THE INTERPLAY OF CULTURAL SYNDROMES AND PERSONALITY IN PREDICTING LIFE SATISFACTION
Comparing Asian Americans and European Americans

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This study explored how personality and cultural variables influence subjective well-being (SWB) in two different U.S. ethnic groups: Asian Americans and European Americans. Structural equation modeling analyses supported a hypothesized culture → personality model of SWB, in which the cultural syndromes of individualism and collectivism predict variations on personality dispositions (Big Five), which, in turn, influence life satisfaction through self- and relational esteem. Despite ethnic mean-level differences found for many of the variables, none of the pathways in the culture → personality model of SWB differed across our two ethnic groups. Furthermore, the culture → personality model of SWB fit the data more adequately than a competing personality → culture model of SWB, in which personality dispositions preceded cultural syndromes in predicting life satisfaction. A consistent finding was the stronger weight of self-esteem (compared with relational esteem) in predicting life satisfaction for both ethnic groups. Results are discussed in the context of acculturation theory and recent cultural psychology views.

Although a thorough definition of the good life undoubtedly includes both internal and relational aspects, culture may tip the balance between these two sets of factors.

(Suh, Diener, Oishi, & Triandis, 1998; p. 491)

Few topics have attracted as much attention in the field of psychology as the study of subjective well-being (SWB), that is, people's evaluations of their lives (Diener, Suh, Lucas, & Smith, 1999; Kahneman, Diener, & Schwarz, 1999). SWB includes both cognitive judgments of life satisfaction (Diener, Emmons, Larsen, & Griffin, 1985) and affective evaluations of moods and emotions. Studies in this area provide a wealth of evidence suggesting that SWB is largely influenced by dispositional variables, such as personality and temperament (Diener & Lucas, 1999), and moderately to largely influenced by contextual factors, such as marriage, employment, social class (Argyle, 1999), and culture (Diener & Suh, 2000).

An examination of the literature on SWB reveals a clear division between studies that examine the effects of dispositional variables (e.g., extraversion and neuroticism) on SWB and those examining the role of culture on SWB. To date, only a few studies have incorporated dispositional and cultural effects in their designs, and these studies do so mainly by comparing the patterns of personality and affect effects on SWB for different cultural groups (e.g., Kwan, Bond, & Singelis, 1997; Schimmack, Radhakrishnan, Oishi, Dzokoto & Ahadi,

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2002; Suh et al., 1998). In these cross-cultural studies, culture is typically operationalized as a moderator of SWB processes and measured as a nominal, exogenous variable (i.e., being Chinese vs. being American). Although this work has been instrumental in elucidating the diverging ways in which cultures define SWB, the possible joint effects of culture and personality variables in predicting SWB remain largely unexplored. Specifically, it is possible that individual differences in the endorsement of particular cultural norms and values (e.g., individualism and collectivism) and differences in basic personality traits (e.g., extraversion, neuroticism, agreeableness, conscientiousness, and openness) are related to each other and jointly influence SWB. With these conceptual issues in mind, this article aims to explore how personality and cultural variables, separately and together, translate into various psychological processes of SWB (namely, self- and relational esteem and life satisfaction) while relying on a more psychological conceptualization of culture (vs. more exogenous definitions such as cultural membership), namely, cultural syndromes (Triandis, 1996).

This study draws on and furthers previous work that has examined the separate influence of certain personality and/or cultural variables on SWB (Kwan et al., 1997; Lu et al., 2001). A unique component of our study is that it addresses an issue largely unexamined in most personality and cultural research: the possible competing mediational roles of personality and culture in predicting important psychological outcomes, such as SWB. Namely, we are interested in the following opposing questions: Do cultural syndromes, such as individualism and collectivism, (Triandis, 1996) predict variations on broad personality dispositions (Big Five) (John, 1990), which in turn predict SWB (i.e., personality as a mediator of the relationship between cultural values and SWB)? Or rather, do personality traits drive the internalization of individualism and collectivism, which in turn relate to different levels of SWB (i.e., cultural values as mediators of the relationship between personality traits and SWB)?

Another relevant feature of this study is its reliance on two different U.S. ethnic groups, European American and (first- and second-generation) Asian American, rather than cross-national samples. This design will allow us to explore the generalizability of some well-established U.S.-versus-Asia mean-level differences in cultural syndromes, personality, and SWB in a multiethnic context, as well as to examine the possible influence of acculturation on our study variables and processes.

In short, the main three goals of this article are (a) to examine the separate and joint effects of cultural syndromes and personality traits on SWB (self- and relational esteem and life satisfaction) across two different U.S. ethnic groups (European American and Asian American); (b) to compare two possible mediational models of SWB: one in which personality traits mediate the impact of individualism and collectivism on SWB and one in which the two cultural syndromes mediate the influence of personality on SWB; and (c) to explore ethnic differences on our variable levels and proposed models.

Before turning to our study, we first review the evidence for cultural and personality influences on SWB and discuss how these two types of influences should be integrated into a more complex model of SWB. We finish our introduction with a brief review of the literature examining cultural and ethnic differences on our variables of interest and the role of acculturation.

CULTURAL SYNDROMES AND SWB

There is growing recognition in psychology for the idea that culture chronically shapes the way we perceive and evaluate ourselves, which, in turn, influences our experiences,

judgments, and expressions of SWB (Diener & Suh, 2000). One way culture influences our self-perceptions of SWB is via cultural norms, attitudes, and beliefs about what is desirable and meaningful in terms of our self-definitions and relationships with others, or what we know as *cultural syndromes* (Triandis, 1996). Societal differences in the emphasis placed on the goals and well-being of the individual (individualism) versus those of the collective (collectivism), for instance, are linked to definitions of SWB that are based on affirmation of one's sense of individuality and autonomy versus affirmation of one's relationships with others and group membership (Diener & Diener, 1995; Kitayama, Markus, and Kurokawa, 2000; Lu et al., 2001; Oishi, Diener, Lucas, & Suh, 1999).

The notion of SWB as a culturally bound construct is empirically supported by several recent studies. Kwan et al. (1997), for instance, show that the relative importance of self-esteem to relationship harmony in predicting life satisfaction is greater in individualistic cultures, such as the United States, than in Hong Kong. Similarly, Oishi et al. (1999) found that satisfaction with esteem needs (e.g., the self and freedom) predicted global life satisfaction more strongly among people in individualist nations than people in collectivist nations. Furthermore, Kitayama et al. (2000) show that "good feelings"—the central element of SWB—are associated with an interdependent orientation and interpersonal engagement of the self in Japan but with independence and interpersonal disengagement of the self in the United States.

In line with these studies, we propose a cultural model of SWB that asserts that the cultural syndromes of individualism and collectivism (Triandis, 1996) will predict the cognitive component of SWB, that is, life satisfaction, through different mechanisms. In particular, drawing from Kwan et al.'s (1997) findings, we hypothesize that across our two U.S. ethnic groups (Asian American and European American), individualism will predict life satisfaction through the mediational role of self-esteem, whereas collectivism will predict life satisfaction through the mediational role of relational esteem (i.e., satisfaction with family and friends relationships). Note that, as in Kwan et al. (1997), we conceptualize the broader construct of SWB in terms of three different components that differ in their scope and cultural meaning: (a) life satisfaction, our final outcome variable; (b) self-esteem; and (c) relational esteem (family and friends satisfaction). We see the latter two constructs as narrower components of SWB that mediate the relation between cultural syndromes and life satisfaction and have different cultural weight in predicting SWB.

Because this study relies on variables very similar to those used in Kwan et al.'s study, our study will also be able to examine to what extent Kwan et al.'s (1997) finding that self-esteem and relationship harmony have different weights for Americans and Hong Kongese in predicting life satisfaction generalizes to European American and Asian American U.S. ethnic groups.

