

Mysticism and Self-Determination in Iran: Multidimensional Complexity of Relationships with Basic Need Satisfaction and Mindfulness*

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Summary

In this study, the self-reported mystical experience of Muslims was correlated with constructs relevant to positive psychology. Iranian university students responded to the Extrovertive, Introvertive, and Religious Interpretation factors of the Mysticism Scale; to the Basic Need Satisfaction and Mindfulness measures associated with Self-Determination Theory; and to instruments recording Attributional Complexity, Obsessiveness, and Quest religiosity. Religious Interpretation and Extrovertive factors correlated positively whereas the Introvertive factor correlated negatively with the Self-Determination and adaptive functioning that are emphases of positive psychology. Research that analyzes mystical experience within the context of positive psychology may, therefore, be useful in clarifying the psychology of religious experience across traditions.

Keywords

Mystical experience; Muslims; basic needs; mindfulness; self-determination theory; positive psychology

Introduction

Mystical experience involves a sense of transcendent unity that is central to many religious traditions (Stace, 1960). The possibility that research into

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mysticism can promote a more international psychology of religion was suggested in a recent comparison of Iranian Muslims and American Christians (Hood, Ghorbani, Watson, Ghramaleki, Bing, Davison, Morris, & Williamson, 2001). In that study, the Hood (1975) Mysticism Scale was used to measure three dimensions of mystical experience described in the philosophical analysis of Stace (1960; Hood, Morris, & Watson, 1993). Extrovertive Mysticism referred to an awareness of the "ultimate oneness of all things" (Stace, p. 76) and was obvious in the self-report, "I have had an experience in which I realized the oneness of myself with all things." Introvertive Mysticism represented a timeless and spaceless consciousness of ultimate void and appeared in the claim, "I have had an experience in which everything seemed to disappear from my mind until I was conscious only of a void." A final dimension reflected religious interpretations of mystical experiences, as illustrated in the statement, "I have had an experience which I knew to be sacred." Confirmatory factor analyses documented that Iranian Muslims were like American Christians in displaying this three-factor structure.

Relationships with other constructs also identified cross-cultural similarities and differences in the implications of mystical experience. Introvertive Mysticism was associated with measures that have been documented as valid indices of maladjustment in both societies, but the Extrovertive and especially the Religious Interpretation factors were linked with healthier psychological functioning only in Iran. Such outcomes appeared in small, though statistically significant linkages with symptom checklist measures of such dysfunctions as somatization, depression, and, most importantly for the present project, obsessive-compulsiveness.

Religious implications of mystical experience were also clarified in this previous study through use of the Allport and Ross (1967) Religious Orientation Scales. The Intrinsic Scale theoretically records a sincere commitment to religion as a master motive in life, whereas the Extrinsic Scale seeks to measure the use of religion as a means to other, sometimes more selfish ends. Research generally, though not invariably, has identified the Intrinsic and Extrinsic Scales as correlates of adjustment and maladjustment, respectively (Donahue, 1985). In both Iran and the United States, the Extrovertive and Religious Interpretation factors correlated positively with the Intrinsic Scale, and Religious Interpretation was also associated with lower Extrinsic Scale scores. A positive correlation appeared between the Introvertive and Intrinsic measures only in the American sample. An earlier study, nevertheless, documented the relevance of the Introvertive dimension to Iranian religious commitments when all three

Mysticism factors displayed direct associations with the Muslim Attitudes toward Religion Scale (Ghorbani, Watson, Ghramaleki, Morris, & Hood, 2000).

Self-Determination, Basic Needs, and Mindfulness

Research into mystical experience, therefore, can encourage development of the psychology of religion beyond the analysis of Western Christian samples that tends to dominate the literature. A special opportunity for integrating Muslim religion into a broader conceptual framework may also be available in positive psychology. Positive psychology emphasizes aspects of human flourishing that are believed to be universal (Compton, 2005, pp. 196-216). Indeed, measures associated with positive psychology operate validly in Iran (Ghorbani & Watson, 2006; Ghorbani, Watson, & Hargis, 2006) and correlate predictably with mystical experience in the United States (Byrd, Lear, & Schwenka, 2000).

