

Dimensions of the Mysticism Scale: Confirming the Three-Factor Structure in the United States and Iran

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In a mostly Christian American sample (N = 1,379), confirmatory factor analysis of Hood's (1975) Mysticism Scale verified the existence of Stace's (1960) introvertive and extrovertive dimensions of mystical phenomenology along with a separate interpretation factor. A second study confirmed the presence of these three factors in not only another group of Americans (N = 188), but also in a sample of Iranian Muslims (N = 185). Relationships of the introvertive and extrovertive factors with the interpretation factor were essentially identical across these two cultures, but the Americans displayed a stronger association between the two phenomenology factors. In both samples, the interpretation factor correlated positively with an intrinsic and negatively with an extrinsic religious orientation, and the introvertive factor predicted psychological dysfunction. Associations of the interpretation factor with relative mental health appeared only in the Iranians. These data offered general support for Stace's phenomenology of mysticism, although the ineffability he linked with interpretation proved to be as much or even more a feature of the introvertive experience, as hypothesized by Hood.

Few would disagree with the claim that an experience of unity is the central defining characteristic of mysticism; yet, considerable debate has surrounded one aspect of what has been termed the "unity thesis" (Hood 1989, 1997). This debate can be described as an argument between those who propose that the unity thesis implies a common core to all mystical experience, independent of the interpretation of that core, and those who assert instead that all experience is interpreted and hence that no common core can be identified independent of interpretation.

With regard to the former position, the seminal work was that of Walter Stace (1960), whose *Mysticism and Philosophy* set the stage for the debate by adopting two methodological

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assumptions. First, Stace contended that experience could be identified relatively independent of its interpretation. While admitting that no experience is absolutely unmediated (a point often ignored by his critics (Stace 1960:31)), Stace nevertheless maintained that one could easily distinguish between minimally interpreted experiences and elaborations of experiences that were possible only within particular ideological traditions. For instance, to identify a luminous light or a figure within a luminous light is to offer a minimal identification of an experience that might otherwise be interpreted as a vision of Jesus. The latter obviously is a more elaborated interpretation than the former. Second, Stace argued for “causal indifference,” refusing to differentiate experiences by what might have triggered them, for instance, accepting experiences described in classic religious texts alongside drug-induced experiences reported by contemporaries.

Stace’s unity thesis led to extensive, largely conceptually based criticisms of his position. In a series of edited volumes, Katz (1977b, 1983, 1992) marshaled the work of numerous authorities to argue against a common core basis to the unity thesis. While these criticisms varied, the most telling positions rejected Stace’s two methodological postulates. The first counterargument was that no experience is unmediated because all experience is socially constructed. In other words, Buddhists have Buddhist experiences, Christians have Christian experiences, and so on for each religious tradition (Katz 1977a). Second, there was a refusal to separate the trigger of an experience from the experience itself, so that the postulate of “causal indifference” was simply rejected. Drug-facilitated experiences, for instance, were identified as necessarily different from spontaneously occurring ones or from those that were carefully produced through devout religious practices.

More recently, Stace’s common core interpretation of the unity thesis has been supported by the arguments of numerous scholars included in works edited by Forman (1990, 1998). In particular, what Stace called introvertive mysticism, an experience of nothingness, has been viewed as necessarily free from any social constructionist construal because the introvertive psychological state lacks any substantive content. Preferring to identify this form of mysticism as “pure conscious experience,” Forman and others have argued that introvertive mysticism can be identified empirically and found within the major faith traditions, which may indeed have articulated contrasting interpretations of such otherwise identical experiences.

At the empirical level, Stace’s unity thesis has been identified most strongly with the work of Hood and his colleagues (Hood 1989, 1997, in press; Hood, Spilka, Hunsberger, and Gorsuch 1996). Hood’s (1975) *Mysticism Scale* was derived explicitly from Stace’s “common core” criteria, and use of this scale in a programmatic line of research yielded a growing body of evidence that sustained Stace’s interpretative position. Initial analysis of the *Mysticism Scale* uncovered two factors (Hood 1975), one associated with the minimal phenomenological properties of mystical experience (including the unity criteria) and the other reflecting a more interpretative factor (including views of the experience as noetic and sacred). Importantly, under relevant conditions, persons agreeing with the experiential items were able to display differences on the interpretative items, confirming Stace’s basic claim that identical experiences can be differentially interpreted (Hood 1975).

Subsequent factor analyses by other researchers supported a two-factor solution in which interpretation was separated from the basic experiential items (Caird 1988; Reinert and Stifler 1993). These studies lacked adequate subject-to-item ratios and were at best suggestive. Two more recent investigations employed more than adequate subject-to-item ratios and maintained a sensitivity to Stace’s more fine-grained analysis of mystical experience (Hood, Morris, and Watson 1993; Hood and Williamson 2000). Within the phenomenological core, Stace made a distinction between introvertive and what he called extrovertive mysticism. The extrovertive experience is one in which the self reaches a unity with the multiplicity of objects in the universe. Stace defined this state as a “unifying vision, expressed abstractly by the formula ‘All is One’” (p. 79). In contrast, the introvertive experience is one of self-loss within a “Unitary Consciousness, from which all the multiplicity of sensuous or conceptual or other empirical content has been excluded, so that there remains only a void and empty unity” (p. 110).

