

Cross-cultural generalizability of the Spiritual Transcendence Scale to the Philippines: Spirituality as a human universal

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Abstract

The Spiritual Transcendence Scale (STS) has been developed to operationalize spirituality as an intrinsic source of motivation that impels individuals to create a broad sense of personal meaning for their lives. Spiritual Transcendence is nondenominational in nature and hypothesized to underlie the development of religious sentiments. To further support the universal nature of Spiritual Transcendence, the STS was translated into a native Filipino language, Tagalog. Using two different, varied samples of Filipino adults ($N=654$ and 248 , respectively), this study demonstrated that scores on the translated version evidenced acceptable levels of internal consistency, structural validity, and incremental validity over personality in predicting a wide range of psychosocial outcomes, like well-being and interpersonal style. Further analyses also indicated that the Tagalog version of the STS produced comparable means and standard deviations to its English counterpart. The data provided support for the hypothesis that spirituality is a robust, universal human quality because two languages that are etymologically distinct both include terms that describe transcendent experiences. The STS appears to be an empirically robust measure of these qualities that can be useful for researchers interested in establishing cross-cultural linkages in spiritual motivation.

Introduction

Spirituality and religiosity are the key concepts in the psychology of religion. In their recent review of the field, Emmons and Paloutzian (2003) noted the upsurge in interest in these constructs over the past 15 years by both applied and basic researchers. Emerging out of this increasing interest is a growing

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number of assessment instruments that attempt to capture these constructs from a variety of theological and psychological perspectives (Hill & Hood, 1999 present a compendium of these measures). However, it has long been known that the majority of measures designed to assess the numinous are rooted in Christian-based perspectives (Gorsuch, 1984; Hall, Tisdale, & Brokaw, 1994), reflecting mostly a mainline Protestant orientation (Gorsuch & Miller, 1999). Although Christianity may be the mainstream faith orientation in America, it certainly does not represent, nor speak for, other faith traditions. Piedmont and Leach (2002) have noted that this lack of theological pluralism undermines both the scientific endeavor to understand the basic elements of spirituality and efforts to develop a comprehensive model of spiritual development and experience that would have ecological validity. The purpose of this report is to evaluate the psychometric integrity of a Filipino translation of the Spiritual Transcendence Scale (STS); a motivational-based, nondenominational measure of spirituality. Demonstrating cultural generalizability will further support the hypothesis that spirituality represents a fundamental aspect of human functioning that is uniquely defining of our species.

Overview of the STS

In an effort to capture a broad-based aspect of spirituality that would be non-denominational in nature, Piedmont (1999) developed the STS. Working from a trait perspective for construing spirituality, the STS operationalized spirituality as a motivational drive directed towards creating personal meaning for one's life. Three correlated subscales were identified: *Universality*, a belief in the unitive nature of life; *Prayer Fulfillment*, a feeling of joy and contentment that results from personal encounters with a transcendent reality; and *Connectedness*, a belief that one is part of a larger human reality that cuts across generations and groups. As a broad-based affective drive, spiritual transcendence is hypothesized to underlie religious strivings across all faiths. Research has found the structure of the scale to be stable across different samples, to converge significantly with observer ratings, and to correlate with a wide array of psychosocial variables even after the predictive effects of personality were removed (Piedmont, 1999, 2001). In an effort to demonstrate the universality of spiritual transcendence, Piedmont and Leach (2002) gave the STS to a sample of Hindus, Muslims, and Christians in India and found the scale to be reliable and valid for each of these faith traditions. They argued that spiritual transcendence represented an intrinsic quality of the individual that is universal and motivates all religious behaviors. Their study also highlighted how cross-cultural analyses can be indispensable in the search for identifying the common genotype inherent to all spiritual strivings and for outlining how culture and context come to form its phenotypic expression. One medium where genotype and context intersect is in the language of a particular culture. Lexical analyses provide a way for identifying psychosocial qualities of adaptive significance.

Lexigraphic hypothesis for cross-cultural research on spirituality

In commenting on the Piedmont and Leach study, Otani (2002) argued that to demonstrate that there exists a universal spiritual domain, one would need to include a variety of religions and languages. Language, especially, is an important adaptive aspect of human functioning. Over time, any object, event, place, or concept that relates to our survival would acquire a word to represent it. In one sense, a lexicon is a culture's accumulated wisdom based on generations of experience and judgment as to what is important to adaptation and survival. Known as the *lexigraphic hypothesis* (John, Angleitner, & Ostendorf, 1988), this axiom has important implications for cross-cultural research. Because language is a culture-specific phenomenon, comparing languages across cultures can identify concepts that are unique to a culture and those that are universal. For example, the word "snow" has many different related terms in native Eskimo languages, but it does not appear in any language group in equatorial Africa. This is expected, given the very different climactic experiences of these two cultures. However, the term "friendly" appears in both. This is because friendliness and/or being a friend is an important aspect of human survival in every culture, which is why all cultures have such a term (see McCrae, 2004).