In the present study, the self-reported mystical experience of Iranian Muslims was related to the positive psychological assumptions of Self-Determination Theory (Deci & Ryan, 2000; Ryan & Deci, 2000a). A principal contention of this theory is that optimal well-being and development are promoted through intrinsic motivations that are deemed to be relevant to a wide range of perspectives in contemporary psychology, including for example those associated with social-learning, terror management, control, achievement goals, flow, and attachment theories (Deci & Ryan, pp. 256-262).

More specifically, Self-Determination Theory argues that eudaemonic functioning is made manifest in the satisfaction of “innate, essential, and universal” needs for autonomy, competence, and relatedness (Ryan & Deci, 2000a, p. 74) Autonomy involves the experience that personal activities emerge out of non-coerced internal choices. As measured in the general version of the Basic Need Satisfaction Scale (Ryan, 2005), Autonomy appears in such self-reports as “I feel like I am free to decide for myself how to live my life.” Competence reflects the successful achievement of challenging goals, with its satisfaction exemplified in the statement, “Most days I feel a sense of accomplishment from what I do.” The need for relatedness is met through a network of sustaining interactions and is illustrated in the assertion, “People in my life care about me.” Influences of relatedness on eudaemonic functioning are presumed to be more indirect and supportive of other needs because “intrinsic motivation will be likely to flourish in contexts characterized by a sense of secure relatedness” (Deci & Ryan, p. 235). Personal identity formation will of course vary in its

specifics from society to society, but Self-Determination Theory assumes that ideal development across cultures will reflect fulfillment of all three basic needs (e.g., Chirkov, Ryan, & Willness, 2005; Deci, Ryan, Gagné, Leone, Usunov, & Kornazheva, 2001; Ryan & Deci, 2003).

Self-Determination Theory also assumes that subjective well-being is maximized through avoidance of tendencies to perceive the self as an object (Ryan & Brown, 2003). Reification of the self in this manner can reflect extrinsic motivations to meet the evaluative standards of others, and can thus block a more intrinsic satisfaction of basic needs. Optimal functioning theoretically emerges instead from the "mindfulness" of a self-in-process that "entails an open, nonjudgmental awareness of what is occurring in the present" (Ryan & Brown 2003, p. 75). Mindfulness "has roots in Buddhist and other contemplative traditions where conscious attention and awareness are actively cultivated" (Brown & Ryan, 2003, p. 822) and is more validly operationalized in articulations of its absence rather than of its presence. The Mindful Attention Awareness Scale, for example, contains 15 reverse-scored expressions of diminished on-going awareness, involving such self-reports as "it seems I am 'running on automatic' without much awareness of what I'm doing" (Brown & Ryan, 2003).

Of central interest in the present study was the possibility that Self-Determination Theory might usefully clarify mystical experience and vice versa. Mystical experience has complex mental health implications that include associations not only with greater well-being, but also with more disturbed forms of self-functioning (e.g., Boison, 1960; Hood, Spilka, Hunsberger, & Gorsuch, 1996, 410-411; Wulff, 1997, p. 508). Nevertheless, based upon previous linkages with adjustment in Iran (Hood et al., 2001), the Extrovertive and Religious Interpretation dimensions of mystical experience were hypothesized to correlate positively with the eudaemonic functioning assessed by the Basic Need Satisfaction and the Mindfulness Scales. This expectation for Mindfulness was especially interesting with regard to the Extrovertive factor. Islam has a rich mystical tradition that at least sometimes includes the use of meditation to cultivate an apparently extrovertive mindfulness. The Muslim mystic Nūrī, for instance, once explained his extraordinary powers of meditation by saying that "he learned this habit from a cat which was observing a mouse hole" (Nicholson, 1914/ 1989, p. 49).