Hood et al. (1993) obtained a three-factor solution in which Stace's introvertive and extrovertive mysticisms were identified, along with a third interpretation factor. Later, Hood and Williamson (2000) utilized three "translations" of the Mysticism Scale. The original scale avoided specifically religious language, for instance, referring to union with "ultimate reality" rather than with "God." In two other "translations," more specifically religious language was employed, for instance, referring to unity with God and, in a more explicitly Christian version, to unity with Jesus. The nonreligious and one of the religious "translations" were administered to a relevant Christian sample, and factor analyses identified three-factor solutions, which in broad terms paralleled Stace's common core. Within a given faith tradition, therefore, different levels of experience included an awareness of unity with reality, God, or Jesus that was introvertive or extrovertive along with a more elaborate interpretation of such experiences.

In short, considerable empirical work has revealed contrasts between the experiential and interpretation items, supporting the claim that a core of mystical experience exists relatively independent of its interpretation. The present project further investigated this issue in two most important ways. First, confirmatory rather than exploratory factor analytic procedures were employed to test the common core criteria against other plausible models. Second, measurement invariance and structural invariance procedures (Vandenberg and Lance 2000) were utilized to compare the self-reported mystical experiences of American Christians with those of Iranian Muslims. These cross-cultural analyses made it possible to test the apparent presumption of Katz (1977a) that Muslims would have Muslim experiences, and Christians would have Christian experiences.

STUDY 1

In addition to comparing the three-factor model with other plausible models of mysticism, this first study employed confirmatory factor analysis (CFA) to examine possible variations in defining the three-factor structure. The empirical description of all models, of course, rested on details of how the Mysticism Scale operationalized mystical experience.

The Mysticism Scale includes 32 statements organized into eight four-item groupings. Three groupings refer to interpretations of mystical experience in terms of positive affect, religious holiness, and noetic quality (i.e., as a source of nonrational, though valid, knowledge). Illustrative of *Positive Affect* is the statement: "I have had an experience in which I felt that all was perfection at that time." *Holiness* appears in the self-report as: "I have had an experience which I knew to be sacred." A *Noetic* interpretation is exemplified by the claim: "I have had an experience in which a new view of reality was revealed to me."

All other four-item groupings refer to the phenomenology of mystical experience. Two groupings record aspects of the extrovertive state. *Unity in Diversity* items operationalize the "All is One" experience (e.g., "I have had an experience in which I realized the oneness of myself with all things"). *Inner Subjectivity* items express the perception of an inner subjectivity within all things (e.g., "I have had an experience in which all things seemed to be conscious"). Introvertive items express a loss of the self in a greater *Unity* (e.g., "I have had an experience in which something greater than myself seemed to absorb me") and in a sense of *Timelessness/Spacelessness* (e.g., "I have had an experience that was both timeless and spaceless"). A final group of items speaks about the *Ineffability* of mystical experiences (e.g., "I have had an experience that is impossible to communicate"). Stace linked ineffability to the interpretation of mysticism. Ineffability, nevertheless, suggests an inability to interpret experience; thus Hood has suggested that ineffability more properly describes the self-loss of the introvertive void (Hood and Williamson 2000).

In this study, a global unidimensional model first was compared to the two-factor model obtained in the initial exploratory factor analysis of the Mysticism Scale (Hood 1975). This bidimensional model combined the affect, holiness, and noetic statements into an interpretation factor with the remaining items joined together into a single phenomenological factor. Next, the Stace and Hood variations of the three-factor model were compared with the two-factor model.

METHOD

Subjects

The sample consisted of 847 female and 532 male university students who had been involved in one of three previous research projects. One group of 750 was utilized in the Hood et al. (1993) study with the remaining 629 serving as subjects in two previously unpublished investigations. Each sample was at least 71 percent Caucasian with most other students being African-American. The overwhelming majority was nominally Christian with Protestant and, especially, Baptist affiliations being dominant. The median age was 18, and all subjects received extra course credit in return for their voluntary contributions to the project.

Procedure

The Mysticism Scale was presented within a questionnaire booklet that included numerous other psychological scales. Participants responded to the booklets in group settings. Responses to all questionnaire items were entered on standardized answer sheets, and these sheets were later read by optical scanning equipment into a computer data file.

For the purposes of analysis, the four-item Mysticism Scale groupings were aggregated into testlets, which are associated with a number of advantages in CFA procedures (Neuman and Wright 1999; Schmidt and Ryan 1993). With the two- and three-factor solutions, an oblique model was utilized, since the assumption was that the three dimensions of mystical experience were correlated.

RESULTS AND DISCUSSION

As Table 1 demonstrates, the two-factor solution was clearly superior to the global unidimensional model. Both three-factor models represented an essentially equivalent improvement over the two-factor solution. Indeed, the comparative (Bentler 1990) and nonnormed (Tucker and