The lexigraphic hypothesis has played a major role in identifying universal personality dimensions (e.g., Goldberg, 1981) and should also apply similarly for understanding spiritual constructs. Spiritual Transcendence (ST) is conceptualized as a universal aspect of the human experience. Seeking a personal sense of meaning is innate, and unique, to our species. To support this hypothesis would require a demonstration that the concepts underlying this construct can be found in a variety of cultures that do not share a common etymological root. If two independent languages can be shown to have similar concepts, this would argue that these concepts represent important experiences in both cultures and may be universal. Unlike the Piedmont and Leach study which used the English version of the STS, this study will develop and test a native language Filipino version (written in Tagalog, an official language of the Philippines). Creating such an instrument would directly examine the degree to which the new language contains words that describe the spiritual issues contained in the STS. Having similar concepts appear across English and Tagalog would be a potent indicator of the universality of these constructs.

Psychometric considerations

To demonstrate the measurement utility of the Filipino version of the STS, several psychometric criteria need to be met. First, the STS scales should remain internally consistent and stable over time in this new cultural sample. Second, the STS scales should evidence cross-observer validity. Self-reported scores on the STS should converge significantly with STS scores obtained from raters. Such consensual validation provides strong evidence that people share an understanding of what is "spiritual" and that they can identify behaviors and

goals that characterize individuals so motivated. Without this convergence, constructs of spirituality can be dismissed as mere solipsistic characteristics of the person, qualities that reflect idiosyncratic aspects of functioning that have limited interpretive and predictive value.

Third, it will need to be demonstrated that the STS evidences its putative structure. The STS is a unidimensional, multifaceted instrument. It consists of three correlated factors which together comprise a single overall factor. Using structural equation modeling (SEM), two models will be tested: the first will determine whether the items cohere to form a single dimension, and the second will determine whether the items can be sorted into their *a priori* groupings on their intended subscales. These structures should be evidenced on both the self-report (taken in Tagalog) and observer (completed in English) forms of the STS.

Fourth, some evidence of construct validity needs to be documented. There are two levels of analysis here. Because Spiritual Transcendence represents a broad-based affective force that motivates behavior, scores on the STS should correlate with a variety of psychosocial criteria, including well-being, psychological maturity, and interpersonal style. Conceptually, spirituality is a construct hypothesized to help individuals find greater personal meaning and connectedness. This, in turn, enables people to establish more adaptive orientations to life. Previous research in Western samples has shown empirical support for the linkage between spirituality and positive life outcomes in general (e.g., Sawatzky, Ratner, & Chiu, in press; Thoresen, 1999; Trimble, 1997), and in particular, research has shown that these positive life outcomes are significantly related to the STS (Dy-Liacco, Kennedy, Parker, & Piedmont, in press; Piedmont, 1999, 2001). The first set of analyses will examine whether a similar pattern is found in the Filipino sample. If Spiritual Transcendence is a universal trait, it should retain a similar psychological meaning across cultures. In order to demonstrate the robustness of the STS's relatedness to these criteria, significant associations should be found with both self- and observer ratings. The second set of analyses will concern the incremental validity of the STS. The STS has been argued to represent the sixth dimension of personality (Piedmont, 1999), and therefore should show itself to be significantly related to these psychosocial outcomes, even after the predictive effects of the dimensions of the Five-Factor Model of personality (FFM; Digman, 1990; McCrae & John, 1992; Piedmont, 1998) have been removed. These analyses will be performed using both concurrent and predictive validity paradigms.

Finally, it is the ideal intention of any translation process to create an instrument that is identical to its original in all ways except language. If the constructs being assessed are truly cross-culturally generalizable, then an individual's score should be the same on any version of the measure. Only then can the translated scales be considered parallel forms of their English counterparts. If the translated version generated different means and standard deviations from the original norms, this would be evidence of important cultural differences in how these constructs are distributed in the two societies. This study will evaluate this

issue by giving *both* the Filipino and English versions of the STS to the same bilingual individuals. There should be no significant differences between scores on the two different forms.

Method

Participants

Validation sample. A total of 654 Filipino nationals (437 women, 197 men, 20 not indicated) were included, ranging in age from 16 to 75 years (mean = 30). Over 90% were Roman Catholic, with the remaining 10% representing other Christian faiths. Individuals were a mixed group of single and married adults belonging to lay Catholic associations, and professionals from the cities of Manila and Makati City both on the island of Luzon, which is the largest island in the Philippines. Individuals were also recruited from Ateneo de Davao University and comprised both undergraduate and medical students. Thus, the sample represents a diverse cross-section of Filipinos. These individuals were instructed to obtain two individuals who knew them for at least 3 months to serve as raters. A total of 253 individuals returned two ratings, while 32 returned a single rating packet. Of the 536 raters with usable information, 354 were women, and 182 were men, ranging in age from 15 to 64 years (mean = 26). On average, raters knew the participants for 5.75 years (range 1 month to 33 years). Raters were asked to rate on a 7-point Likert scale how well they knew the participant from 1 = *not very well* to 7 = *extremely well*, and the average rating was 5.22. Raters apparently knew the participants quite well.