On the other hand, the Introvertive factor refers to experiences of void that Stace (1960, e.g., p. 109) often associated with the Buddhist contemplative traditions explicitly mentioned in Self-Determination Theory. Timeless sense of void, however, is not the same thing as mindful awareness of the present.

Introvertive Mysticism previously predicted maladjustment in Iran. Negative correlations of this factor with Basic Need Satisfaction and with Mindfulness might, therefore, be useful in delimiting the assumptions of Self-Determination Theory about how mindful states of consciousness can be related to contemplative traditions.

Some evidence nevertheless suggests that Religious Interpretation can interact with other dimensions of mysticism in predicting the eudaemonic traits emphasized by positive psychology (Byrd et al., 2000). Extrovertive and Introvertive factors attempt to record the phenomenology of mystical states. Optimal psychological influences of those states might require efforts to make them more meaningful through religious interpretation, and Iranian research has in fact suggested that such interpretative processes might be important in efforts to understand how Introvertive Mysticism might predict lower rather than higher levels of maladjustment (Ghorbani, Watson, & Rostami, 2007). In light of these previous research observations, the present project used multiple regression procedures to examine interactions of Religious Interpretation with the other two factors.

Implications of the Self-Determination and Mysticism variables were clarified through an examination of three additional measures. An Obsessiveness Scale (Sanavio, 1988) evaluated a form of psychopathology that has been linked with aspects of religiosity (e.g., Freud, 1927/1961, pp. 54-56; Maltby, 1999), including mystical experience in Iran (Hood et al., 2001). This scale also was relevant to the suggestion that Mindfulness, experiences of transcendence, and other "hypo-egoic" forms of essentially eudaemonic self-functioning are incompatible with tendencies toward obsessive self-rumination (Leary, Adams, & Tate, 2006). The Attributional Complexity Scale assessed individual differences in the use of complex schemas to better understand the self and others (Fletcher, Danilovics, Fernandez, Peterson, & Reeder, 1986). Relative to positive psychology, this measure seemed relevant to eudaemonic motivations to actively discover meaning in life (e.g., Compton, 2005, pp. 202-204; Ryan & Deci, 2000b, pp. 325-326). Finally, the Quest Scale operationalized "the degree to which an individual's religion involves an open-ended, responsive dialogue with existential questions" (Batson, Schoenrade, & Ventis, 1993, p. 169). An "open-ended" religious responsiveness presumably would be consistent with mystical experience and with Self-Determination; although, Quest has predicted maladjustment as well as adjustment both in the United States (Watson, Morris, & Hood, 1989) and in Muslim societies (Ghorbani, Watson, & Mirhasani, 2007; Khan, Watson & Habib, 2005).

Hypotheses

In summary, this study most importantly used the positive psychological assumptions of Self-Determination Theory to further analyze the self-reported mystical experiences of Iranian Muslims. Four broad sets of hypotheses were examined:

1. As previously identified adaptive dimensions of mystical experience in Iran, the Extrovertive and Religious Interpretation factors were expected to display direct relationships with Basic Need Satisfaction and Mindfulness. A further anticipation was that all of these constructs would correlate positively with Attributional Complexity and negatively with Obsessiveness.
2. Opposite relationships with Basic Need Satisfaction, Mindfulness, Obsessiveness, and Attributional Complexity were predicted for what empirical evidence has identified as an apparently more maladaptive Introvertive factor.
3. At the most intuitively obvious level, the “open-ended” religious responsiveness of Quest should correlate positively with Self-Determination and with the more adaptive Mysticism factors, and an opposite relationship was expected for the more maladaptive Introvertive Mysticism factor. Ambiguities in the adjustment implications of Quest, nevertheless, made it necessary to evaluate such possibilities with sensitivity to previously observed complexities.
4. Finally, maximal psychological influences of mystical states might require efforts to make such experiences more meaningful in religious terms (Byrd et al., 2000). Religious Interpretation might, therefore, interact with the Extrovertive and Introvertive factors in predicting the other measures.