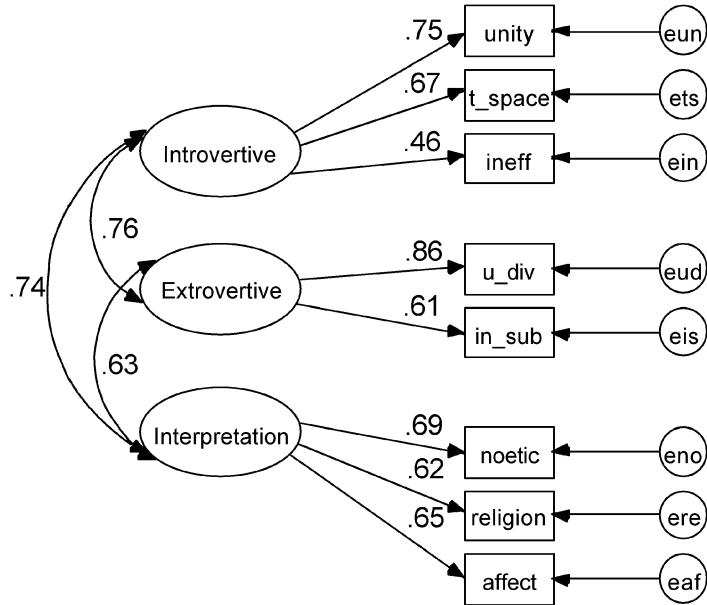
TABLE 1
CONFIRMATION OF HOOD'S THREE-FACTOR OBLIQUE MODEL
OF MYSTICISM

Competing Models	χ^2	<i>df</i>	$\Delta\chi^2$	Δdf	CFI	ΔCFI	TLI
0. Null Model	2920.086**	28	—	—	—	—	—
1. Global Unidimensional Mysticism Model	387.589**	20	—	—	0.87	—	0.82
2. Two-Factor Oblique Model	239.168**	19	—	—	0.92	—	0.89
Model 2 vs. Model 1			148.421**	1	—	0.05	—
3. Hood's Three-Factor Oblique Model	131.062**	17	—	—	0.96	—	0.94
Model 3 vs. Model 2			108.106**	2	—	0.04	—
4. Stace's Three-Factor Oblique Model	127.130**	17	—	—	0.96	—	0.94
Model 4 vs. Model 2			112.038**	2	—	0.04	—

Note: For this initial U.S. sample $N = 1,379$; CFI = comparative fit index (Bentler 1990); TLI = Tucker and Lewis (1973) nonnormed fit index. Dashes indicate not applicable.

* $p < 0.05$; ** $p < 0.01$.

FIGURE 1
HOOD VERSION OF THREE-FACTOR MODEL OF MYSTICAL EXPERIENCE
IN AN AMERICAN SAMPLE OF 1,379



In this model, Unity, Timelessness/Spacelessness (t_space), and Ineffability (ineff) items defined the introvertive factor; Unity in Diversity (u_div) and Inner Subjectivity (in_sub) items defined the extrovertive factor; and Noetic, Holiness (religion), and Positive Affect (affect) items defined the interpretation factor. Associated with each four-item grouping is error variance with “eun” defining the error variance for Unity in Diversity, “ets” for the error variance in Timelessness/Spacelessness, and so on for the other testlets.

Lewis 1973) fit indexes for both the Hood and Stace models were greater than 0.90, demonstrating that each three-factor solution provided an adequate fit to the data.

In summary, both three-factor models successfully described self-reported mystical experience. The CFA procedures offered no empirical justification for preferring one three-factor model over the other. Still, by definition, ineffability describes a circumstance for which no meaningful interpretations can be offered. A linkage of ineffability with the introvertive state (as suggested by Hood) rather than with interpretation (as suggested by Stace), therefore, makes sense on logical grounds. Figure 1 depicts the factor structure, factor loadings, and factor correlations obtained for this empirically equivalent and seemingly more logical alternative.

STUDY 2

A second study reexamined the structure of mystical experience not only in an American sample, but in a group of Iranian university students as well. In addition to the Mysticism Scale, research participants responded to a number of religious and mental health measures. This procedure made it possible to answer three most important questions. Was the structure of self-reported mystical experience similar in Iran and the United States? Did mystical experience correlate similarly with other religious variables in the two cultures? Did mystical experience have similar cross-cultural mental health implications?

METHOD

Subjects

The two samples included 78 male and 110 female students from a medium-sized university in the southeastern United States along with 81 men, 110 women, and 1 individual failing to indicate gender who were enrolled in the University of Tehran. All participants volunteered for the project. Ages were essentially the same for the Americans ($M = 20.0$, $SD = 3.93$) and Iranians ($M = 22.6$, $SD = 5.41$). All Iranians were Persian Muslims, but greater religious diversity (38.8 percent Baptist, 11.2 percent Catholic, 11.2 percent Methodist, 6.9 percent Presbyterian, 6.4 percent Church of Christ, and 25.5 percent other religious groups) and racial diversity (71.3 percent Caucasian, 23.4 percent African-American, and 5.3 percent other racial groups) characterized the American sample.

Procedure

All participants responded to two questionnaire booklets containing scales utilized in several projects. Booklets were as similar as possible across the two samples with the instruments presented in the same order and with the same basic instructions. The Iranians, of course, responded to Persian versions of the English instruments (copies available upon request). The adequacy of all translations was confirmed by having the Persian questionnaires translated back into English by an independent translator who was not involved with the original translation or the study hypotheses.

Mystical experience once again was measured with Hood's (1975) Mysticism (M) Scale. With regard to the other religious variables, religious motivation was recorded with the Allport and Ross (1967) Religious Orientation Scales. The Intrinsic Religious Orientation Scale operationalizes a largely adaptive motivation in which religion serves as an end in itself (Donahue 1985). The Extrinsic Scale records a sometimes more selfish and maladaptive use of religion as a means to nonreligious ends. The Extrinsic Personal and Social Factors and the Extrinsic Residual items (Kirkpatrick 1989) were analyzed along with the full Extrinsic Scale. Participants also indicated the degree of their overall religious interest by responding along a 10-point scale ranging from 0 (not at all interested) to 9 (extremely interested).