Retest sample. Out of 261 returned data sets, usable data were obtained from 161 women and 59 men (three did not indicate gender) between the ages of 15 and 69 years (mean = 30). These individuals were recruited from two locations. The first was Metro Cebu (Se-boo), the provincial capital of the island of Cebu. The second location was Metro Davao (Dah-vow), the provincial capital of Davao Province, located on the island of Mindanao. Over 91% were Roman Catholic, with the remainder being other Christian faiths. These individuals completed two sets of ratings, on average, 9 days apart. Participants were randomly assigned to complete the Spiritual Transcendence Scale (STS) in one of four language groups: (1) to take the STS in English both times ($n = 65$); (2) to take the STS in Tagalog twice ($n = 55$); (3) to take the STS in English first, then Tagalog ($n = 41$); and (4) to take the Tagalog version first then the English ($n = 62$).

Measures

Spiritual Transcendence Scale. Developed by Piedmont (1999, 2001), this 24-item scale consists of three subscales: Universality (a belief in the unity and

purpose of life), Prayer Fulfillment (an experienced feeling of joy and contentment that results from prayer and/or meditation), and Connectedness (a sense of personal responsibility and connection to others). Items were answered on a 1 (*strongly agree*) to 5 (*strongly disagree*) Likert-type scale. An observer version of this scale was also developed to be completed by the raters. This form contains the same format as the self-report version, with the exception that items are worded in the third person. Piedmont (1999, 2001) has shown these scales to have acceptable reliabilities for both the self-report (0.83, 0.87, and 0.64 for Universality, Prayer Fulfillment, and Connectedness, respectively) and peer versions (0.91, 0.87, and 0.72, respectively). Scores on these scales have also been shown to predict a variety of related spiritual constructs and a number of psychologically salient outcomes (e.g., stress experience, well-being, and attitudes towards sexuality; Piedmont, 1999). Piedmont and Leach (2002) have shown that the STS generalized cross-culturally to a sample of Indian Muslims, Christians, and Hindus. The Spiritual Transcendence Scale (STS) was completed in Tagalog in the self-report version, while raters completed the standard English version.

Bradburn Affect Balance Scale. Developed by Bradburn (1969), this 20-item true-false scale captures these dimensions of affective well-being: Positive Affect (PAS), Negative Affect (NAS), and Affect Balance (NAS subtracted from PAS). Studies have shown the PAS and NAS scales to represent independent dimensions (Bradburn, 1969; Costa & McCrae, 1980). Scores on these scales have been shown to correlate with global happiness (Lowenthal, Thurner, & Chiriboga, 1975) and well-being (Costa & McCrae, 1984). Alpha reliabilities in the current sample for the PAS and NAS scales were 0.59 and 0.64, respectively, for the self-report version, and 0.61 and 0.71 for the observer scores. Self- and observer ratings were obtained on this measure.

Self-Actualization Scale. Created by Jones and Crandall (1986), this scale provides a measure of Maslow's highest level of development. The 15 items are responded to on a 1 (*disagree*) to 4 (*agree*) Likert-type scale. Jones and Crandall (1986) have found that high scores on this scale are associated with individuals being extraverted, rational in their thoughts and behaviors, and inner-directed. Crandall, McCown and Robb (1988) showed that this scale was sensitive to clinical interventions related to increasing personal assertiveness. Alpha reliabilities in the current sample were 0.65 and 0.62 for the self- and observer ratings scores, respectively.

Individualism/Collectivism Scale. Developed by Dion K. K. and Dion K. L. (1991), this 15-item scale is an index of how much a person feels themselves as being a part of a larger community or group. Items are answered on a 1 (*strongly agree*) to a 5 (*strongly disagree*) Likert-type scale. Alpha reliabilities in

the current sample were 0.68 and 0.66 for the self- and observer rating scores, respectively.

Delighted–Terrible Scale. This scale was developed by Andrews and Withey (1976) as a cognitive measure of global well-being. Participants rate their overall level of life satisfaction on a Likert scale of 1 (*terrible*) to 7 (*delighted*).

Prosocial Scale. Developed by Rushton, Chrisjohn and Fekken (1981), this 20-item scale captures altruistic behavior. Individuals rate the frequency with which they have engaged in altruistic behaviors on a 5-point Likert type scale, ranging from *never* to *very often*. Items are summed to provide an overall total score. Rushton et al. provide alpha reliabilities in five samples ranging from 0.78 to 0.86. Significant peer-self correlations were also obtained, while correlations with a measure of social desirability were nonsignificant. Rushton et al. also demonstrated significant convergence of the Prosocial Scale with both other scales (e.g., Emotional Empathy Scale and the Social Interest Scale) and actual behaviors (e.g., volunteering to read to blind persons in response to a telephone solicitation). In the current Filipino sample, the alpha reliability was 0.86.

