique about the Chinese sample in this study or whether the model is not robust across alternative dialectical cultures. Additional studies with new Chinese samples (and other dialectical cultures such as Korea) will be needed to answer this question more confidently.

**Failure to replicate the hypothesized three-way interaction.** Hypothesis 6 was not supported as there were no significant three-way interactions between culture, presence of meaning, and search for meaning in the prediction of hedonic well-being. Therefore, the present study did not replicate Steger, Kawabata, et al.’s (2008) intriguing finding in U.S. and Japanese samples. It seems unlikely that the different findings in the present study was due to the use of alternative measures of well-being—Steger et al. used a measure of subjective happiness—because subjective happiness is often measured as the balance of positive and negative affect, two constructs assessed in the present study. Instead, the failure to replicate Steger et al.’s findings may reflect the difficulty in replicating higher level interactions, particularly without very large samples. Steger et al.’s samples in the United States ($N = 1183$) and Japan ($N = 982$) were much larger than the samples in the present study.

**Summary.** Overall, the findings of the present study are consistent with those studies that report cultural differences in meaning in life and well-being, and—to a lesser extent—cultural differences in their relationship (Ryff & Singer, 1998; Steger, Kawabata, et al., 2008). The cultural differences found in the present study for the United States, Australia, and Japan were consistent with expectations and were fully or partially accounted for by the dialecticism dimension. These findings are consistent with previous studies that have shown that the presence
of meaning in life is positively related to positive affect and subjective happiness or well-being, and negatively related to negative affect (King et al., 2006; Steger, Kawabata et al., 2008; Church, Katigbak, et al., 2012; Peterson, Park, & Seligman, 2005; Sirgy & Wu, 2009). As noted earlier, longitudinal studies are needed to confirm the primary (or reciprocal) direction of causality in these relationships. On the one hand, it makes sense that greater meaning in life would lead to greater well-being. On the other hand, one’s level of well-being could provide a perceptual filter through which one evaluates one’s sense of meaning. Other findings were less supportive of the dialectical model. It is worth noting that Steger et al.’s model was based in part on their categorization of cultures as dialectical versus non-dialectical and that they did not actually include a direct measures of dialecticism that could be used as a mediator variable.

**Theoretical and Applied Implications**

Regarding theoretical implications, the present study provided only partial support for Steger, Kawabata, et al.’s (2008) dialectical model and may point to the more robust features of the model versus those aspects that are less generalizable across cultures. Indeed, the more robust features appear to be those that were less unique to the model and previously found by other researchers, albeit primarily in the U.S. Nonetheless, the findings do provide useful information about how meaning in life and hedonic well-being may vary across cultures in ways that may relate to the dialecticism of the cultures. Thus, the findings provide theoretical support for dialecticism as an important dimension of cultural and individual differences (e.g., Spencer-Rodgers et al., 2010).

Indeed, the present study offered fairly strong support for cultural psychology hypotheses, more generally, regarding dialecticism. As noted by Church, Katigbak, et al. (2012), a number of studies have shown that lower levels of dialecticism are associated with greater
levels of hedonic well-being (Boucher et al., 2009; Hamamura et al., 2008; Sheldon et al., 2011; Spencer-Rodgers et al., 2004). Spencer-Rodgers et al. contended that individuals or cultural groups characterized by higher levels of dialecticism acknowledge and accept psychological contradictions, which can lead to greater evaluative ambivalence in their self-appraisals and evaluations of happiness. Indeed, a number of previous studies indicate that the tendency for dialectical thinkers to experience contradiction and emotional ambivalence can lead to lower assessments of subjective or hedonic well-being and meaning in life (Miyamoto & Ryff, 2011; Spencer-Rodgers et al., 2010; Steger, Kawabata et al., 2008). For example, Spencer-Rodgers et al. (2010) showed that dialecticism mediated the influence of culture on emotional complexity, suggesting a degree of emotional ambivalence in dialectical cultures, which could underlie lower evaluations of well-being or meaning in life.