PERSONALITY AND SWB

One of the most robust findings in the study of SWB is that personality dispositions are important predictors of most components of SWB (see Diener & Lucas, 1999, for a review). Specifically, many personality studies of SWB point to the relationship between certain affective/cognitive traits such as positive and negative affect, optimism, and self-efficacy (all traits related to the broader Big Five dispositions) and the way individuals appraise and react to environmental rewards and punishments that determines their SWB.

Recent work suggests that the links between basic personality dispositions such as extraversion and neuroticism (and other Big Five traits) and SWB may be quite robust cross-culturally (Kwan et al., 1997; Schimmack et al., 2002). Kwan et al.'s (1997) study is particularly interesting because, as mentioned earlier, it relies on a broader conceptualization of SWB that includes self- and relational esteem as well as life satisfaction. Specifically, Kwan's study shows that for both Chinese and American individuals, self-esteem mediates the relations between extraversion, neuroticism, conscientiousness, and openness and life satisfaction, whereas relationship harmony mediates the relations between agreeableness and extraversion and life satisfaction. Interestingly, the weights of each of the Big Five dimension on self-esteem and relationship harmony were cross-culturally equivalent, although the relative weights of self-esteem and relationship harmony in predicting life satisfaction were different for the two cultural groups (in the same direction as the results discussed earlier). Again, because this study relies on variables very similar to those used in Kwan et al.'s study, we will be able to examine the generalizability of the above findings to European American and Asian American U.S. ethnic groups.

CULTURAL SYNDROMES AND PERSONALITY: INDEPENDENT OR JOINT PATHWAYS TO LIFE SATISFACTION?

As mentioned earlier, one limitation of many personality and cultural studies of SWB has been their tendency to conceptualize culture and personality influences as unrelated forces that shape people's lives in a largely independent fashion. Even in those few studies in which personality and cultural variables have been considered simultaneously (e.g., Kwan et al., 1997; Schimmack et al., 2002; but see Grimm, Church, Katigbak, & Reyes, 1999), the possible mutual constitution of these two kinds of constructs is not explicitly acknowledged. This tendency to treat culture and personality as separate effects may be based on researchers' preference for designs where culture is operationalized as an objective, exogenous variable (e.g., country of birth, race, ethnicity) that influences (i.e., moderates) the phenomenon of interest (e.g., link between personality and SWB).

More important, this traditional separation of cultural and personality influences so common in cross-cultural personality studies seems at odds with recent cultural psychology views that emphasize the inseparability and mutual constitution of psyche and culture (Aaker, Benet-Martínez, & Garolera, 2001; Greenfield, 1994; Markus & Kitayama, 1998; see also Church, 2000, for a review). According to these views, personality (i.e., an individuals' affective, cognitive, and motivational tendencies) is largely a sociocultural product. In other words, those personality dispositions that influence individuals' evaluations and reactions to their environment (e.g., SWB) cannot be separated from the broad social and cultural context in which they develop and are expressed. In fact, as said by Markus and Kitayama (1998):

> A cultural psychology approach assumes that personality . . . is completely interdependent with the meanings and practices of particular sociocultural contexts. People develop their personalities over time through their active participation in the various social worlds in which they engage. A cultural psychological perspective implies that *there is no personality without culture* [italics added]; there is only a biological entity. (p. 67)

In light of these views, the study of how cultural norms and personality tendencies influence each other becomes critical. Accordingly, a key goal of this study is to examine how the cultural syndromes of individualism and collectivism and Big Five personality dispositions relate to each other and jointly predict SWB. Note that although the links (i.e., correlations) between individualism and collectivism (or related constructs) and the Big Five have already been reported in a few studies (Kwan et al., 1997; Luk & Bond, 1993; Yik & Tang, 1996), the direction of this relationship in the context of predicting important life outcomes such as SWB remains unexplored. Namely, do cultural syndromes predict specific personality dispositions, which in turn influence SWB (a *culture* → personality model of SWB)? Or alternatively, do personality dispositions function as antecedents of cultural norms, which in turn influence SWB (a *personality* → culture model of SWB)? For instance, in line with the first model, it may be the case that the internalization of individualistic values and norms (i.e., valuing agency and self-determination) makes an individual more extraverted and open to experience (i.e., more talkative, assertive, and independent), dispositions that, in turn, predict SWB. According to the second model, on the other hand, it may be that having an extraverted and open disposition makes you more likely to endorse individualism, which, in turn, predicts SWB.

Note that the above two models concern a basic debate within personality psychology; namely, the issue of whether the Big Five represent (a) observable behavioral regularities that reflect characteristic adaptations to the sociocultural context (phenotypic view) (Saucier & Goldberg, 1996), or (b) endogenous and inherited basic tendencies that are largely independent from culture (genotypic view) (McCrae & Costa, 1996).

In accordance with the phenotypic view on the Big Five (Saucier & Goldberg, 1996) and cultural psychology's definition of personality (Markus & Kitayama, 1998), we predict that for both of our cultural groups, the culture → personality model of SWB will provide a more accurate picture of the relationships among the variables measured in our study. In other words, we hypothesize that individualism and collectivism will emerge as antecedents of the endorsement and expression of the Big Five personality dispositions, which in turn will influence life satisfaction through self-esteem and interrelatedness. The soundness of this culture → personality model will also be tested against the competing personality → culture model of SWB, where the Big Five precede the internalization of individualism and collectivism, which in turn predict life satisfaction through self-esteem and interrelatedness.

It is important to note that the processes involved in our two models, as in most processes in psychology, occur over time and, ideally, should be tested with longitudinal samples (Baron & Kenny, 1986).[1] Given the cross-sectional nature of our data, our study focuses instead on providing insight into a slice of this phenomenon: how individuals' cultural values and personality dispositions separately and jointly influence life satisfaction.

ETHNICITY AND SWB:
COMPARING EUROPEAN AMERICANS AND ASIAN AMERICANS

Despite the theoretical and practical importance of studying individuals belonging to different ethnocultural groups (Berry & Sam, 1997) and the need to move beyond "West-versus-the-rest" dichotomies (Hermans & Kempen, 1998), most cultural psychological studies continue to rely mainly on cross-national samples. Comparing different ethnic groups on variables of interest, however, has value that goes beyond the understanding of within-culture diversity. Within-country ethnic group comparisons (particularly when they

involve pitting a dominant, cultural majority group against a minority group) provide an ideal backdrop for the understanding of the culture-learning mechanisms involved in the processes of enculturation and acculturation. More specifically, in the context of our study, comparing European Americans and (first- and second-generation) Asian Americans on our variables and models of interest will allow us to (indirectly) examine the influence that acculturation to the United States (as an ethnocultural group) may have on two different kinds of mechanisms relevant to SWB: the internalization of specific psychological SWB processes (e.g., value or weight of self-esteem in predicting life-satisfaction), and the manifestation of specific psychological SWB features or characteristics (e.g., individuals' absolute levels of self-esteem and life satisfaction). Specifically, we are interested in the extent to which being an American of Asian descent may affect these two kinds of psychological notions differently. To clarify, we may find that our Asian American participants, by virtue of their Asian background, differ from their European American counterparts on both the processes leading to life satisfaction (e.g., results may indicate that relational esteem, rather than self-esteem, is the key predictor of life satisfaction among Asian-Americans, as found in Kwan et al.'s [1997] study) as well as the endorsement of these attributes (i.e., results may show that the Asian American sample has lower levels of self-esteem and life satisfaction, as also found in Kwan et al.'s study). Alternatively, we may find that the Asian American and European American groups only differ on one of these two mechanisms (e.g., attributes mean levels), a finding that would suggest that the impact of acculturation on SWB processes and features is not uniform.