Materialism Scale. Developed by Belk (1985), this 24-item scale is an index of the degree to which an individual focuses on the immediacy of their needs and life situation. The scale consists of three subscales: Possessions, Non-generousness, and Enviousness. Items are answered on a 1 (*strongly agree*) to 5 (*strongly disagree*) Likert-type scale. The overall alpha reliability in this sample was 0.54.

Bipolar Adjective Rating Scale (BARS). Developed and validated by McCrae and Costa (1985, 1987), this 80-item scale is designed to capture the FFM domains of adult personality, namely, Neuroticism (N), Extraversion (E), Openness (O), Agreeableness (A), and Conscientiousness (C). The scale has also been shown to be reliable and structurally valid with college students (Piedmont, 1995). Responses are measured on a 1- to 7-point Likert-type scale, and FFM domain scores are found by summing the responses to items for each domain. Alpha reliabilities for the FFM domains in the Validation sample were 0.70, 0.74, 0.58, 0.83, and 0.90 for N, E, O, A, and C, respectively. In the Retest sample, these values were 0.80, 0.76, 0.70, 0.83, and 0.89 for N, E, O, A, and C, respectively.

The Purpose in Life Test. Developed by Crumbaugh (1968), this 20-item scale measures a person's "will to meaning" as construed by Victor Frankl (1959, 1966). Responses are given on a 7-point Likert-type scale, the poles of which vary according to the question. Guttman (1996) reviews the research literature on this scale, which provides basic validity data, documenting the scale's ability

to capture the degree to which an individual has developed a personal sense of meaning in life. Research has shown this scale to be related to psychological well-being (Zika & Chamberlain, 1992), ability to cope successfully with the death of a significant other (Pfof, Stevens & Wessels, 1989; Stevens, Pfof, & Wessels, 1987), and successful outcomes from an alcohol-dependence treatment program (Waisberg & Porter, 1994). The alpha reliability for the scale in this sample was 0.91.

Attitude Towards Abortion. This is a single-item 9-point bipolar scale designed to capture the subject's attitude toward abortion from "very pro-abortion" (-4) to "very pro-life" (+4).

Procedure

Translation process. A multistep, iterative process was implemented for creating the Tagalog version of the STS. First, items of the STS were translated into Tagalog by two bilingual individuals. Efforts were made to keep the same item content, but changes were made to make the items appropriate for a Filipino audience. For example, the item, "I have had at least one peak experience" was changed to "I have had at least one deep experience." This is because the comparable idiom for peak experience is not going "higher," but rather going deeper inside oneself. These items were then given to two other bilingual individuals who were not part of the translation process to back-translate into English. These items were then compared to the originals. Items that did not seem to match the original English items were then re-translated by the original two individuals after discussion with the first author. A different pair of back-translators were then obtained. This process continued until satisfactory translations were obtained.

Research process. For the validation sample, individuals completed their materials in a single sitting. Materials were presented in packets and instructed to complete materials in the order in which they are arranged. Scales were counterbalanced to control for order effects. These individuals contacted two people who they believed knew them for three months and provided them with an envelope containing the materials. Raters were instructed to complete their forms independently from the person they were rating. Once completed, they sealed their materials in the provided envelope and returned them to the participant.

Those in the retest group were provided with two envelopes and instructed to complete the one marked "#1" immediately, then to wait approximately 7 days before completing the other. Each packet contained either an English or Tagalog version of the STS. At Time 1, all participants completed the Bi-Polar Adjective Rating Scale and the STS (in the language version for the group). At Time 2, individuals completed the Purpose-in-Life Test, Self-Actualization

Test, Individualism Scale, Altruism Scale, and the Materialism scale, as described above. When materials were completed, they were returned. Individuals were randomly assigned to one of the four language groups noted above.

Results

Validation sample

Table I presents descriptive statistics for the Tagalog version of the STS. No gender differences were observed. The mean scores on the scales are higher than those found with American normative data (the total STS score for the Filipinos is about 8 points higher than that presented in Piedmont, 2001). This difference may be due to the age of the subjects in the two samples. American data are based mostly on college-age students between 17 and 22, while the current sample is mostly nonstudent adults. Given that STS scores are correlated significantly positive with age (both in the current study and with American samples, e.g., Piedmont, 2001), the observed difference between these two samples may be an age effect. Alpha reliabilities for both the observer and self versions are lower than that found normatively, especially for the Connectedness scale, which is quite low. Significant cross-observer correlations were found, and again, they are lower than those found in American samples, although the range of these values is consistent with those found for traditional personality constructs (e.g., FFM domains) in American samples (where average *rs* range from 0.30 to 0.48; Funder, Kolar, & Blackman, 1995; McCrae & Costa, 1987; Piedmont, 1994). One possible reason for the lower convergence may be a function of the self version being in Tagalog, while the rater version was in English. Given some of the item changes made in the Tagalog version, the scales may not be perfectly comparable.