From an applied perspective, the results suggest that interventions designed to increase the presence of meaning in life may benefit individuals’ psychological well-being in similar ways across cultures. For example, Feldman (2013) suggested that a sense of meaning in life may be established through hope-based therapeutic interventions, for example, involving a two process model that includes identifying meaningful, value-based goals and then engaging the cognition and behavior necessary to actively pursue such goals. Other factors that may enhance a sense of meaning in life include attachment security (Mikulincer & Shaver, 2013), nostalgia (Juhl & Routledge, 2013), an authentic self-concept (Schlegel, Smith, & Hirsch, 2013), and the appraisal of events when facing chaos (Heine et al., 2006; McLean & Morrison-Cohen, 2013; Park, 2010). In contrast, factors that address search for meaning, such as religion (Newton & McIntosh, 2013; Steger et al. 2009) and hardiness (Maddi, 2013), may impact well-being differently across cultures. In addition, because people in dialectical cultures tend to have lower
levels of meaning and hedonic well-being, it is possible that they will benefit more from interventions directed at increasing a sense of meaning in life and well-being, as compared to people in non-dialectical cultures. Of course, within all cultures—whether dialectical or non-dialectical—there is considerable variability in individuals’ sense of meaning and hedonic well-being. Finally, interventions designed to enhance individuals’ dialecticism might increase their willingness to accept contradiction and change in their daily lives, which are essential components of psychological flexibility.

**Strengths, Limitations, and Future Directions**

Strengths of the present study included the sampling of four diverse cultures, direct assessment of cultural dimensions, and the use of additional measures of meaning in life and hedonic well-being to supplement those used in Steger, Kawabata, et al.’s (2008) test of the dialectical model. The study also had a number of limitations. First, the sample used was comprised of college students only, which limits the generalizability of findings. Although college students in each culture may be more similar to each other in their sense of meaning and well-being than more representative samples in each culture, I did find meaningful cultural differences in the key variables of the study. One related consideration is that the present study treated countries as proxies for culture, as in most cross-cultural research to date, thereby ignoring likely within-culture heterogeneity. Second, some cultural differences may be due to translation inequivalencies. Although rigorous backtranslation methods were used, it is possible that some translation “equivalents” have different degrees of salience or intensity across cultures. Third, it would be helpful to sample a broader range of cultures than those used in the present study. For example, it would likely be beneficial to obtain a greater number of cultures representing particular cultural dimensions (i.e., individualism-collectivism, cultural tightness-
looseness, dialecticism). Finally, it would likely be beneficial to extend findings from existing literature on meaning in life, well-being, and cultural dimensions (e.g., Miyamoto & Ryff, 2011; Steger, Kawabata, et al., 2008) by using alternative methods such as experience sampling designs or daily process studies. Such an approach could provide information about the presence and stability of individuals’ dialectical tendencies over time when reporting the type and frequency of positive and negative emotions experienced. This might help to account for within-person or contextual factors affecting one’s self-expression or evaluation of meaning in life and well-being in different cultures.

Regarding further potential directions for research, it may be helpful to explore novel ways to investigate the interaction of presence and search for meaning in life with culture in predicting well-being. One approach would be to incorporate additional potentially relevant variables such as sense of belonging (Stillman & Lambert, 2013), religiosity (Newton & McIntosh, 2013; Steger et al. 2009), existential courage (Maddi, 2013), and generativity (de St. Aubin, 2013). Second, researchers could explore how individuals’ multiculturalism may provide multiple meaning systems, which can enhance interpretation and understanding of diverse perspectives as one selects strategies and resources to pursue one’s value-based goals. A third suggestion is to incorporate longitudinal designs in future cross-cultural studies to help answer unresolved questions about causality and interaction. Additional studies could also benefit from the inclusion of personality traits as predictors. It is well-established that personality traits such as extraversion and neuroticism predict positive and negative affect, respectively (e.g., Costa & McCrae, 1980; DeNeve & Cooper, 1998; Sheldon, Ryan, Rawsthorne, & Ilardi, 1997), and may underlie some of the relationships found in the present study. Also, some studies have found that the “positive” poles of Big Five personality states (e.g., extraversion rather than introversion) are
reported in situations perceived as more autonomous or authentic to the individual (Ching et al., 2014; Fleeson and Wilt, 2010). Thus, it is possible that individuals might feel more autonomous and authentic, and experience greater meaning in life when enacting behaviors associated with the positive poles of the Big Five traits. Finally, despite the failure of individualism-collectivism (i.e., self-construals) to serve as a mediator in the present study, future studies may benefit from incorporating multiple or alternative cultural dimensions (e.g., uncertainty avoidance, tightness-looseness) as possible mediators of the influence of culture on meaning in life and well-being. While the present study provided support for dialectical thinking as a mediator of cultural differences in meaning in life and well-being, it does not preclude the possible impact of other cultural dimensions on these variables.