Psychological dysfunction was recorded with the five scales from the Hopkins Symptom Checklist (Derogatis, Lipman, Rickels, Uhlenhuth, and Covi 1974) and with the Psychoticism subscale of the SCL-90 (Derogatis and Cleary 1977). Previous research has confirmed the validity of the Hopkins Scales for use with undergraduates (Maddi and Khoshaba 1994), and, more importantly, has documented its validity in evaluating cultural variations in psychological functioning (Liebkind 1996; Pernice and Brook 1996). Measurement of Psychoticism made it possible to determine if self-reported mystical experience could reflect even more disturbed forms of functioning than the anxiety, depression, somatization, interpersonal sensitivity, and obsessive-compulsiveness recorded by the Hopkins instrument. Through error, one Psychoticism item was left off the Iranian questionnaire and so the corresponding item was dropped from the American analyses as well.

Questionnaires were administered to groups of varying size with none greater than 50. Participants generally completed all measures in less than an hour and a half. In the American sample, subjects once again entered their responses on standardized answer sheets that were subsequently read by optical scanning equipment into a computer data file. In Iran, research participants marked their responses on paper answer sheets, and these data later were entered manually into a computer file. A double-check of this process ensured the accuracy of the Iranian data.

After creation of separate data files for the two samples, coefficient alphas were computed for all instruments. All items displayed positive item-to-total correlations with their respective

TABLE 2
NUMBER OF ITEMS (IN PARENTHESES), ALPHAS, MEANS, AND STANDARD
DEVIATIONS (SD) OF RELIGIOUS AND PSYCHOLOGICAL SYMPTOM
MEASURES IN SAMPLES FROM IRAN (N = 187) AND THE
UNITED STATES (N = 188)

Measures	Iran Sample			United States Sample		
	Alpha	Mean	SD	Alpha	Mean	SD
<i>Mysticism Scale</i>						
Full Scale (32)	0.83	73.14	15.99	0.91	71.63	18.56
Introvertive Factor (12)	0.64	24.16	6.89	0.85	24.64	8.90
Extrovertive Factor (8)	0.72	18.98	5.56	0.82	15.85	5.85
Interpretation Factor (12)	0.72	30.01	7.37	0.82	31.14	7.49
<i>Additional Religious Measures</i>						
Intrinsic Scale (9)	0.74	32.96	6.69	0.84	30.56	8.42
Extrinsic Scale (11)	0.65	31.86	6.96	0.71	28.38	7.29
Extrinsic Personal (3)	0.65	11.97	2.89	0.62	9.65	3.05
Extrinsic Social (3)	0.68	8.32	3.27	0.59	6.66	2.84
Extrinsic Residual (6)	0.64	11.57	4.35	0.60	12.07	4.04
Religious Interest (1)	—	6.32	2.28	—	6.68	2.23
<i>Psychological Symptom Measures</i>						
Anxiety (6)	0.80	7.39	4.81	0.80	4.96	3.49
Depression (11)	0.86	22.11	10.03	0.86	12.95	6.86
Obsessive-Compulsiveness (8)	0.80	13.42	6.33	0.74	12.20	5.15
Psychoticism (9)	0.82	12.67	7.49	0.74	7.38	4.70
Interpersonal Sensitivity (7)	0.83	11.63	6.12	0.84	9.39	4.87
Somatization (12)	0.88	17.75	10.32	0.87	12.95	7.05

scales in both samples, and thus were retained for scale score computations and analyses. Table 2 presents the alphas, means, and standard deviations for all measures in both samples.

Statistical analyses then focused on the factor structure of the Mysticism Scale. The same testlets utilized in the first study were computed and used in the second study. CFA procedures within each sample revealed which model supplied the best fit to the data. This baseline model was then employed in measurement invariance (MI) and structural invariance (SI) procedures in order to identify similarities and differences in the self-reported mystical experience of the two samples. Once the cross-cultural implications of the mysticism factors were specified, they were correlated with the other religious and mental health variables in each sample separately.

RESULTS

Table 3 demonstrates that the two-factor model was again superior to the global unidimensional model in each sample. In the Iranian sample, both three-factor models represented an improvement over the two-factor model, but with the Americans, only the Hood version of the three-factor solution was superior to the two-factor model. The Hood solution, therefore, served as the baseline model in subsequent MI and SI analyses. Figures 2 and 3 depict the Hood model for the American and Iranian samples, respectively.

As Table 4 indicates, MI procedures first established that the overall pattern of the Hood model (configural invariance), the loadings of item groupings (i.e., testlets) on the relevant factors (metric invariance), and the error variances of the item groupings (invariant uniquenesses) were