In order to examine structure, two sets of Confirmatory Factor Analyses (CFAs) were performed. The first model tested examined whether the STS represented an overall single dimension. As can be seen in Table II, Model 1a, there is support for this structure. The ratio of degrees of freedom to the overall chi square is less than 3, the RMSEA is less than 0.05, and the NFI and CFI are

Table I. Descriptive statistics and reliability estimates for self-report and observer ratings on the STS.

STS scale	<i>M</i>	<i>SD</i>	Self-report α	Observer α	Cross-observer agreement	Age
Universality	35.68	4.52	0.75	0.77	0.49***	0.23***
Prayer fulfillment	32.75	4.27	0.59	0.46	0.27***	0.18***
Connectedness	22.93	2.91	0.42	0.25	0.17**	0.21***
Total transcendence	91.36	9.21	0.79	0.78	0.29***	0.26***

Note. *N* for self-reports = 626; *N* for observer ratings = 272; *N* for cross-observer agreement = 270. ***p* < 0.01; ****p* < 0.001, two-tailed.

Table II. Comparison of model fits for various structural equation models in a Filipino sample.

Model #	Model	df	χ^2	χ^2/df	RMSEA	NFI	CFI
Self-report data ($N=626$)							
1a	Single overall factor	218	483.34	2.2	0.04	0.92	0.95
2a	Three correlated first-order factors	220	471.64	2.1	0.04	0.92	0.96
Observer ratings on STS ($N=287$)							
1b	Single overall factor	241	354.03	1.5	0.04	0.96	0.99
2b	Three correlated first-order factors	239	351.32	1.5	0.04	0.96	0.99

Note. RMSEA: root mean square error of approximation; NFI: normed fit index; CFI: comparative fit index. Data were estimated using generalized least-squares algorithms.

Table III. Correlations between the STS facets and the self- and observer rated outcomes.

Criterion	Universality	Prayer Fulfillment	Connectedness	Total STS	R^2
<i>Self-rated outcomes^a</i>					
Delighted Scale	0.22***	0.06	0.20***	0.20***	0.06
Positive Affect	0.15***	0.14***	0.18***	0.19***	0.04
Negative Affect	-0.19***	-0.08	-0.13***	-0.17***	0.04
Affect Balance	0.23***	0.15***	0.21***	0.25***	0.06
Purpose-in-Life	0.40***	0.25***	0.29***	0.40***	0.17
Self-Actualization	0.31***	0.12**	0.22***	0.27***	0.10
Prosocial Scale	0.21***	0.27***	0.20***	0.29***	0.09
Attitudes on Abortion	0.22***	0.20***	0.09*	0.23***	0.05
Individualism	-0.37***	-0.13***	-0.32***	-0.34***	0.16
Materialism	-0.24***	-0.18***	-0.15***	-0.24***	0.06
<i>Rater outcomes^b</i>					
Delighted scale	0.28***	-0.10	0.11	0.13*	0.05
Positive Affect	0.15*	-0.01	0.08	0.10	0.01
Negative Affect	-0.14*	-0.10	-0.09	-0.14*	0.01
Affect Balance	0.22***	0.07	0.13*	0.19**	0.02
Self-Actualization	0.31***	0.03	0.17**	0.22***	0.04
Individualism	-0.29***	-0.03	-0.17**	-0.22***	0.04

^a $N_s = 556-622$. ^b $N = 269$. * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$; two-tailed.

above 0.90, all indicative that the data fit the putative model well. The second model then examined whether the items of the STS can be separated into their respective three correlated facet scales (i.e., Universality, Prayer Fulfillment, and Connectedness). Model 2a tested this and again found support for the putative structure of the STS. These two models were again tested, this time using the English rater version. Model 1b examined the overall one-factor model, and Model 2b examined the three correlated factor model. As found with the self-report data, the observer data evidenced acceptable fit with the underlying model. The Tagalog version of the STS, as well as the English rater version, does evidence its expected structure.

Scores on the STS scales were correlated with both the self- and observer ratings on the outcome variables. As can be seen in Table III, the STS scales

Table IV. Incremental validity of the Tagalog version of the STS in predicting various self- and observer-rated outcomes over the dimensions of the Five-Factor Model of personality.

Criterion	FFM R^2	STS R^2	Partial F	Scale ^a
<i>Self-rated outcomes (Ns = 533–594)</i>				
Delighted Scale	0.10***	0.03	8.70**	C, U
Positive Affect	0.10**	0.01	7.68**	F
Negative Affect	0.14***	0.01	5.04*	U
Affect Balance	0.21***	0.01	6.99**	U
Purpose-in-Life	0.40***	0.05	25.73***	U, F
Self Actualization	0.23***	0.03	22.47***	U
Prosocial Scale	0.10***	0.06	21.79***	F, C
Attitude towards Abortion	0.03**	0.06	17.85***	U, F
Individualism	0.14***	0.08	30.97***	U, C
Materialism	0.18***	0.03	20.62***	U
<i>Rater outcomes (Ns = 230–249)</i>				
Delighted Scale	0.10***	0.08	12.29**	U, F
Positive Affect	0.07**	0.00	–	–
Negative Affect	0.03	0.02	6.14**	U
Affect Balance	0.08***	0.02	6.54**	U
Self Actualization	0.07**	0.06	16.05***	U
Individualism	0.10	0.05	13.11***	U