Although the exploration of cultural mean-level differences is not the main focus of our study, several recent studies (that we briefly review below) are informative regarding the types of European American versus Asian American mean-level differences we may find in with our own study variables. For instance, with regard to individualism-collectivism, several studies conducted in the United States (Coon & Kemmelmeier, 2001; Gaines et al, 1997; Singelis, Triandis, Bhawuk, & Gelfand, 1995) reveal that Asian Americans, unlike other minority groups (e.g., Hispanics, African Americans), consistently score higher on collectivism and lower on individualism than do European Americans. These ethnic differences on cultural syndromes seem to align themselves with findings from cross-national studies comparing American and Asian samples (Kwan et al., 1997; Oyserman, Coon, & Kemmelmeier, 2002; Singelis, Bond, Sharkey, & Lai, 1999).

In terms of SWB and its components (e.g., self-esteem, relational esteem, life satisfaction), studies comparing European American and Asian American samples (Oishi, Wyer, & Colcombe, 2000; Singelis et al., 1999) indicate that overall, individuals of Asian descent report lower levels of self-esteem and life satisfaction. This trend is also present in studies comparing U.S. and Asian samples (Diener & Diener, 1995; Kwan et al. 1997). There is also strong evidence suggesting that for Asians, interrelatedness (e.g., relationship harmony, family and friends satisfaction) plays a particularly significant role and is closely tied to judgments of SWB (Kitayama & Markus, 2000; Suh, 2000), although this emphasis does not seem to translate into higher levels of relationship satisfaction for this group (Diener & Diener, 1995; Kwan et al., 1997).

Finally, studies comparing Asian American and European American samples on the Big Five personality dimensions report only trivial to moderate mean-level differences (Goldberg, Sweeney, Merenda, & Hughes, 1998), whereas those relying on cross-cultural samples tend to suggest somewhat lower levels of openness and extraversion and higher levels of neuroticism for Asian groups (Kwan et al., 1997; McCrae, Yik, Trapnell, Bond, & Paulhus, 1998).

In conclusion, the work reviewed above underscores the existence of some moderate to large mean-level differences between individuals of Asian and European descent on our variables of interest (cultural syndromes, personality traits, self-esteem, and life satisfaction). Recall that a secondary goal of this study is to explore the generalizability of some of these differences to our particular European American and Asian American samples.

OVERVIEW OF THE STUDY

In this article, we explore how personality and cultural variables, jointly and separately, influence SWB in two different U.S. ethnic groups: Asian Americans and European Americans. In line with current cultural psychology views of personality, we propose and empirically evaluate a culture $\rightarrow$ personality model of SWB, where the cultural syndromes of individualism and collectivism predict variations on personality dispositions (Big Five), which in turn, influence life-satisfaction through self- and relational-esteem.

METHOD

PARTICIPANTS

The sample consisted of 321 undergraduate students (132 men and 189 women; mean age 20, $SD = 3.3$) from a large university on the West Coast of the United States. Of these, 122 were European American and 199 were Asian American (99 first generation and 100 second generation). Mean socioeconomic (SES) levels were 3.2 ($SD = 0.9$) for Asian Americans and 3.4 ($SD = 0.8$) for European Americans, based on the following 5-point scale: 5 (upper class); 4 (upper middle); 3 (middle); 2 (lower middle); and 1 (working class).

Individuals in the Asian American sample had backgrounds from China ($n = 102$), Korea (42), Japan (15), India (13), Southeast Asia (e.g., Vietnam, Cambodia) (15), Pacific Islands (8), and other Asian countries (4). Participants in the first-generation Asian subsample had lived in the United States and in an Asian country for an average of 11.9 years ($SD = 5.2$) and 8 years ($SD = 5.5$), respectively. All Asian American participants reported high levels of fluency in written and spoken English.

Of the 122 participants in the European American sample, 10 (8%) were born overseas (4 in England, 3 in Canada, 2 in Germany, and 1 in Poland) and had lived in the United States for an average of 12.6 years ($SD = 7.3$). Of the 112 U.S.-born European American participants, 17 were second generation, and 95 were third or older generation.

PROCEDURE

Questionnaires were group administered in sessions of 45 to 60 minutes. Respondents completed the questionnaire in class in partial fulfillment of a research requirement. The questionnaires included a series of demographic background questions and then measures of individualism-collectivism, personality, and SWB, and cultural identification. Participants were assured that their responses would be anonymous and confidential.

TABLE 1
Descriptive Statistics for European Americans
and First- and Second-Generation Asian Americans

	European American (n = 122)			Asian American (n = 199)					
				1st Gen. (n = 99)		2nd Gen. (n = 100)			
	M	SD	α	M	SD	M	SD	α	F
Demographics/acculturation									
Socioeconomic status	3.4_a	0.85	—	2.9_b	1	3.4_a	0.84	—	9.89***
Identification with U.S.	5.4_a	1.5	—	3.8_b	1.7	5_a	1.4	—	32.28***
Identification with									
Asian culture	—	—	—	5_a	1.8	4.2_b	1.6	—	11.42***
Cultural syndromes									
Independence	4.79_a	0.60	0.68	4.49_b	0.69	4.56_b	0.66	0.75	6.59**
Interdependence	4.42_a	0.64	0.70	4.82_b	0.71	4.82_b	0.66	0.76	13.98***
Vertical individualism	4.06	0.95	0.79	4.25	1.04	4.16	1.00	0.83	1.09
Horizontal individualism	5.22	0.61	0.56	5.19	0.64	5.20	0.73	0.68	0.08
Vertical collectivism	3.94_a	0.73	0.54	4.67_b	0.94	4.57_b	0.86	0.75	25.19***
Horizontal collectivism	5.07	0.58	0.54	5.04	0.69	5.23	0.69	0.71	2.54
Individualism (abbrev.)	4.88	0.64	0.68	4.72	0.73	4.79	0.71	0.77	1.54
Collectivism (abbrev.)	4.38_a	0.64	0.71	4.87_b	0.84	4.88_b	0.71	0.82	17.26***
Personality									
Extraversion	3.33_a	0.79	0.86	2.99_b	0.89	$3.14_{a,b}$	0.82	0.88	4.55**
Agreeableness	3.69	0.63	0.78	3.63	0.66	3.69	0.58	0.76	0.24
Conscientiousness	3.78_a	0.61	0.77	3.32_b	0.71	3.56_b	0.69	0.82	12.80***
Neuroticism	3.06	0.81	0.84	3.25	0.78	3.21	0.72	0.80	2.06
Openness	3.95_a	0.62	0.89	3.67_b	0.67	$3.74_{a,b}$	0.68	0.83	5.46**
Subjective well-being									
Self-esteem	5.26_a	0.97	0.87	4.84_b	1.12	4.85_b	1.03	0.89	6.22***
Loneliness	3.12	1.11	0.84	3.34	1.25	3.14	1.23	0.89	1.15
Family satisfaction	5.28	1.49	—	5.11	1.48	5.30	1.43	—	0.51
Friend satisfaction	5.51	1.20	—	5.34	1.25	5.39	1.23	—	0.54
Life satisfaction	4.84_a	1.19	0.84	3.99_b	1.28	4.28_b	1.34	0.87	13.05***

NOTE: Gen. = generation; abbrev. = abbreviated. Means in the same row that do not share subscripts differ at $p < .05$ in Scheffé test.
**$p < .01$. ***$p ≤ .001$.

INSTRUMENTS

All instruments were administered in English. Unless otherwise noted, all items were answered on a 7-point scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*). Alpha reliabilities for each measure (when applicable) are reported in Table 1.

1. Cultural Syndromes (Individualism and Collectivism)

Independent-Interdependent Self-Construals (Singelis, 1994). This measure includes a 12-item Independence scale (IND) measuring value preference for separateness, independence, and uniqueness, and a 12-item Interdependence scale (INT) measuring value preference for connectedness, harmony, and conformity.

Horizontal and Vertical Individualism and Collectivism (Singelis et al., 1995). This measure includes four eight-item scales. The Vertical Individualism scale emphasizes a view of the self as autonomous from others while underscoring inequality, status, and competition; the Horizontal Individualism scale emphasizes a view of the self as autonomous from others while underscoring equality. The Vertical Collectivism scale stresses the belongingness to a collective and acceptance of inequality within the collective; the Horizontal Collectivism scale stresses the importance of perceiving the self as part of a group while also seeing all members of the collective on the same level.