**Conclusion**

Individuals in different cultures are both similar and different in their experiences of meaning in life and well-being. Cultures clearly differ in average levels of meaning and well-being and these differences appear to be at least partially accounted for by cultural differences in dialecticism. This may be due to dialectical thinkers experiencing greater contradiction and emotional ambivalence in daily experience. The presence of meaning in life appears to have a similar impact on positive affect across cultures. The search for meaning in life may relate differently to presence of meaning and hedonic well-being across cultures, although this finding was not very definitive. Higher-level interactions between culture, presence of meaning, and search for meaning in predicting hedonic well-being may be difficult to replicate across cultures. Therefore, it is likely to be more challenging to confirm the generalizability across cultures of this aspect of Steger, Kawabata, et al.’s (2008) dialectical model. Some of the study’s findings have applied implications. For example, the findings suggest that interventions to facilitate the
presence of meaning in life, and in some cultures, the search for meaning in life, may benefit individuals’ psychological well-being.
References


Keller, J., Loewenstein, J., & Jin, Y. (2010). *Reasoning about perceived opposites and competition in teams.* Unpublished manuscript, University of Austin, TX.


Table 1
*Summary of Fit Indices for Tests of Measurement Invariance across Cultures*

<table>
<thead>
<tr>
<th>Model</th>
<th>Overall $\chi^2$</th>
<th>df</th>
<th>$p$</th>
<th>$\chi^2$/df</th>
<th>$\Delta \chi^2$</th>
<th>$\Delta df$</th>
<th>$p$</th>
<th>GFI</th>
<th>CFI</th>
<th>RMSEA</th>
<th>SRMR</th>
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<td></td>
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</tr>
<tr>
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<td>1.00</td>
<td>.99</td>
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<td>ns</td>
<td>.99</td>
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<td>.00</td>
<td>.03</td>
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<td>58.41</td>
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<td>.93</td>
<td>.97</td>
<td>.03</td>
<td>.04</td>
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<td>df</td>
<td>$p$</td>
<td>$\chi^2/df$</td>
<td>$\Delta \chi^2$</td>
<td>$\Delta df$</td>
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<td><strong>PWB-Purpose in Life</strong></td>
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<td>.97</td>
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<td>35.26</td>
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<td>.95</td>
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<td>106.95</td>
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<td><strong>PANAS</strong></td>
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<td>.97</td>
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<td>.05</td>
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<td><strong>Need Satisfaction (Pleasure-Stimulation and Self-Actualization)</strong></td>
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<td>-</td>
<td>.90</td>
<td>.05</td>
<td>.10</td>
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</tbody>
</table>

GFI indices are not computed by AMOS when intercepts are estimated. The RMSEA index is not meaningful for saturated models (i.e., when the model can be perfectly estimated).
Table 2.

Comparison of Scales across Four Cultures

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<tr>
<th>Dimension</th>
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<th>Australia</th>
<th>China</th>
<th>Japan</th>
</tr>
</thead>
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<tr>
<td>M</td>
<td>(_{-a})</td>
<td>.23(_{b})</td>
<td>1.00(_{c})</td>
<td>1.35(_{d})</td>
</tr>
<tr>
<td>S.E.</td>
<td>.11</td>
<td>.09</td>
<td>.09</td>
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<tr>
<td><strong>Independent self-construal</strong></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>(_{-a})</td>
<td>-.30(_{b})</td>
<td>-.34(_{b})</td>
<td>-.87(_{c})</td>
</tr>
<tr>
<td>S.E.</td>
<td>.11</td>
<td>.09</td>
<td>.12</td>
<td></td>
</tr>
<tr>
<td><strong>Collective self-construal</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>(_{-a})</td>
<td>-.24(_{b})</td>
<td>.28(_{c})</td>
<td>-.32(_{b})</td>
</tr>
<tr>
<td>S.E.</td>
<td>.07</td>
<td>.06</td>
<td>.07</td>
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</tr>
<tr>
<td><strong>MLQ - Search</strong></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>(_{-a})</td>
<td>-.00(_{a})</td>
<td>.26(_{a})</td>
<td>.37(_{b})</td>
</tr>
<tr>
<td>S.E.</td>
<td>.17</td>
<td>.15</td>
<td>.15</td>
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<tr>
<td><strong>MLQ - Presence</strong></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>(_{-a})</td>
<td>.12(_{a})</td>
<td>.19(_{a})</td>
<td>-.89(_{b})</td>
</tr>
<tr>
<td>S.E.</td>
<td>.17</td>
<td>.14</td>
<td>.15</td>
<td></td>
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<tr>
<td><strong>PWB - Purpose in Life</strong></td>
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<td></td>
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</tr>
<tr>
<td>M</td>
<td>(_{-a})</td>
<td>-.09(_{a})</td>
<td>-.38(_{b})</td>
<td>-1.30(_{c})</td>
</tr>
<tr>
<td>S.E.</td>
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<td>-.51(_{b})</td>
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<td>-.82(_{c})</td>
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Table 2 (continued)