^aU = Universality; F = Prayer Fulfillment, C = Connectedness. * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$.

correlated significantly with all the self-reported outcomes and with all but one of the observer ratings. The STS scales show that they are relevant to a wide range of psychosocial outcomes. The last column in Table III presents the R^2 linking the STS facet scales with each criterion measure. As can be seen, the STS scales predict 1–17% of the variance in the outcomes (mean = 6%).

To examine the incremental validity of the STS, a series of hierarchical multiple regression analyses were performed. On step 1 of the analyses, the personality domains of the FFM were entered. On step 2, the STS facet scales were entered using a forward selection process. The dependent variables are listed in Table IV. As can be seen, when self-reported scores on the psychosocial variables were used as criteria, the STS provided significant amounts of additional explained variance over and above the predictive power of the dimensions of the FFM in all instances. When observer ratings on the psychosocial variables were used as outcomes, a similar pattern was found in all but one instance (positive affect on the ABS). The patterns of predictors were also similar for both the self and observer outcomes. Thus, the incremental validity of the STS scales is not due to correlated method error.

Retest sample

Table V presents the descriptive statistics, alphas, and retest coefficients for each of the four testing groups. As can be seen, the alphas are higher than those found in the validation sample, although there is considerable variability in their levels across time. Retest correlations all show a high rank order stability. The values

Table V. Descriptive statistics and reliability estimates for the four testing groups.

Condition	Time 1			Time 2			Retest <i>r</i>	<i>t</i> -Differential
	<i>M</i>	<i>SD</i>	α	<i>M</i>	<i>SD</i>	α		
<i>English-English (N = 65)</i>								
Universality	35.48	4.8	0.83	34.60	4.4	0.78	0.63***	1.78
Prayer fulfillment	31.95	3.9	0.57	32.69	3.8	0.64	0.63***	-1.78
Connectedness	22.26	3.4	0.70	22.00	2.8	0.48	0.68***	0.82
Total scores	89.69	10.1	0.85	89.29	9.3	0.84	0.73***	0.45
<i>English-Tagalog (N = 41)</i>								
Universality	34.61	5.0	0.78	34.05	5.3	0.82	0.71***	0.91
Prayer fulfillment	32.32	4.3	0.52	32.34	4.2	0.58	0.61***	-0.04
Connectedness	22.85	3.3	0.52	22.89	3.2	0.59	0.70***	0.06
Total scores	89.78	11.0	0.83	89.22	11.0	0.86	0.73***	0.45
<i>Tagalog-English (N = 62)</i>								
Universality	32.45	5.2	0.69	33.27	5.6	0.77	0.56***	-1.27
Prayer fulfillment	31.84	3.8	0.43	32.39	4.7	0.59	0.55***	-1.05
Connectedness	22.24	3.1	0.48	21.37	3.5	0.50	0.57***	2.20*
Total scores	86.53	10.3	0.79	87.03	11.8	0.83	0.66***	-0.43
<i>Tagalog-Tagalog (N = 55)</i>								
Universality	34.05	3.7	0.57	34.82	4.4	0.73	0.74***	-1.89
Prayer fulfillment	31.98	4.3	0.57	32.36	3.8	0.58	0.58***	-0.76
Connectedness	22.67	2.9	0.34	23.04	3.0	0.67	0.77***	-1.35
Total scores	88.71	8.9	0.76	90.22	9.0	0.83	0.79***	-1.92

Note. * $p < 0.05$; *** $p < 0.001$; two-tailed.

for the Tagalog-only group are generally higher than those found with the English-only group, suggesting that the English phraseology may not be as clearly understood as the Tagalog items.

To determine if there were any mean level changes over time, a 2 (time of assessment) \times 4 (testing group) ANOVA was performed using total STS score as the dependent variable. No significant effects emerged, indicating that the STS total scores did not change over time and that the different groups were equivalent. These data show that the two versions of the STS produced similar means and standard deviations. A second 2 \times 4 MANOVA was conducted using the three STS facet scales as the dependent variables. No significant effect was found for time of assessment. Thus, the one significant difference noted for Connectedness in Table V represents a Type I error. However, a significant effect for testing group did emerge (Wilks' Lambda = 0.913, multivariate $F[9,528.27] = 2.25$, $p < 0.05$). Univariate analyses indicated that scores on Universality for Group 3 were significantly lower than those of the other three conditions ($F[3,219] = 2.79$, $p < 0.05$). Finally, a significant group-by-time of assessment interaction was also obtained (Wilks' Lambda = 0.92, multivariate $F[9,528.72] = 2.18$, $p < 0.05$). Univariate analyses indicated one effect for Universality ($F[3,219] = 2.69$, $p < 0.05$), where scores on Universality increased slightly from Time 1 to Time 2 for groups 3 and 4, while they declined for groups 1 and 2. The reason for this finding is not intuitively clear. Given that

Table VI. Incremental validity of the Time 1 Tagalog-version of the STS in predicting time 2 self-rated outcomes over the dimensions of the Five-Factor Model of personality.