Development of an abbreviated measure of individualism and collectivism. The six scales (56 items total) that compose the prior measures of independent and interdependent self-construals (Singelis, 1994) and vertical/horizontal individualism and collectivism (Singelis et al., 1995) provide a wide content representation of the cultural norms, beliefs, and self-representations associated with the cultural syndromes of individualism and collectivism. However, because using all these scales in our subsequent path analyses would have yielded models of excessive complexity (and redundancy), we sought to reduce the pool of 56 items to two smaller and reliable sets of individualism and collectivism markers. Using both samples together, and for each cultural syndrome separately, all the relevant items from Singelis (1994) and Singelis et al. (1995) were combined and forced to a one-factor solution and then the 13 items with the highest loadings were selected.[2]

2. Personality

Big Five Inventory (BFI) (Benet-Martínez & John, 1998). This measure uses 44 short phrases to assess the most prototypical traits associated with each of the Big Five basic personality dimensions (John, 1990): extraversion, agreeableness, conscientiousness, neuroticism, and openness to experience. Respondents rated each of the 44 short phrases on a 5-point scale ranging from 1 (*disagree strongly*) to 5 (*agree strongly*).

3. SWB

Rosenberg Self-Esteem Scale (RSES) (Rosenberg, 1965). This 10-item scale is the most commonly used measure of self-esteem. Half of the items in this measure are scored in the reverse direction to reduce the possibility of acquiescence.

Satisfaction With Life Scale (SWLS) (Diener et al., 1985). This 5-item scale measures people's global life satisfaction and is the most commonly used measure of its kind.

Satisfaction with family and friends. Participants' overall satisfaction with their family and friends was measured with two separate items that asked, "All things considered, how satisfied are you with your family life (friendships)?" Response options for these two questions ranged between 1 (*completely dissatisfied*) and 7 (*completely satisfied*).

UCLA Loneliness Scale (ULS-8) (Hays and DiMatteo, 1987). This is an eight-item scale that conceptualizes loneliness as a unidimensional emotional response to a discrepancy between desired and achieved levels of social contact.

4. Cultural Identification

U.S. and ethnic cultural identification. Participants rated the strength of their identification with American culture and specific Asian ethnic culture (in the case of the Asian American participants) with two separate items that asked, "How much do you identify with U.S. (Asian ethnic) culture?" Responses were measured in a 6-point scale that ranged from 1 (*very weakly identified*) to 6 (*very highly identified*).

ANALYSES AND RESULTS

DESCRIPTIVE STATISTICS AND ETHNIC DIFFERENCES

Table 1 shows the mean, standard deviation, and internal consistency (alpha) reliability (when relevant) for our main study variables, separately for the European American and Asian American (first- and second-generation) samples. Notice that the internal consistencies for all the variables are substantial in both cultural groups—however, note that three of Singelis et al.'s scales for the European American group (Horizontal Individualism and the two collectivism scales) have alphas below .60.

Mean differences between our cultural groups on all the variables were tested with a series of one-way ANOVAs and post hoc analyses. With regard to the demographics/acculturation section, note that the first-generation Asian American subsample, as is typically found with immigrant groups, reports somewhat lower levels of SES than the other two subsamples.[3] Also not surprisingly, first-generation Asian American participants report lower levels of identification with the United States than the other two groups and higher levels of identification with their Asian ethnic culture than their second-generation counterparts. It is noteworthy that despite these differences in absolute levels of cultural identification, both Asian American subsamples display a bicultural pattern of identification (they identify moderately to highly with both cultures), although to different degrees.

As expected, both first- and second-generation Asian American participants score higher than European Americans on interdependent self-construal and lower on independent self-construal, supporting findings from other studies of cultural value orientations (Oyserman et al., 2002). Interestingly, with regard to Singelis et al.'s (1995) measure of vertical/horizontal individualism and collectivism, note that only vertical collectivism was different across our two groups (Asian Americans scored higher). This pattern is also reported in Singelis et al.'s (1995) original study and interpreted by the authors as suggesting that vertical collectivism may be the essential element of collectivism (see also our comment on Note 2). Relatedly, with regard to our new abbreviated measures of individualism and collectivism, only the collectivism scale differed across the two cultural groups.

There are also significant differences between the groups on the Big Five personality factors: European Americans report higher levels of extraversion, conscientiousness, and openness to experience than first-generation Asian Americans, partially replicating Kwan et al.'s (1997) findings with American- and Chinese-born individuals (see Table 4 in their paper). Interestingly, although not significant, the direction of the differences between first- and second-generation Asian Americans on extraversion, openness, and conscientiousness (dispositions commonly associated with Western, independent worldviews) (McCrae et al., 1998) supports the lesser degree of U.S. assimilation by the first-generation Asian group (e.g., as indicated by their lower levels of identification with U.S. culture).

With regard to our well-being measures, as expected, European Americans score higher on self-esteem and life satisfaction (as also found by Kwan et al., 1997), but the two groups do not differ on any of variables related to relationship harmony (loneliness, and friends and family satisfaction).[4]

STRUCTURAL EQUATION MODELING (SEM) ANALYSES

Table 2 presents the intercorrelations among our main variables separately for the European American and Asian American samples. Note that these bivariate correlations provide information that is largely accounted for by the SEM analyses reported below; thus, for the sake of parsimony, we do not discuss these correlations here.

Before conducting the SEM analyses, we formed four parcels for each of the individualism and collectivism scales, three parcels for each of the Big Five scales, three parcels for self-esteem, and two parcels for loneliness (the use of parcels reduces the number of variables in a model and increases the reliability of indicators).[5] Following Mathieu and Farr's (1991) procedure, we fitted a single-factor solution to the items within the aforementioned scales separately, and then we aggregated the one or two items with the highest and one or two items with the lowest loadings to form the first parcel (note that the size of the parcels varied across scales because the instruments had different number of items/number of parcels ratios). Thereafter, we repeated this procedure to form the second parcel, repeating the same procedures until all items were aggregated to one parcel.

Note that in this study, we conceptualize relational esteem in terms of two different domains: friends satisfaction and family satisfaction. In our view, these two domains represent two qualitatively different spheres of interpersonal relationships, particularly among college students who tend to live away from home and whose relationships revolve around peers mainly. In our path models, the construct of friends satisfaction was represented by the original single item measuring friends satisfaction and the two parcels of loneliness (given that these measures were highly intercorrelated). Family satisfaction was represented by a single item measuring satisfaction with the family relationships.

The LISREL 8 program (Jöreskog & Sörbom, 1993) and maximum likelihood estimation were used for the analyses.[6] The following indices were used to evaluate the fit of the models: chi-square/degrees of freedom ratio (χ^2/df), root mean square error of approximation (RMSEA), Non-Normed Fit Index (NNFI), and the Comparative Fit Index (CFI). Generally, NNFI and CFI above .85 to .90s, RMSEA below .05 to .08, and χ^2/df below 3 indicate reasonable fit.

In all the analyses we describe next, we estimated the covariances between our exogenous variables (individualism and collectivism; Big Five) freely and added correlated errors between the mediating variables of self-esteem, friends satisfaction, and family satisfaction. For each model, we first tested the measurement model and then proceeded to test our causal models across the two groups using multigroup analyses (this procedure tests whether a model has the same parameter values in two different groups). As suggested by Kline (1998), we used covariance matrices and constrained only factor loadings and path coefficients, but not the covariances and error variances. In the multigroup analyses, we sequentially imposed more and more equality constraints on each path across the two cultural groups. We evaluated the fit of each modified model by subtracting the smaller χ^2 and degrees of freedom from the larger ones. If there was no significant χ^2 change (i.e., no substantial loss in the model fit), we then proceed to the more restricted model.