Method

Participants

Participants were undergraduates enrolled at the University of Tehran. These 131 women, 77 men, and 3 individuals who failed to indicate their gender were, on average, 20.4 years old ($SD = 2.7$).

Instruments

All scales were printed in a questionnaire booklet that contained, in sequence, the 15-item Mindfulness Scale (Brown & Ryan, 2003); the 7-items each of

the three Basic Need Satisfaction Scales (Ryan, 2005); the 17-item Impaired Control over Mental Activity measure of Obsessiveness (Sanavio, 1988); the 28-item Attributional Complexity Scale (Fletcher *et al.*, 1986); the 12-item Extrovertive, 12-item Religious Interpretation, and 8-item Introvertive factors from the Hood (1975) Mysticism Scale (Hood *et al.*, 1993); and the 12-item Quest Scale (Batson & Schoenrade, 1991a, 1991b).

Reactions to Mindfulness statements occurred along a 1 (“almost always”) to 6 (“almost never”) scale. The three Basic Need Satisfaction measures utilized a 1 (“not at all true”) to 7 (“very true”) format. For the Quest items, participants selected options ranging from 0 (“not at all true of me”) to 3 (“completely true of me”). A 0 (strongly disagree”) to 4 (strongly agree”) Likert scale was employed with all other instruments. Representative items from the Mindfulness, Basic Needs, and Mysticism Scales have been presented previously. Obsessiveness was apparent in such statements as “unpleasant thoughts come into my mind against my will and I cannot get rid of them.” Attributional Complexity appeared in such self-reports as “I believe it is important to analyze and understand our own thinking processes.” Illustrative of Quest was the claim, “I was not interested in religion until I began to ask questions about the meaning and purpose of my life.”

Procedure

Persian versions of all instruments were created in preparation for the present or previous projects. The meaning of all English statements was discussed prior to their translation. All items were expressed in Persian and then back-translated into English by an individual not previously involved in these procedures. Substantive discrepancies between the Persian and back-translated statements were rare. Discrepancies were discussed and successfully resolved through revisions of the Persian translation. Only the general Basic Need Satisfaction Scale had not been used previously in Iran, although an employment-related version of this instrument was examined in an earlier study of Iranian factory workers (Ghorbani & Watson, 2006). The validity of all other translated measures had been documented in previous investigations (e.g., Ghorbani *et al.*, 2000, 2007; Ghorbani, Bing, Watson, Davison, & LeBreton, 2003; Ghorbani *et al.*, 2006; Ghorbani, Watson, Krauss, Davison, & Bing, 2004).

Participants in groups of varying size responded to the questionnaire booklet in classroom settings. Responses to all instruments were then entered into a SPSS data file. Data analysis procedures began with an examination of internal

reliabilities. As in previous Iranian studies, items displaying a negative item-to-total correlation were eliminated in order to maximize internal consistency. This procedure resulted in the removal of one statement from the Attributional Complexity Scale.

All instruments were scored in terms of the average response per item. Correlations among scales were examined next. Then, in a series of multiple regression procedures, Mysticism factors and interactions were used to predict all other variables. The Introvertive, Extrovertive, and Religious Interpretation factors were entered simultaneously in the first step of these procedures, followed by the Religious Interpretation-by-Extrovertive and the Religious Interpretation-by-Introvertive interactions on the second step.

Results

Preliminary analyses assessed the potential impact of gender on obtained results. A MANOVA indicated no overall mean differences between men and women [Wilks' Lambda = 0.92; $F(10/197) = 1.72, p > .05$], nor did gender differences appear in the pattern of observed correlations [Box's $M = 45.71$; $F(5/84202.82) = 0.78, p > .80$]. These data most importantly revealed that gender could be ignored as a noteworthy influence in all subsequent analyses.