Time 2 criterion	FFM R^2	STSR ²	Partial F	Scale ^a
Purpose-in-Life	0.43***	0.07	13.02***	C
Self Actualization	0.29***	0.09	13.24***	U
Individualism	0.09	0.07	7.65**	F
Prosocial Scale	0.21***	0.11	14.95***	F
Materialism	0.03	0.09	9.79***	C

Note. $N = 101$. ^aU = Universality; F = Prayer Fulfillment; C = Connectedness. * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$.

it occurred with only a single STS facet and that the effect size is quite small (partial $\eta^2 = 0.04$), this suggests that it may represent an idiosyncrasy of the sample. Overall, though, the means and standard deviations in the two mixed-language groups are quite comparable, and these results suggest that both forms provide similar scores in similar individuals.

The retest correlations provide support for the stability of these scores in this sample. That they are quite high, especially with regard to the Connectedness facet, suggests that the lower alphas noted may indicate that the scales are more factorially complex in the Filipino culture, rather than the scales being unreliable. Future research may wish to examine the emic consequences of all these scales.

To provide evidence of predictive validity, hierarchical multiple regression analyses were conducted using scores on the Tagalog version of the STS obtained at Time 1 (groups 3 and 4) and the outcome measures obtained at Time 2. The personality dimensions of the FFM were entered on step 1, and the STS facets entered on step 2 using a forward selection. The results of these analyses are presented in Table VI. As can be seen, the STS evidences significant levels of cross-time predictiveness over and above personality across all five of the psychosocial criteria.

Discussion

The presented data show that the STS was successfully translated into Tagalog, a native Filipino language that does not share a common etymological root with English. This is an important finding in its own right because, as the lexigraphic hypothesis contends, finding in two relatively independent lexical systems terms that represent a similar experience is evidence for the presence of a universal phenomenon. That the putative factorial structure of the STS was recoverable in this Tagalog version and that it also produced similar mean scores as its English cousin adds empirical strength to the claim of universality. Clearly, the concepts of spirituality that underlie the STS represent psychological phenomena that are relevant across different cultural contexts. That scores on the Spiritual Transcendence scale also evidenced a broad range of predictive power, even

after controlling for the effects of personality, underscores the psychological value of the construct. Taken together, these data add to the growing body of evidence supporting the position that Spiritual Transcendence is a significant, universal, motivational quality that exists in all cultures.

It is hoped that these findings will also further discussions on how to define spirituality. Scott (cited in Hill et al., 2000) identified 40 different definitions for spirituality which she classified into nine different content areas (e.g., experiences of connectedness, processes leading to increased connectedness, systems of thought or beliefs, behavioral responses to something sacred, traditional institutional or organizational structures, pleasurable states of being, beliefs in the sacred or transcendent, capacities for transcendence, and concern with existential questions). The STS certainly includes many of these content areas among its scales and items, but the current findings support the STS as a measure of an innate, intrinsic motivation to seek meaning in terms of some ultimate reality rather than an attitude or belief that is formed from some specific set of religious beliefs or teachings. Dy-Liacco et al. (in press) used Structural Equation Modeling (SEM) with this Filipino sample to examine various causal relationships between the STS and religious behaviors. Their findings provided the most support for those models where spirituality was hypothesized to be the causal predictor of religious behavior.

Further support for the view that the STS captures motivational aspects of spirituality is found in its many significant relationships with the outcome criteria included in this report. As a measure of personal meaning and existential integration, the STS correlated with a wide range of psychosocial outcomes, like well-being, psychological maturity, interpersonal styles, and sexual attitudes. Only a motivational variable can have such a broad influence on one's psychological equilibrium, and that is why such a wide array of constructs were selected as relevant outcomes. In comparing this motivational variable to those included in the FFM, the STS represents an individual differences dimension that is independent of these major personality domains (Piedmont, 1999, 2001). The incremental validity analyses performed here further demonstrated that spirituality's predictive power was not mediated by personality. See also Dy-Liacco et al. (in press) and Piedmont (in press), for more sophisticated, SEM-based approaches to assessing mediation. These data help refute criticisms of spiritual constructs as being nothing more than the "parasitization" of already-existing psychological constructs (Buss, 2002).

As a predictor, STS scores certainly provided low to moderate levels of associations with the outcome variables. These levels of association compare well with those found with the domains of the FFM. By dividing the last column of Table III (which provides the overall amount of shared variance between the STS and the outcome criteria) by the second column of Table IV (which provides the overall association between the outcome criteria and all five of the personality domains), it can be found that the single STS score is 29–90% as predictive of the outcomes as were all the FFM domains combined. In two instances (Attitudes towards Abortion and Individualism), the STS scales predicted a larger share

of the variance in these criteria than the FFM domains. As the third column of Table IV indicated, much of the STS's predictive power is independent of the FFM's. These findings generate two important conclusions.