TABLE 2
Zero-Order Correlations Among Main Variables for European Americans and Asian Americans

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
European American														
1. Individualism[a]	—													
2. Collectivism[a]	−.08	—												
3. Extraversion	.52**	.01	—											
4. Agreeableness	.11	.33**	.20**	—										
5. Conscientiousness	.17	.09	.28**	.15	—									
6. Neuroticism	−.34**	−.02	−.36**	−.41**	−.25**	—								
7. Openness	.52**	−.23	.29**	.12	.02	−.24**	—							
8. Self-esteem	.44**	−.08	.39**	.22*	.40**	−.52**	.34**	—						
9. Loneliness	−.30**	−.03	−.59**	−.27**	−.33**	.35**	−.19*	−.56**	—					
10. Family satisfaction	.19*	.28**	.01	.24**	.14	−.16	.08	.25**	−.21*	—				
11. Friend satisfaction	.31**	−.02	.38**	.16	.12	−.28**	.26**	.41**	−.51**	.20*	—			
12. Life satisfaction	.34**	.01	.34**	.26**	.26**	−.47**	.18	.70**	−.59**	.40**	.47**	—		
13. U.S. identification	.07	.09	.06	.10	.05	.08	−.20*	.03	−.04	−.08	.01	.00	—	
Asian American														
1. Individualism[a]	—													
2. Collectivism[a]	−.15*	—												
3. Extraversion	.46**	−.12	—											
4. Agreeableness	−.11	.36**	.17*	—										
5. Conscientiousness	−.23**	.09	.32**	.37**	—									
6. Neuroticism	−.31**	.12	−.42**	−.29**	−.32**	—								
7. Openness	.47**	−.05	.42**	.16*	.27**	−.24**	—							
8. Self-esteem	.40**	−.23**	.42**	.24**	.31**	−.55**	.29**	—						
9. Loneliness	−.21**	.07	−.56**	−.35**	−.27**	.48**	−.29**	−.58**	—					
10. Family satisfaction	−.03	.19*	.07	.15*	.01	−.00	−.02	.21**	−.14*	—				
11. Friend satisfaction	.14	.11	.27**	.20**	.09	−.31**	.15*	.37**	−.62**	.19**	—			
12. Life satisfaction	.37**	−.02	.39**	.23**	.24**	−.45**	.25**	.67**	−.52**	.34**	.36**	—		
13. U.S. identification	.09	−.09	.09	.03	.11	−.14*	.10	.19*	−.10	−.03	.05	.14	—	
14. Asian identification	.06	.23**	.07	.08	.10	.13	−.10	−.09	.02	.20**	.00	−.06	−.45**	—

NOTE: Ns = 122 European Americans and 199 Asian Americans.
a. abbreviated measures.
*$p < .05$. **$p < .01$.

Cultural model of SWB. We first tested a model in which the cultural syndromes of individualism and collectivism predict life satisfaction through different mechanisms. In particular, drawing from Kwan et al.'s (1997) findings, we hypothesized that across our two U.S. ethnic groups, individualism would predict life satisfaction through the mediational role of self-esteem, whereas collectivism would predict life satisfaction through the mediational role of relational esteem (i.e., satisfaction with family and friends).

As mentioned earlier, before testing the proposed causal model, we specified a measurement model to assess the measurement properties of all our latent variables (i.e., individualism and collectivism, self-esteem, friends satisfaction, family satisfaction, and life satisfaction) across the two groups. All the factor loadings for each scale indicator and all the error variances were significant at $p < .05$, and the measurement model yielded an acceptable level of fit across the two groups, $\chi^2(327, N = 321) = 575.34$, $\chi^2/df = 1.78$, RMSEA = .066, NNFI = .90, CFI = .92.

Our initial test of the hypothesized structural model revealed a nonsignificant path between collectivism and friends satisfaction for both groups. Furthermore, modification indices suggested the need for a path between individualism and friends satisfaction for both groups. Hence, we dropped the path from collectivism to friends satisfaction and added a new path going from individualism to friends satisfaction. Note that this relationship between individualism and friends satisfaction in both of our college samples, although an unexpected finding, is not surprising considering the highly individualistic nature of college life in the United States, where students may be more likely to have friends of their own choosing with whom they share interests and values.[7] Furthermore, this finding supports recent conceptual work that underscores the complementarity of individuality and relatedness needs in individuals (İmamoğlu, 1998; Kagıtçıbaşı, 1996). Still, the absence of a path between collectivism and friends satisfaction is interesting.

Our modified model, with no equality constraints on either the measurement or the structural model, yielded an acceptable level of fit, $\chi^2(322, N = 321) = 577.92$, $\chi^2/df = 1.79$, RMSEA = .068, NNFI = .90, CFI = .91. Next, we imposed equality constraints on the measurement model and on each path subsequently. There was no significant change in chi-square at any step, suggesting that the predicted relationships among our variables are equivalent across our two samples. The final model (see Figure 1), in which all the path coefficients were constrained across the two groups, yielded a good fit, $\chi^2(342, N = 321) = 597.29$, $\chi^2/df = 1.75$. All the path coefficients, loadings, and error variances of the variables are significant at $p < .05$. The CFI, NNFI, and RMSEA indices for this model were .91, .91, and .067, respectively. As a last step, we tested the direct effects of individualism and collectivism on life satisfaction. Both direct paths from individualism ($\Delta\chi^2 = 2.94$, $\Delta df = 2$, $p > .05$) and collectivism ($\Delta\chi^2 = 2.27$, $\Delta df = 2$, $p > .05$) to life satisfaction did not produce any significant change in chi-square and the model fit, suggesting that the hypothesized model is a fully mediating model across the two samples.[8]

Personality model of SWB. Based on the patterns of correlations depicted in Table 2 and Kwan et al.'s (1997) findings, we hypothesized that (a) the Big Five dimensions of neuroticism, extraversion, conscientiousness, and openness would influence life satisfaction through the mediating effect of self-esteem; (b) extraversion, neuroticism, and agreeableness would influence life satisfaction through the mediating effect of friends satisfaction; and (c) agreeableness would influence life satisfaction through the mediating effect of family satisfaction. We expected the paths between the Big Five and self- and relational-esteem variables to be ethnically invariant (as in Kwan et al.'s study), whereas we expected the paths
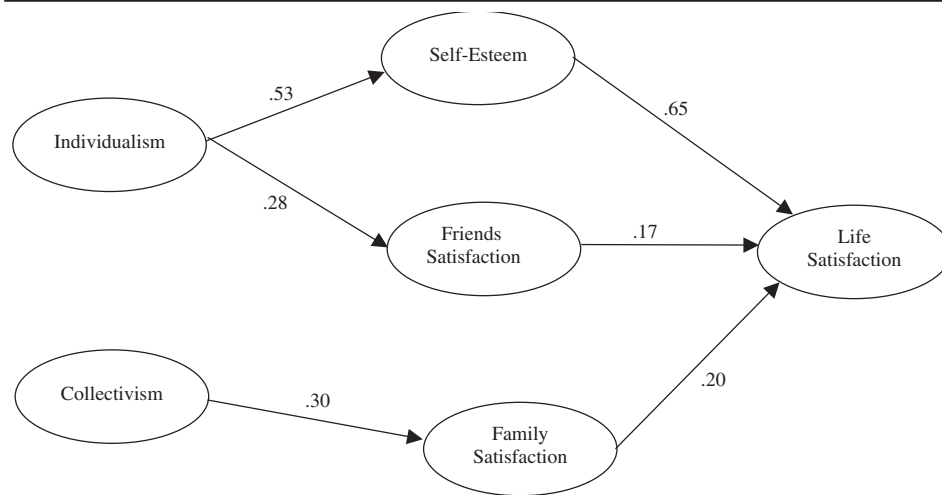
Figure 1: Final Cultural Model of Subjective Well-Being
NOTE: Standardized path coefficients are shown. All the path coefficients are the same for both European Americans and Asian Americans. All the path coefficients are significant at *p* < .05.

from self- and relational esteem to life satisfaction to perhaps differ across our two cultural samples.