Acceptable internal reliabilities were observed for the Religious Interpretation ($\alpha = .86, M = 2.59, SD = 0.76$), Extrovertive ($\alpha = .89, M = 2.33, SD = 0.84$), and Introvertive ($\alpha = .78, M = 2.22, SD = 0.78$) Mysticism factors. Religious Interpretation correlated robustly and positively with Extrovertive (.77) and Introvertive (.54) scores, and the latter two measures also displayed a strong direct linkage with each other (.62, $ps < .001$).

As Table 1 demonstrates, other instruments exhibited internal consistencies that were generally acceptable for research purposes. The four Self-Determination variables correlated positively with each other and negatively with Obsessiveness. The Basic Need Satisfaction Scales also predicted greater Attributional Complexity. Quest was associated with slightly higher levels of Attributional Complexity and Obsessiveness.

All three Mysticism factors predicted higher levels of Attributional Complexity and Quest, as Table 2 makes clear. Religious Interpretation correlated positively with all four Self-Determination constructs, and the Extrovertive factor exhibited direct associations with the three Basic Need Satisfaction Scales. The Introvertive factor correlated negatively with Mindfulness and positively with Obsessiveness.

Table 1. Correlations among Basic Needs, Mindfulness, Attributional Complexity, Obsessiveness, and Quest

Variable	α	<i>M</i>	<i>SD</i>	1.	2.	3.	4.	5.	6.	7.
1. Autonomy	.73	4.71	1.03	-	.63***	.55***	.44***	.22**	-.57***	-.07
2. Competency	.67	4.56	1.02		-	.50***	.40***	.16*	-.53***	.00
3. Relatedness	.66	4.81	0.91			-	.28***	.17*	-.36***	.00
4. Mindfulness	.83	4.21	0.76				-	.09	-.54***	-.09
5. Attributional Complexity	.81	2.44	0.58					-	.01	.16*
6. Obsessiveness	.91	1.24	0.74						-	.16*
7. Quest	.71	1.42	0.50							-

* $p < .05$ ** $p < .01$ *** $p < .001$

Table 2. Correlation and Multiple Regression Analyses of Religious Interpretation (RI), Extrovertive (EXT), and Introvertive (INT) Mysticism Factors

Variable	Correlations			Multiple Regressions			
	RI	EXT	INT	Multiple <i>r</i>	β for RI	β for EXT	β for INT
Autonomy	.34***	.24***	-.08	.43***	.35***	.22*	-.41***
Competence	.29***	.27***	-.03	.41***	.24*	.31**	-.36***
Relatedness	.26***	.27***	.08	.33***	.23*	.20	-.17*
Mindfulness	.15*	.06	-.18*	.34***	.27**	.08	-.39***
Attributional Complexity	.36***	.27***	.25***	.36***	.35***	-.06	.10
Obsessiveness	-.10	-.03	.18**	.29***	-.25*	-.05	.34***
Quest	.18**	.26***	.29***	.32***	-.05	.15	.23**

* $p < .05$ ** $p < .01$ *** $p < .001$

Data from the first step of the multiple regressions are also presented in Table 2. The Religious Interpretation and Extrovertive factors made independent contributions to the prediction of greater Autonomy and Competence. Variance associated with Religious Interpretation apparently explained the previously observed Extrovertive correlations with Relatedness and Attributional Complexity. A negative connection of Religious Interpretation with Obsessiveness also became evident in these procedures. After accounting for variance associated with the other two factors, high Introvertive scores proved to be broadly incompatible with Self-Determination and indicative of even stronger tendencies toward Obsessiveness. The Introvertive factor also appeared to underlie all associations of Mysticism with Quest.