TABLE 3
A CROSS-CULTURAL CONFIRMATION OF HOOD'S THREE-FACTOR OBLIQUE
MODEL OF MYSTICISM

Competing Models	χ^2	<i>df</i>	$\Delta\chi^2$	Δdf	CFI	Δ CFI	TLI
<i>United States</i>							
0. Null Model	651.456**	28	—	—	—	—	—
1. Global Unidimensional Mysticism Model	101.588**	20	—	—	0.87	—	0.81
2. Two-Factor Oblique Model	62.905**	19	—	—	0.93	—	0.90
Model 2 vs. Model 1			38.683**	1	—	0.06	—
3. Hood's Three-Factor Oblique Model	49.734**	17	—	—	0.95	—	0.91
Model 3 vs. Model 2			13.171**	2	—	0.02	—
4. Stace's Three-Factor Oblique Model	62.398**	17	—	—	0.93	—	0.88
Model 4 vs. Model 2			0.507	2	—	0.00	—
<i>Iran</i>							
0. Null Model	397.675**	28	—	—	—	—	—
1. Global Unidimensional Mysticism Model	76.181**	20	—	—	0.85	—	0.79
2. Two-Factor Oblique Model	69.852**	19	—	—	0.86	—	0.80
Model 2 vs. Model 1			6.329*	1	—	0.01	—
3. Hood's Three-Factor Oblique Model	46.571**	17	—	—	0.92	—	0.87
Model 3 vs. Model 2			23.281**	2	—	0.06	—
4. Stace's Three-Factor Oblique Model	48.079**	17	—	—	0.92	—	0.86
Model 4 vs. Model 2			21.773**	2	—	0.06	—

Note: For the U.S. sample $N = 188$; for the Iranian sample $N = 185$. CFI = comparative fit index (Bentler 1990); TLI = Tucker and Lewis (1973) nonnormed fit index. Dashes indicate not applicable.

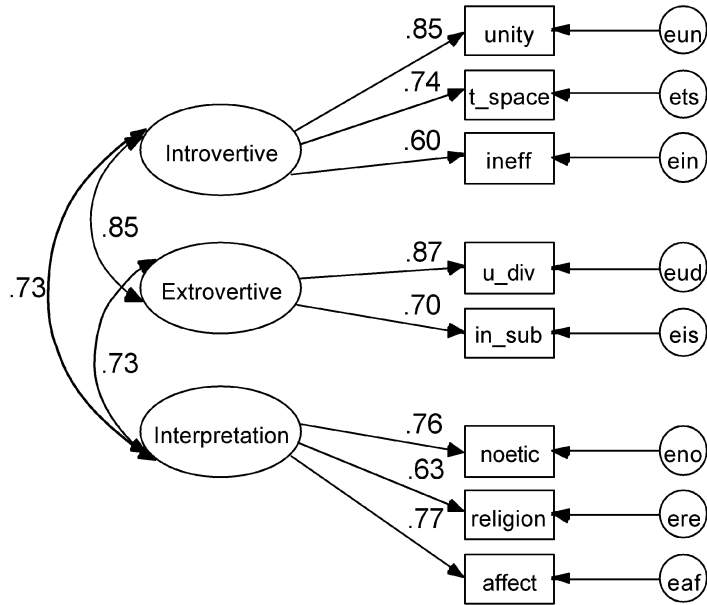
* $p < 0.05$; ** $p < 0.01$.

all essentially the same across the two cultures. SI analyses then demonstrated that relationships of the interpretation factor with the introvertive and with the extrovertive factors were invariant across the samples, but a cultural contrast appeared in the association of the introvertive factor with the extrovertive factor. Therefore, all aspects of the model except for the introvertive-extrovertive relationship were fixed as equivalent across cultures. Figure 4 depicts this model for the Iranians. For the Americans, this model, of course, was identical except that the correlation between the introvertive and extrovertive factors was 0.87 rather than 0.64.

Religious Variables

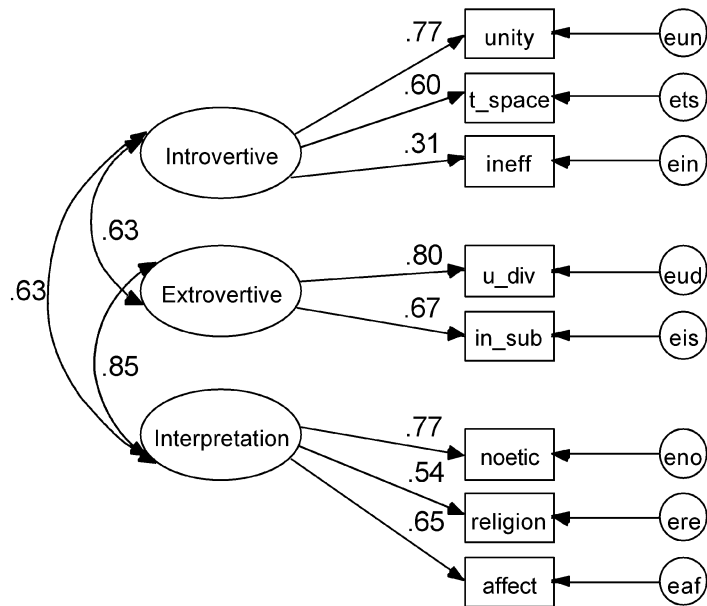
Table 5 reviews the correlations for the Mysticism Scale and factors with the other religious variables. The interpretation factor in both countries was associated with greater religious interest and a stronger intrinsic orientation. This factor also correlated inversely with the Extrinsic Scale, with the Extrinsic Residual items, and, in Iran, with the Extrinsic Social factor. The extrovertive factor predicted greater intrinsicness in both samples and religious interest in Iran. The only significant outcome for the introvertive factor involved a small positive correlation with the Intrinsic Scale in the American sample.

FIGURE 2
HOOD VERSION IN THREE-FACTOR MODEL IN AN AMERICAN SAMPLE OF 188



See the Figure 1 caption for an identification of all aspects of the model.