The measurement model yielded an acceptable fit across the groups, $\chi^2(595, N = 321) = 1,022.99$, $\chi^2/df = 1.72$, RMSEA = .059, NNFI = .89, CFI = .91. Next, we tested the hypothesized model with no equality constraints on either the measurement or the structural model. Surprisingly, the path between extraversion and self-esteem was not significant for either of the groups in this analysis, and thus, we omitted this path and reestimated the model. This result suggests that once other personality dispositions (such as neuroticism, which has a sizable correlation with extraversion) are introduced into the model, extraversion no longer predicts self-esteem. Our modified model revealed an acceptable level of fit, $\chi^2(598, N = 321) = 1023.57$, $\chi^2/df = 1.71$, RMSEA = .059, NNFI = .89, CFI = .91.

Next, we subsequently imposed equality constraints on the paths between personality, self- and relational esteem and life satisfaction across the two cultural groups. As with our previous model, neither of the equality constraints produced significant changes in the chi-square values, suggesting that the relations among our variables were invariant across the two cultural groups. The final model (see Figure 2), in which all the factor loadings and path coefficients were constrained across the two groups, had an acceptable level of fit, $\chi^2(626, N = 321) = 1,059.00$, $\chi^2/df = 1.69$, RMSEA = .059, NNFI = .90, CFI = .91. None of the direct paths from the Big Five to life satisfaction produced significant change in the model fit, suggesting that the hypothesized model is a fully mediating model across the two samples.[9]

Culture → personality model of SWB. Recall that an important goal of our study is to empirically evaluate a model in which cultural syndromes (individualism and collectivism) influence the endorsement and expression of basic personality dispositions (Big Five), which in turn influence life satisfaction through self-esteem and interrelatedness.

We hypothesized relationships between (a) individualism and openness, extraversion, conscientiousness, and neuroticism; and (b) collectivism and agreeableness. We also hypothesized mediating roles for self- and relational esteem in linking the Big Five and life
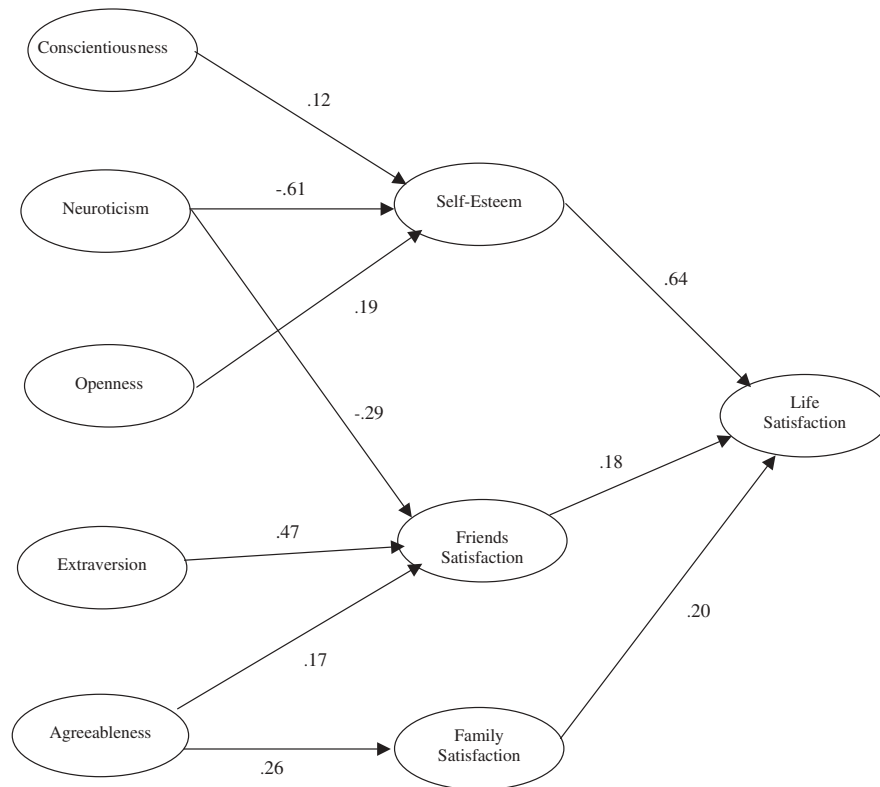
Figure 2: Final Personality Model of Subjective Well-Being
NOTE: Standardized path coefficients are shown. All the path coefficients are the same for European Americans and Asian Americans. All the path coefficients are significant at $p < .05$.

satisfaction, similar in direction (but not necessarily size) to those reported in the final personality model of SWB (see Figure 2). Last, considering the striking lack of ethnic differences so far found for the relationships examined in both the personality and cultural models of SWB, we were not ready to predict any difference between our groups on this culture $\rightarrow$ personality model.

In testing the above culture $\rightarrow$ personality model of SWB, we initially attempted an analysis in which each construct was represented by multiple indicators similar to those used in the previous models. However, in this complex analysis, the number of parameters to be estimated was about 200. Given the relatively small ($N = 321$) sample size of our study, we decided to reduce the number of parameters to obtain more reliable results. Following Liang, Lawrence, Bennett and Whitekew's (1990) advice, we relied on composite scales instead of multiple indicators (i.e., we combined all the indicators for each construct into one score) and fixed the loadings and error variances of single indicators.[10]

The unconstrained model yielded a very good fit to the data, $\chi^2(52, N = 321) = 93.22$, $\chi^2/df = 1.79$, RMSEA $= .066$, NNFI $= .92$, CFI $= .96$. Next, we imposed equality constraints on the path coefficients subsequently (total eight models). Again, neither of the constraints produced significant change in the model fit, suggesting that the relations among our variables are invariant across our Asian American and European American samples. The final
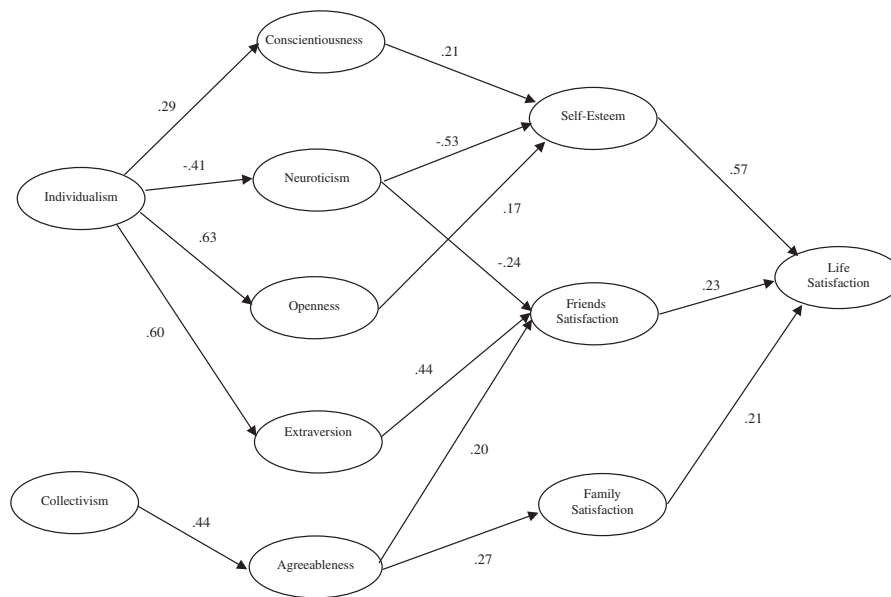
Figure 3   Final Culture→Personality Model of Subjective Well-Being
NOTE: Standardized path coefficients are shown. All the path coefficients are the same for European Americans and Asian Americans. All the path coefficients are significant at $p < .05$.

model (displayed in Figure 3) yielded a very good fit, $\chi^2(67, N = 321) = 110.94$, $\chi^2/df = 1.65$, RMSEA = .060, NNFI = .93, CFI = .96. All the path coefficients, loadings, and error variances of the variables were significant at $p < .05$.