<table>
<thead>
<tr>
<th>Dimension</th>
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<th>China</th>
<th>Japan</th>
</tr>
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<tr>
<td>PA</td>
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<tr>
<td>M</td>
<td>-a</td>
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<td>-.43\textsubscript{b}</td>
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<tr>
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<td>M</td>
<td>-a,b</td>
<td>.14\textsubscript{b,c}</td>
<td>-.03\textsubscript{a}</td>
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<td>.07</td>
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<td>Pleasure-Stimulation</td>
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<tr>
<td>M</td>
<td>-a</td>
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<td>.10</td>
<td>.10</td>
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*Note:* Means in each row that share a subscript are not significantly different ($p > .05$) in MACS analyses. Values shown as mean deviations for the U.S. reference group.
Table 3

*Dialecticism as a Mediator of Cultural Differences in Meaning in Life and Well-being*

<table>
<thead>
<tr>
<th>Cultural Comparison</th>
<th>Standardized path coefficients (βs)</th>
<th>Standardized indirect effects (a×b)</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>a</td>
<td>b</td>
</tr>
<tr>
<td>Presence of meaning</td>
<td></td>
<td></td>
</tr>
<tr>
<td>United States and Australia vs. Japan</td>
<td>.62**</td>
<td>-.65**</td>
</tr>
<tr>
<td></td>
<td>[.56, .69]</td>
<td>[-.75, -.54]</td>
</tr>
<tr>
<td>Search for meaning</td>
<td></td>
<td></td>
</tr>
<tr>
<td>United States and Australia vs. China and Japan</td>
<td>.57**</td>
<td>.22**</td>
</tr>
<tr>
<td>Positive Affect</td>
<td></td>
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<tr>
<td>United States and Australia vs. China and Japan</td>
<td>.57**</td>
<td>-.45**</td>
</tr>
<tr>
<td>Negative Affect</td>
<td></td>
<td></td>
</tr>
<tr>
<td>United States vs. Japan</td>
<td>.68**</td>
<td>.41**</td>
</tr>
<tr>
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<td>[.61, .74]</td>
<td>[.20, .62]</td>
</tr>
<tr>
<td>Pleasure Stimulation</td>
<td></td>
<td></td>
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<tr>
<td>United States and Australia vs. China and Japan</td>
<td>.57**</td>
<td>-.36**</td>
</tr>
<tr>
<td>United States vs. Japan</td>
<td>.68**</td>
<td>-.39**</td>
</tr>
</tbody>
</table>

*Note. a = βs relating cultural differences to dialecticism; b = βs relating dialecticism to meaning in life or well-being; c = βs relating cultural differences to meaning in life or well-being when no mediator variable was included in the model; c’ = βs relating cultural differences to meaning in life or well-being when dialecticism was included as a mediator. Bias-corrected 95% confidence intervals based on the bootstrap method (with 1000 bootstrap samples) are shown in brackets.*
under each estimate. Cultural comparisons were made based on theoretical patterns found in MACS analyses explained in the Results section for Hypothesis 3. Presence was modeled as a latent variable with the MLQ-P, PWB-P, and Self-Actualization measures used as observed indicators. Search was modeled as a latent variable with the five search items from the MLQ. PA, NA, and Pleasure-Stimulation were modeled as latent variables with 3-item parcels.

*p < .05. **p < .01.
### Table 4

**Presence and Search for Meaning as Predictors of Hedonic Well-being Variables**

<table>
<thead>
<tr>
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<td>.68**</td>
<td>.87**</td>
<td>.66**</td>
<td>.68**</td>
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<tr>
<td></td>
<td>[.51, .85]</td>
<td>[.76, .96]</td>
<td>[.53, .76]</td>
<td>[.53, .81]</td>
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<td>-.65**</td>
<td>-.55**</td>
<td>-.40**</td>
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<tr>
<td></td>
<td>[-.75, -.38]</td>
<td>[-.76, -.50]</td>
<td>[-.67, -.41]</td>
<td>[-.60, -.17]</td>
</tr>
<tr>
<td>Presence $\rightarrow$ Pleasure Stimulation&lt;sup&gt;a&lt;/sup&gt;</td>
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<td>.45**</td>
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<sup>a</sup>Confidence intervals are not listed for this model because of negative variance estimates in the bootstrapping model. *p < .05, **p < .01