FIGURE 3
HOOD VERSION IN THREE-FACTOR MODEL IN AN IRANIAN SAMPLE OF 185



See the Figure 1 caption for an identification of all aspects of the model.

TABLE 4
TESTS OF FULL MEASUREMENT INVARIANCE IN CROSS-CULTURAL
CONFIRMATION OF HOOD'S THREE-FACTOR OBLIQUE MODEL
OF MYSTICISM

Competing Models	χ^2	<i>df</i>	$\Delta\chi^2$	Δdf	CFI	TLI
1. Invariant Covariance Matrices	63.901**	36	—	—	0.99	0.99
2. Configural Invariance	96.306**	34	—	—	0.99	0.98
2 vs. 3	—	—	14.726	8	—	—
3. Metric Invariance	111.032**	42	—	—	0.99	0.98
3 vs. 4	—	—	10.789	8	—	—
4. Invariant Uniquenesses	121.821**	50	—	—	0.99	0.99
4 vs. 5	—	—	9.371**	1	—	—
5. Invariant Factor Covariance: Introvertive-Extrovertive	131.192**	51	—	—	0.99	0.98
4 vs. 6	—	—	1.274	1	—	—
6. Invariant Factor Covariance: Introvertive-Interpretation	123.095**	51	—	—	0.99	0.99
4 vs. 7	—	—	0.743	1	—	—
7. Invariant Factor Covariance: Extrovertive-Interpretation	122.564**	51	—	—	0.99	0.99
4 vs. 8	—	—	2.780	2	—	—
8. Invariant Factor Covariances: Introvertive-Interpretation & Extrovertive-Interpretation	124.601**	52	—	—	0.99	0.99

Note: For the U.S. sample $N = 188$; for the Iranian sample $N = 185$. CFI = comparative fit index (Bentler 1990); TLI = Tucker and Lewis (1973) nonnormed fit index. Dashes indicate not applicable.

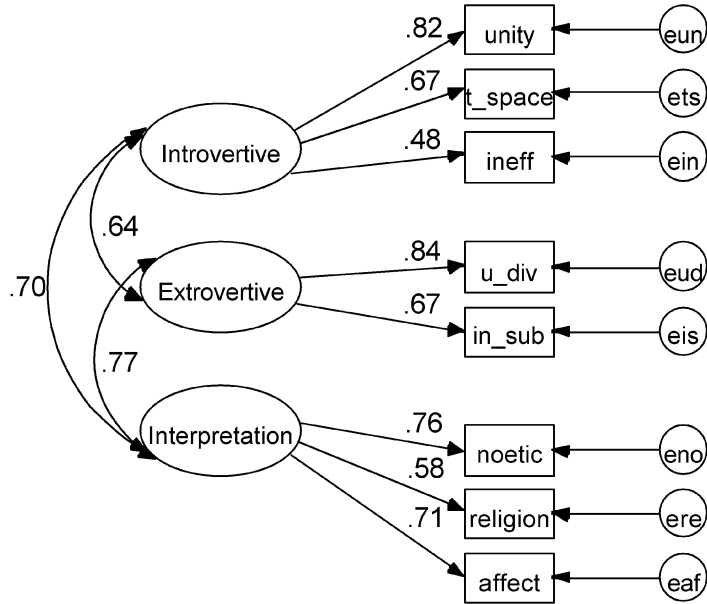
* $p < 0.05$; ** $p < 0.01$.

These relationships were further analyzed by entering the three mysticism factors into the second step of multiple regressions after controlling for age and sex in the first step. In Iran, interpretation was a reliable predictor of the Intrinsic Scale ($\beta = 0.23$), Religious Interest ($\beta = 0.24$), the Extrinsic Scale ($\beta = -0.32$), and the Extrinsic Social factor ($\beta = -0.24$). A reliable association also appeared between the extrovertive factor and the Extrinsic Social factor ($\beta = 0.21$, all $ps < 0.05$). In the United States, interpretation predicted responding on the Intrinsic Scale ($\beta = 0.55$), Religious Interest ($\beta = 0.50$), the Extrinsic Scale ($\beta = -0.35$), and the Extrinsic Residual items ($\beta = -0.45$). The introvertive factor also displayed an association with the Extrinsic Residual items ($\beta = 0.21$, all $ps < 0.05$). No other relationships in any of these analyses proved to be statistically significant.

Mental Health Variables

Table 6 presents the mysticism relationships with the mental health variables. In the United States, the introvertive factor was associated with slightly higher levels of Somatization, Depression, Psychoticism, and Obsessive-Compulsiveness. In Iran, this factor correlated positively with Somatization, Depression, and Obsessive-Compulsiveness. In addition, the Iranian students displayed negative relationships of the extrovertive factor with Obsessive-Compulsiveness and of interpretation with Anxiety, Depression, Interpersonal Sensitivity, and Psychoticism.

FIGURE 4
THE MEASUREMENT AND STRUCTURAL ESTIMATES FOR THE FINAL HOOD
VERSION OF THE THREE-FACTOR MODEL IN THE IRANIAN SAMPLE



Measurement invariance was obtained across the two samples, and only the structural covariance between introvertive and extrovertive factors was allowed to vary cross-culturally. With the American sample, the relationship between the introvertive and extrovertive factors was 0.87 instead of 0.64. See the Figure 1 caption for an identification of all aspects of the model.