Next, we compared our final culture→personality model of SWB against a competing personality → culture model of SWB in which personality precedes (rather than follows) cultural syndromes, which in turn influence life satisfaction through self- and relational esteem. In this competing model, we proposed links between the Big Five and individualism and collectivism similar to those reported in Figure 3 but of reverse directionality (again, size of parameters was not constrained). The paths from individualism and collectivism to life satisfaction through the mediational roles of self- and relational esteem were set to be of the same direction as those reported in Figure 1. This personality-culture model of SWB yielded a very poor fit to the data, $\chi^2(60, N = 321) = 243.87$, RMSEA = .14, NNFI = .67, CFI = .82, supporting the superiority of the previous cultural → personality model.[11]

DISCUSSION

This study examined how broad personality and cultural dispositions, jointly and separately, influence life satisfaction across two distinct U.S. ethnic groups, Asian Americans and European Americans. Results from SEM analyses revealed significant (and ethnically invariant) pathways from cultural syndromes (individualism and collectivism) and personality traits (Big Five) to life satisfaction through the variables of self- and relational esteem. A more complex model explicitly representing the interplay of culture and personality (Markus & Kitayama, 1998) was also supported by our results. In this culture → personality model of SWB, individualism and collectivism predicted the endorsement and expression of basic

personality dispositions (Big Five), which in turn influenced life satisfaction through self-esteem and interrelatedness. Despite the ethnic mean-level differences found for many of the study variables (e.g., individualism, self-esteem, life satisfaction), none of the pathways in the culture → personality model differed across our two ethnic groups. A consistent finding throughout the different analyses was the stronger weight that self-esteem (compared with relational esteem) had in predicting life satisfaction for both ethnic groups.

In the next sections, we discuss results from each model and their implications for acculturation theory and recent cultural psychology, views that highlight the cultural embeddedness of personality.

CULTURAL MODEL OF SWB

Supporting our general prediction and several recent conceptualizations of SWB as a culture-bound construct (Diener & Suh, 2000; Kwan et al., 1997), we found that self- and relational esteem largely mediated the relationship between individualism and collectivism and life satisfaction. As depicted in Figure 1, the effect of individualism on life satisfaction was mediated through self-esteem and friends satisfaction, whereas collectivism predicted family satisfaction, which, in turn, predicted life satisfaction. These findings also support recent theoretical work underlying the importance of autonomy and relatedness for psychological well-being (Imamoğlu, 1998; Kağıtçıbaşı, 1996). Surprisingly, the above processes were invariant across our two ethnic groups. That is, unlike Kwan et al.'s (1997) findings with American and Chinese samples, the weights of self- and relational esteem on life satisfaction did not differ across our two groups; more specifically, for both, European American and Asian American individuals, self-esteem consistently emerged as a the strongest predictor of life satisfaction.

Note that in our study, we conceptualized the construct of interrelatedness in terms of two separate domains representing different realms of interpersonal relationships, namely, family and friends satisfaction. Our results support the validity of this conceptualization and the existence of differential cultural antecedents for each domain: For both Asian Americans and European Americans, individualism predicts friends satisfaction, whereas collectivism predicts family satisfaction. As suggested earlier, these results are likely to reflect the particular developmental and physical context of our college participants, who have left their homes and live in academic environments where peer relations are, by and large, differentiated from and even emphasized above family relations, freely-chosen (e.g., driven by common interests), and competitive.

PERSONALITY MODEL OF SWB

As predicted, the Big Five personality dispositions had an impact on life satisfaction through the differential effects of self- and relational esteem (see Figure 2). Specifically, extraversion influenced life satisfaction through friends satisfaction, conscientiousness through self-esteem, and neuroticism through self-esteem and friends satisfaction (negatively). Furthermore, agreeableness and openness predicted relational and self-esteem, respectively, which, in turn, predicted life satisfaction. The pathways from personality to self- and relational esteem, and from the later variables to life satisfaction, were, once again, similar across our European American and Asian American samples. Also, as in the previous model, self-esteem emerged as the strongest predictor of life satisfaction for both European American and Asian American individuals.

Note that the emergence of different personality antecedents for family and friends satisfaction provides further support for the utility of conceptualizing relational esteem as two separate constructs. Family satisfaction was only predicted by agreeableness, whereas friends satisfaction was predicted by agreeableness, extraversion, and neuroticism. These particular patterns suggest that across our two ethnic groups, the trusting and accommodating nature of agreeableness, the sociable and assertive nature of extraversion, and the anxious and vulnerable nature of neuroticism exert great influence on the quality of friendships, which, in turn, affect life satisfaction. Interestingly, with regard to family relationships, on the other hand, it seems that being accommodating, cooperative, and trusting (i.e., being agreeable) is more important than being sociable (i.e., extraverted) and emotionally stable (i.e., not neurotic), characteristics that our model portrays as key ingredients of peer relationships.

The links between the personality dispositions of neuroticism, conscientiousness, and openness and self-esteem partially support Kwan et al.'s (1997) findings (in their study self-esteem was also predicted by extraversion) and results from other studies that have examined the personality correlates of self-esteem (Furr & Funder, 1998). Clearly, these associations suggest that among our college participants, positive feelings of self-worth are largely based on seeing oneself as competent (conscientious), emotionally resilient (not neurotic), and intellectually sophisticated (opened).

CULTURE → PERSONALITY MODEL OF SWB

As hypothesized, a more complex model that accounted for the interplay of personality and cultural values in predicting life satisfaction was also supported. This model makes explicit the sociocultural backdrop of broad personality dispositions; namely, it depicts personality as a set of behavioral tendencies that people develop largely as a result of having internalized particular cultural orientation (individualism and collectivism). These processes, as anticipated by the results obtained in the less complex cultural and personality models of SWB, seem to be invariant across European American and Asian American individuals. All in all, these results provide support for the phenotypic view of personality; that is, the view that the Big Five represent characteristic adaptations to the sociocultural context (Saucier & Goldberg, 1996) versus culture-independent endogenous tendencies (McCrae & Costa, 1996).

In the culture → personality model of SWB, individualism predicts all Big Five dispositions except agreeableness, and collectivism predicts only agreeableness. This pattern, which is in line with other studies linking personality traits to cultural values (Kwan et al., 1997; Yik & Tang, 1996), suggests that in Western contexts such as the United States, individualist values such as agency and self-affirmation are particularly powerful antecedents of personality, whereas collectivist values play a secondary role. Furthermore, this pattern of results suggests that, at least in the United States, the endorsement of individualistic values relates to perceiving oneself as more friendly and assertive (extraverted), intellectually independent and sophisticated (open to experience), disciplined and goal oriented (conscientious), and less vulnerable (less neurotic).

Our predicted culture → personality model of SWB was found to be empirically superior to a competing model in which personality predicted cultural syndromes instead. This finding has implications for both cultural and personality psychology. It reinforces our previous argument that, at least among college students, cultural norms and values influence the expression and realization of personality dispositions more than the other way around.

Specifically, our findings suggest that individualist values and norms drive the expression of the more agentic aspects of personality (extraversion, openness, neuroticism, and conscientiousness), which in turn predict well-being (self-esteem, friends satisfaction, and ultimately, life satisfaction). Collectivistic values, on the other hand, drive the expression of the more relational aspects of personality (agreeableness), which in turn predict well-being (friends and family satisfaction, and ultimately, life satisfaction).

In sum, in line with the recent perspectives within cultural (Aaker et al., 2001; Markus & Kitayama, 1998) and personality psychology (Saucier & Goldberg, 1996), our culture → personality model of SWB suggests that cultural values and personality dispositions are related psychological constructs that jointly predict SWB. As we mentioned in the introduction, previous studies examining the cultural and personality correlates of SWB have often ignored the mutual constitution of these two kinds of constructs by favoring research designs in which cultural and personality influences are operationalized as independent factors. Our study underscores the value of examining them jointly and their unique position in predicting SWB.