**Note.** $\beta$ regression coefficients were standardized and freely estimated in each culture. Bias-corrected 95% confidence intervals based on the bootstrap method (with 1000 bootstrap samples) are shown in brackets under each estimate.
Table 5

Fit Indices for Multigroup SEM Models in which Presence of Meaning in Life Predicts Hedonic Well-being Variables

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<th>Hypothesis 4</th>
<th>Overall $\chi^2$</th>
<th>df</th>
<th>$p$</th>
<th>$\chi^2$/df</th>
<th>$\Delta \chi^2$</th>
<th>$\Delta$ df</th>
<th>$p$</th>
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<th>CFI</th>
<th>RMSEA</th>
<th>SRMR</th>
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Hypothesis 5

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<td>.94</td>
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| Search and Presence Predicting NA | Freely-estimated path coefficients | 300.03 | 164 | <.001 | 1.83 | - | - | - | .93 | .96 | .04 | .05 |
| Invariant path coefficients      | 400.52 | 191 | <.001 | 2.10 | 100.49 | 27 | <.01 | .90 | .94 | .04 | .09 |
Table 6.
Hierarchical Multiple Regression Analyses: Search for Meaning, Presence of Meaning, and Culture (the United States versus Japan) Predicting Hedonic Well-being Variables

<table>
<thead>
<tr>
<th>Criterion Variable (CV)/Regression Steps</th>
<th>$b$</th>
<th>$SE_b$</th>
<th>95%CI</th>
<th>$\beta$</th>
<th>$\Delta R^2$</th>
<th>$\Delta F$</th>
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<td>.02</td>
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| **CV=NA**                               |     |        |       |        | .18         | 25.34*** |
| Step 1                                  |     |        |       |        |             |         |
| Culture                                 | .92  | .35    | .24, 1.61 | .70**    |             |         |
| MLQ-Search                              | .05  | .04    | -.02, .12  | .10      |             |         |
| **MLQ-Presence**                        | -.11 | .04    | -.18, -.03 | -.21**   |             |         |
| Step 2                                  |     |        |       |        | .01         | 1.85    |
| MLQ-Search x **MLQ-Presence**           | -.02 | .02    | -.06, .03  | -.05     |             |         |
| MLQ-Search x Culture                    | -.05 | .05    | -.15, .05  | -.20     |             |         |
| **MLQ-Presence x Culture**              | -.07 | .05    | -.17, .04  | -.21     |             |         |
| Step 3                                  |     |        |       |        | .00         | .72     |
| MLQ-Search x **MLQ-Presence** x Culture | -.03 | .03    | -.08, .03  | -.06     |             |         |
Table 6 (continued)

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<th>$SE_b$</th>
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<p>| <strong>CV=Pleasure Stimulation</strong>             |     |        |            |        | .13         | 17.18***  |
| Step 1                                  |     |        |            |        |             |           |
| Culture                                 | -.36| .28    | -.90, .19  | -.27  | .13         | 17.18***  |
| MLQ-Search                              | .05 | .04    | -.03, .12  | .09   |             |           |
| PWB-Purpose in Life                     | .11 | .07    | -.04, .25  | .13   |             |           |
| Step 2                                  |     |        |            |        | .02         | 2.98*     |
| MLQ-Search x PWB-Purpose in Life        | .01 | .05    | -.08, .10  | .17   |             |           |
| MLQ-Search x Culture                    | .01 | .05    | -.09, .12  | .04   |             |           |
| PWB-Purpose in Life x Culture           | .19 | .09    | .01, .36   | .19*  |             |           |
| Step 3                                  |     |        |            |        | .01         | 2.05      |
| MLQ-Search x PWB-Purpose in Life x Culture | .08 | .06    | -.03, .20  | .12   |             |           |</p>
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*Note.* The United States was the reference group (i.e., coded 0) for each analysis. *\( p < .05 \), **\( p < .01 \), ***\( p < .001 \).  \( \beta \)s shown are from Step 3 in the analyses (i.e., final \( \beta \)s after all variables were in the regression equation). The criterion variable and meaning in life indicator for each analysis is bolded.
### Appendix A. Reliabilities and Intercorrelations for Instruments in Each Culture

#### United States

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