TABLE 5
CORRELATIONS OF MYSTICISM FACTORS AND SCALE WITH
RELIGIOUS VARIABLES IN UNITED STATES AND IRAN

Religious Variables	Mysticism Variables			
	Introvertive	Extrovertive	Interpretation	Full Scale
<i>United States</i>				
Religious Interest	0.10	0.13	0.40**	0.25**
Intrinsic Scale	0.15*	0.25**	0.48**	0.34**
Extrinsic Scale	0.01	0.00	-0.22**	-0.08
Extrinsic-Personal	-0.04	0.03	-0.06	-0.03
Extrinsic-Social	0.02	0.00	-0.09	-0.03
Extrinsic Residual	0.03	-0.02	-0.29**	-0.11
<i>Iran</i>				
Religious Interest	0.02	0.19*	0.25**	0.18*
Intrinsic Scale	0.07	0.18*	0.25**	0.21*
Extrinsic Scale	-0.03	0.00	-0.22**	-0.12
Extrinsic-Personal	0.04	0.08	-0.03	0.03
Extrinsic-Social	-0.09	0.05	-0.15*	-0.10
Extrinsic Residual	-0.01	-0.09	-0.23**	-0.14

* $p < 0.05$; ** $p < 0.01$.

TABLE 6
CORRELATIONS OF MYSTICISM FACTORS AND SCALE
WITH PSYCHOLOGICAL FUNCTIONING VARIABLES
IN UNITED STATES AND IRAN

Psychological Variables	Mysticism Variables			
	Introvertive	Extrovertive	Interpretation	Full Scale
<i>United States</i>				
Somatization	0.15*	0.08	0.01	0.10
Anxiety	0.14	0.11	0.05	0.12
Depression	0.16*	0.01	0.06	0.10
Interpersonal Sensitivity	0.07	-0.01	-0.03	0.02
Psychoticism	0.17*	0.03	0.08	0.12
Obsessive-Compulsiveness	0.15*	0.00	0.05	0.09
<i>Iran</i>				
Somatization	0.28**	-0.03	-0.11	0.06
Anxiety	0.11	-0.11	-0.17*	-0.07
Depression	0.18*	-0.11	-0.18*	-0.04
Interpersonal Sensitivity	0.12	-0.13	-0.18*	-0.07
Psychoticism	0.13	-0.13	-0.16*	-0.06
Obsessive-Compulsiveness	0.17*	-0.18*	-0.11	-0.04

* $p < 0.05$; ** $p < 0.01$.

Once again, these relationships were reexamined by entering the three mysticism factors into the second step of multiple regressions after controlling for age and sex in the first step. For the American students, the introvertive factor was a reliable predictor of Depression ($\beta = 0.31$), Psychoticism ($\beta = 0.26$), and Obsessive-Compulsiveness ($\beta = 0.27$). In Iran, Somatization was predicted by the introvertive ($\beta = 0.42$) and the interpretation ($\beta = -0.28$) factors, Anxiety by the introvertive ($\beta = 0.24$) and interpretation ($\beta = -0.23$) factors, Depression by the introvertive ($\beta = 0.34$) and interpretation ($\beta = -0.27$) factors, Interpersonal Sensitivity by the introvertive ($\beta = 0.27$) and interpretation ($\beta = -0.23$) factors, Psychoticism by the introvertive factor ($\beta = 0.27$), and Obsessive-Compulsiveness by the introvertive ($\beta = 0.31$) and extrovertive ($\beta = -0.21$) factors.

DISCUSSION

In this second study, the Mysticism Scale was administered to American and Iranian university students in order to answer three questions. Was the structure of self-reported mystical experience similar in the two cultures? Did mystical experience correlate similarly with other religious variables in Iran and the United States? Did mystical experience have similar mental health implications for the two samples?

With regard to the first question, CFA procedures confirmed that in both samples the two-factor solution was superior to the global unidimensional model and that one or both of the three-factor structures were superior to the two-factor model. The Stace and Hood versions of the three-factor model provided equally good fits for the Iranian data, but in contrast to the American data of the first study, only the Hood version of the three-factor model proved to be superior to the two-factor model for Americans in the second study. These American results, therefore, suggested that ineffability is at least sometimes more indicative of the introvertive experience than of interpretation.

MI and SI techniques further documented that the Hood model provided a good fit to the data when Iranian and American responses to the Mysticism Scale were compared directly. The only cross-cultural contrast appeared in the stronger association between the introvertive and extrovertive factors that was observed for the Americans. The reason for this difference was unclear, but the observation of full measurement equivalence/invariance across the two samples rules out measurement problems (e.g., inadequate translation, measurement errors, etc.) as viable explanations for this difference, and isolate substantive cultural differences between the samples as the cause. Perhaps the more religious social life of Iran promoted a clearer psychological differentiation between the introvertive and extrovertive states.

With regard to correlations with other religious variables, the Iranian and American data were strikingly similar. In both cultures, the interpretation factor predicted greater religious interest and intrinsicness and lower scores on a number of Extrinsic Scale measures, a pattern suggesting that this dimension of mysticism reflected a more adjusted form of religious commitment. The few cross-cultural differences that did appear in these associations proved to be weak and/or were influenced by the age and sex of the respondents.

Finally, correlations of the Mysticism Scale with mental health uncovered obvious similarities and contrasts between the two samples. Both the Americans and Iranians presented evidence indicating that the introvertive factor was a predictor of psychological dysfunction. This was a surprising outcome because Stace (1960) described the introvertive experience as central to mysticism and as a source of profound "bliss."