ETHNIC SIMILARITIES AND DIFFERENCES

Perhaps the most robust finding in our study is the lack of ethnic differences in any of the processes represented in the cultural, personality, and culture → personality models of SWB. Nevertheless, significant mean-level differences were found for several of our cultural, personality, and well-being variables. As expected, and supporting findings from other studies examining these variables within U.S. ethnic groups (Coon & Kemmelmeier, 2001, Gaines et al, 1997; Oyserman et al., 2002), both first- and second-generation Asian Americans reported higher scores on collectivism (interdependence and vertical collectivism) and lower scores on individualism (independence) than their European American peers. The Asian American sample was also lower overall on conscientiousness, extraversion, and openness (differences in the latter two dispositions applied only to first generation), replicating Kwan et al.'s (1997) Chinese/American differences. Interestingly, the direction of first- and second-generation Asian Americans' scores on extraversion, openness, and conscientiousness is in line with the greater exposure of the second-generation group to the individualistic U.S. culture.

Finally, the Asian American group reported significantly lower levels of self-esteem and life satisfaction than the European American sample, a result that is consistent with findings from cross-national studies comparing individualistic and collectivistic cultures (e.g., Diener & Suh, 1999; Kwan et al., 1997).

The fact that our two ethnic groups differed in their mean levels for several of our key variables but displayed similar pathways to SWB in our SEM analyses deserves some discussion. From an acculturation perspective, it is possible that this pattern reflects a particular stage of bicultural identity achievement (Berry & Sam, 1997; LaFromboise, Coleman, & Gerton, 1993) among our Asian American participants, a stage characterized by a successful internalization of specific psychosocial *processes* that are adaptive in the United States (e.g., allowing self-esteem to be the largest predictor of life satisfaction) while conserving important features of one's ethnic background (e.g., endorsing lower levels of self-esteem, at least in relation to European Americans). In other words, the lack of ethnic differences in all the pathways to life satisfaction tested by our models seems to suggest that our Asian American participants (regardless of their absolute levels on all the variables involved in the models) have already internalized the American cultural script in which autonomy and personal goals (individualism) and self-esteem become key ingredients in the pursuit of happiness (life

satisfaction). At the same time, the ethnic differences found on these variables suggest that the Asian American group still holds self-definitions and perceptions that are closer to an Asian self (e.g., self-views that are more collectivistic and self-effacing).

LIMITATIONS AND FUTURE DIRECTIONS

One important limitation of our study is that it conceptualizes cultural syndromes in terms of individualism and collectivism exclusively. Future studies should explore how the personality and SWB processes examined in this article relate to other cultural syndromes such as masculinity-femininity, tightness, or cultural complexity (Hofstede, 1991; Triandis, 1996).

Our study is also limited in that it examines only two ethnic groups, Asian Americans and European Americans, and therefore provides only a slice of the potential ethnic variability/invariance existing on the cultural and personality processes we explored. Future studies should examine these processes across other U.S. ethnic (i.e., African American and Hispanics) and national groups (Latin American, African, Northern and Southern European, etc.). Future work should also explore within-Asian group differences (e.g., comparing Chinese, Japanese, and Indian). In fact, the potential variability existing among U.S. ethnic groups with regard to our variables of interest is supported by a recent meta-analytic study by Oyserman et al. (2002).

A third important limitation of our study is that it relies on cross-sectional data. Because the cultural and personality processes we examine occur over time, our results provide only tentative conclusions about their directionality. In fact, as suggested in Note 1, it is possible that over time, while individuals' identity and personality become more stable, personality dispositions influence variations in cultural values, supporting the personality-culture model of SWB.

Fourth, due to the exploratory nature of some of our study goals, an inductive approach was used to delineate several of the specific relationships tested by our path models (by using information from the correlational analyses). This limitation calls for future studies in which the generalizability of our final path models is tested in different European American and Asian American samples.

Last, our study focuses only on the cognitive component of SWB, namely, life satisfaction. Future studies should examine the additive power of culture and personality factors in predicting the affective components of SWB, such as hedonic tone and positive and negative affect (Schimmack et al., 2002; Suh et al., 1998).

CONCLUSION

This study has important implications for research and theory in cultural and personality psychology. We show that when exploring the determinants of SWB, researchers can benefit from studying the effects of cultural and personality variables simultaneously. By suggesting a complex set of pathways and conceptual relationships among personality, cultural syndromes, and SWB, this study goes beyond traditional studies of SWB and suggests a more comprehensive and sophisticated framework to investigate life satisfaction across cultures and ethnic groups. Furthermore, by showing the superiority of a culture $\rightarrow$ personality model of SWB (over a competing personality $\rightarrow$ culture model of SWB), this study informs about the direction of some key psychological processes in people's lives. All in all, our study attests to the idea that the individual is a reflection of the larger social-cultural milieu in which he or she lives.

NOTES

1. Longitudinal studies can identify reverse causation effects. For instance, it is possible that, over time, particularly once individuals' identity and personality becomes more stable in middle and late adulthood, personality traits become strong predictors of variations in cultural syndromes instead of the other way around.

2. More detailed information about these analyses and the final list of items is available from the authors upon request. However, it is important to note that the new abbreviated Individualism scale contained only one vertical-individualism item (the remaining 12 items represented pretty evenly the independence and the horizontal-individualism scales). The new abbreviated Collectivism scale contained only two items from the horizontal-collectivism scale (the remaining 11 items represented pretty evenly the interdependence and vertical collectivism scales).

3. We should note that socioeconomic status did not correlate with any of our study variables except vertical individualism (among European Americans only).

4. Although a detailed discussion of possible gender (and Gender × Culture) differences in our variables goes beyond the scope of our study, one-way ANOVAs revealed that overall, men reported higher levels of self-esteem, horizontal and vertical individualism, and loneliness, and lower levels of horizontal collectivism and neuroticism.

5. Cultural identification scores were not included in structural equation modeling analyses to avoid adding unnecessary complexity to our subjective well-being models.

6. Note that the ratio of number of participants by number of parameters to be estimated is below the recommended 5:1 ratio. This certainly is a limitation of our analyses.

7. In their study with Chinese- and American-born samples, Kwan, Bond, and Singelis (1997) reported a significant path between independence and relationship harmony (a construct related but not interchangeable with our friends satisfaction construct). Interestingly, their study also reports a negative relation between interdependence and self-esteem that we did not find.

8. Although, broadly speaking, it may be appropriate to describe our final cultural model as showing that the relation between cultural syndromes and life satisfaction is mediated by self- and relational esteem, formal tests of statistical mediation following Baron and Kenny's (1986) procedures indicated that only the pathways from individualism to life satisfaction through self- and relational esteem (friends satisfaction) fulfilled all the criteria for statistical mediation (and this was true for both groups). Unfortunately, this finding could not be compared to results in Kwan et al.'s (1997) study, in which self- and relational esteem variables are consistently and explicitly described as mediators, because no formal tests of statistical mediation are reported in their study.

9. As with the previous model, formal tests of statistical mediation were conducted (Baron & Kenny, 1986). These analyses revealed that only the pathways from extraversion, conscientiousness, and neuroticism to life satisfaction—through self- and relational esteem (friend satisfaction)—fulfilled all the criteria for statistical mediation (and this was true for both groups). Again, this finding could not be compared to Kwan et al.'s (1997) results because no formal tests of statistical mediation are reported in their study.

10. We fixed the factor loadings and error variances of the single indicators by using the following formulas:
Error variance of the indicator = $(1 - \alpha) \times$ variance of the indicator
Factor loading = $\sqrt{\alpha} \times$ variance of the indicator.

11. Note that our competing culture → personality and personality → culture models of SWB are not nested and cannot, therefore, be compared with the traditional χ^2 difference test (Lin & Dayton, 1997); nevertheless, the adequacy of the two models can be assessed by comparing the other fit indices (e.g., Comparative Fit Index, root mean square error, etc.).

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