First, spirituality is an important predictive component of a variety of positive psychosocial outcomes. Emotional well-being, psychological maturity, interpersonal style, and altruistic tendencies are all significantly related to one's spiritual orientation. These findings are consistent with a large literature documenting the facilitative influence of spirituality on mental health (e.g., Thoresen, 1999). Second, the hierarchical multiple-regression analyses showed that these relationships were not mediated by personality. Thus, spirituality made a unique contribution to our understanding of these outcomes. Dy-Liacco et al. (in press) analyzed these data using SEM to determine whether spiritual transcendence was a predictor or consequence of these psychosocial variables. In other words, does one's spiritual orientation influence mental and physical well-being, or does one's level of life satisfaction and maturity determine one's spiritual orientation? Dy-Liacco et al. demonstrated that models that conceptualized spirituality as an "input" were far superior to models where spirituality was an "output." The current findings, and those of Dy-Liacco et al., provide support for the position that a psychological model needs to include a measure of spirituality if it is to be considered comprehensive.

Lexical hypothesis and cultural generalizability

It could be argued that the comparability of the Philippine findings with those found in American samples is that both data sets involve large percentages of Catholics. Thus, similar patterns of findings may represent the effect of Christianity in general and Catholicism in particular on how people talk about and understand their faith and spirituality. Alternatively, over 300 years of Spanish and American colonization could have provided many opportunities for Western concepts of spirituality to become incorporated into Tagalog. It cannot be known how centuries of multicultural contact may have influenced native language usage. Thus, these findings of structural comparability across cultures cannot be interpreted as definitive proof that Spiritual Transcendence is a universal phenomenon. Research involving more culturally isolated, religiously diverse groups is necessary. Using languages that are less "contaminated" by Western ideas and practices would provide a more rigorous medium for testing the lexical hypothesis.

However, it should also be kept in mind that Filipinos differ significantly in many ways from Americans. Grimm, Church, Katigbak, and Reyes (1999) have shown that Filipinos have a very different world view than Americans. Filipinos tend to score much higher on Collectivism than Americans, and exhibit preferences for very different values and personal traits. Therefore, what Catholicism means to Filipinos, the themes that they emphasize and how they practice their faith, can be very different from American Catholics because of the Filipinos' collectivistic orientation. Filipino culture cannot be considered

isomorphic with Western mores and values. It may be exactly these differences that explain why several of the scales used in this study had reliability estimates lower than those found in the United States. That is why the findings of this study are important. Given these important personal differences in world view, the fact that the STS evidenced the same factor structure, produced similar mean levels in scores, and exhibited similar patterns of correlates with measures of well-being, sexual attitudes, and psychological maturity does support the hypothesis that spiritual transcendence represents a fundamental aspect of the individual that is not culture-specific. Because the STS appears to capture a universal spiritual quality, it can be a useful tool for cross-cultural researchers interested in developing broad-band theories of spirituality and its development.

What gives added value to the current findings is that they are consistent with a growing research base examining cross-cultural and cross-faith issues with the STS and finding the instrument to have broad relevance. Goodman (2002) gave the STS to a sample of American conservative, orthodox, and reformed Jews and found the scales to be reliable and valid across these different groups. Cho (2004) translated the STS into Korean and used it with an evangelical Christian sample of middle-aged married couples, and he found the scales valid predictors of relationship dimensions, like fear of intimacy. Bourdeau, Hinojosa, Perez, and Chu (2004) translated the STS into Spanish for use in a study with gay Latino men. Although alpha reliabilities were lower than that found in normative samples, the STS was found to capture native Meso-American religious themes that are not found with more Christian-based spirituality measures. Finally, Wilson (2004) gave the STS in English to a sample of aboriginal Canadians, and reliabilities were found to be quite adequate and scores correlated with other measures of spirituality and ethnic identity. Taken together, these findings suggest that Spiritual Transcendence may represent something universal about individuals and their efforts at creating a broad sense of personal meaning for the lives they are leading.

In conclusion, cross-cultural studies can be helpful in identifying numinous dimensions that have universal relevance. The methods used in the current study can serve as a methodological framework for future researchers interested in exploring the cross-cultural generalizability of spiritual constructs. This study outlined the empirical criteria that would need to be met in order to establish a scale's generalizability to a new culture. The STS can also be a useful measure in such research, having been shown here to be empirically robust, so it can serve as an empirical reference point for examining the construct validity of other putatively numinous measures. Future research should also aim to include more diverse cultural samples and religious orientations. Do measures of spirituality remain equally valid across faith traditions? A goal of cross-cultural research should be to facilitate the development of spiritual models that can outline the larger evolutionary significance of spirituality for the human experience.

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