Stace's perspective, nevertheless, must be evaluated within the context of at least four additional considerations. First, Stace's analysis of mystical phenomenology rested primarily upon an examination of written descriptions of experiences reported by mystical adepts from various religious traditions. No reason exists for assuming that the experience of university students should match the experience of mystical adepts. Second, even Stace reported that at least one individual found the introvertive state to be unpleasant (p. 92). Third, possible linkages between mystical experience and psychological dysfunction are made clear in an extensive previous literature on mysticism. The autobiographical (Boison 1960) and theoretical (Boison 1936) reflections of Anton Boison serve as only one obvious example. Fourth, empirical work has established that self-reported mystical experience sometimes is indeed associated with poorer mental health (Hood, Spilka, Hunsberger, and Gorsuch 1996:410-11; Jackson 1997). The present study, therefore, provided a cross-cultural confirmation for the conclusion that mystical experience can predict psychological dysfunction, and these data supported a further, more specific hypothesis that such effects are attributable to the introvertive experience.

The interpretation factor was a correlate of healthier psychological functioning, but only in Iran. This outcome demonstrated once again that tendencies toward mystical experience could exist within a healthy personality (Hood 1974, 1976). The appearance of this outcome only in the Iranian sample perhaps suggests that life in a more explicitly religious culture promotes the formation of such linkages.

A concluding emphasis perhaps should be placed on how these data offered additional support for the utility of the Mysticism Scale in other cultures (Holm 1982). This instrument proved to be a valid measure of mystical experience even in a non-Western, non-Christian culture. The three-factor structure yielded a more sophisticated and differentiated analysis of mystical experience than would have been possible with a unidimensional or a bidimensional measure. Use of the scale in comparing the Muslim and the largely Christian samples uncovered commonalities in relationships with religious variables and cross-cultural similarities and differences in linkages with mental health. These data, therefore, suggested that the Mysticism Scale might be widely useful for investigating the psychology of diverse religious traditions (Holm 1982).

GENERAL CONCLUSION

According to Stace's (1960) unity thesis, a common phenomenology exists at the core of all mysticism, and this core can be differentiated from any religious interpretation of such experiences. This perspective contrasts with the alternative claim that all experiences are culturally mediated and that mystical experiences, in particular, are the unique and diverse social constructions of different religious traditions (Katz 1977a, 1977b, 1983, 1992). Data from the present studies strongly supported Stace's position. When applied to Hood's (1975) Mysticism Scale, CFA procedures in fact identified the introvertive, extrovertive, and interpretation dimensions that Stace isolated in his philosophical analysis of mysticism. Perhaps most impressive was the further observation that American Christians and Iranian Muslims displayed clear similarities in their self-reported mystical experiences. MI procedures, for instance, confirmed that the Mysticism Scale measured an equivalent introvertive factor across the two cultures. This finding conformed with recent descriptions of introvertive mysticism as a "pure conscious experience" that exists independent of any tradition-specific interpretation (Forman 1990, 1998).

Similarities in the American and Iranian data were not limited to the introvertive factor, however. The Mysticism Scale also measured equivalent extrovertive and interpretation factors across the two samples. The extrovertive insight that "All is One," therefore, may transcend particular social constructions of mystical experience. Moreover, cross-cultural results for the interpretation factor were noteworthy because they suggested that a general religious language might exist for interpreting mysticism that is not specific to a single tradition. Even at the structural level, the interpretation factor operated in the same manner in the two samples, correlating in an essentially identical fashion with both the introvertive and extrovertive factors.

Empirical support for Stace's articulation of the unity thesis in no way invalidates the need to consider how different religious traditions socially construct at least some aspects of mystical experience. Indeed, results from the second study indicated that culture moderated the correlation between the introvertive and extrovertive factors, which was stronger in the American sample. The reason for this contrast was not immediately obvious, but this was precisely the kind of result that a social constructionist would predict. Furthermore, similarities in the mystical experiences of American Christians and Iranian Muslims do not mean that all cross-cultural comparisons would turn out the same. Even within a single religion, important differences might exist. The Iranians in this study, for instance, were Shi'i Muslims, and further research might document differences between this population and Sunni Muslims. In addition, Christianity and Islam are monotheistic religions with shared historical roots. Comparisons of Christians or Muslims with Hindus or Buddhists, for example, might yield very different findings. Explorations of such comparisons remain an obvious need for future research.

One relatively minor concern of the present project was to examine alternative definitions of the three-factor structure of mysticism. Stace identified ineffability as a feature of mystical experience and linked it conceptually to interpretation. Hood suggested instead that ineffability more logically describes one aspect of the introvertive experience (Hood and Williamson 2000). The minimum suggestion of the present data was that these two versions of the three-factor model provided equally good fits to the data. Moreover, CFA results obtained with the American sample of the second study revealed that only the Hood version of the three-factor solution was superior to the two-factor model. Logical arguments and the present empirical findings, therefore, suggested that a preference for the Hood three-factor model could be justified.

In conclusion, this investigation supported Stace's (1960) claim that a common phenomenology defines the core experience of mystical unity. Additional research will have to determine exactly how common that core is by examining individuals with religious commitments not examined in this project. The present data, nevertheless, demonstrated that at certain basic levels of mysticism, Muslims had a Christian experience, and Christians had a Muslim experience.

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