In the second step of the multiple regressions, a significant increase in explained variance occurred only in the analysis of Competence ($\Delta R^2 = .033$, $p < .05$). This effect was attributable to the Religious Interpretation interaction with the Extrovertive factor ($\beta = 1.18$, $p < .05$). Clarification of this outcome was accomplished by using the Religious Interpretation median to create groups that scored low and high on this measure. In the Low Religious Interpretation group, the Extrovertive relationship with Competence was nonsignificant ($.04$, $p > .50$). In the High Religious Interpretation group, these two variables correlated positively ($.30$, $p < .01$).

Discussion

Mysticism involves states of consciousness that are central to religious traditions worldwide (e.g., Stace, 1960). Self-Determination Theory emphasizes the innate and universal benefits of processes associated with positive psychology (Ryan & Deci, 2000a; Ryan & Brown, 2003). Given the presumed universality of these two sets of constructs, the most basic argument of the present study was that a simultaneous examination of both could usefully clarify the psychology of religion in non-Western, non-Christian samples. Support for this suggestion was apparent when this investigation confirmed the multidimensional complexity of mystical experience in a sample of Iranian Muslims. As predicted, the Religious Interpretation and Extrovertive Mysticism factors correlated positively whereas the Introvertive factor correlated negatively with measures reflecting the assumptions of Self-Determination Theory.

Religious Interpretation displayed especially clear and consistent evidence of a compatibility with Self-Determination. This factor was associated with higher levels of all three Basic Need Satisfaction and with Mindfulness.

Further adaptive mental health implications appeared in a linkage of this factor with lower Obsessiveness in the multiple regression analysis. Statements from the Religious Interpretation factor refer to experiences of a holy ultimate reality, of the sacred and the divine, and of wonder, awe, peace, and joy (Hood *et al.*, 1993). Such religiously-based interpretations of mystical experiences may have broad implications for understanding eudaemonic functioning, at least in Iranian Muslims.

In the multiple regressions, Religious Interpretation explained all relationships of Mysticism with Attributional Complexity. This outcome first confirmed that mystical experience might contribute to another process emphasized by positive psychology, the effort to achieve greater meaning in life (e.g., Compton, 2005, pp. 202-204; Ryan & Deci, 2000b, pp. 325-326). Greater complexity in the use of attributions to understand self and others would presumably be associated with greater meaningfulness. Perhaps more importantly, however, such data also supported the underlying conceptualizations of the Mysticism Scale. Extrovertive and Introvertive factors theoretically record the phenomenology of mystical experience without interpretation, whereas Religious Interpretation assesses efforts to make sense of that phenomenology through religious language. The finding that Religious Interpretation explained all Mysticism linkages with Attributional Complexity, in fact, implied that the Extrovertive and Introvertive factors were closer to mystical experiences unmediated by linguistic interpretation and that Religious Interpretation defined the attempt to make sense of those experiences through religious attributions. Additional evidence of that possibility perhaps appeared in multiple regression data demonstrating that Religious Interpretation was important in explaining the connection of the Extrovertive factor with Relatedness and that Extrovertive Mysticism correlated positively with Competence only in those who scored high on Religious Interpretation.

Extrovertive Mysticism was compatible with Self-Determination as well. This factor correlated positively with all three Basic Need Satisfactions and also supplemented Religious Interpretation in predicting higher levels of Autonomy and Competence in the multiple regressions.

At the same time, however, the failure of Extrovertive Mysticism to correlate positively with Mindfulness may have been noteworthy. Self-Determination Theory assumes that eudaemonic functioning is facilitated by the intrinsic motivations of a self-in-process (Ryan & Brown, 2003). Mindful attentiveness to the present theoretically promotes such functioning, and evidence favoring that possibility appeared in positive correlations of Mindfulness with all three Basic Need Satisfactions and in negative correlations of the Self-Determination

variables with Obsessiveness. Further support for the theoretical description of Mindfulness may have been evident as well in its failure to correlate significantly with Attributional Complexity, perhaps indicating that this instrument measured a more uninterpreted phenomenological awareness of the present. On the other hand, Mindfulness displays parallels with Extrovertive Mysticism and is explicitly identified as a goal of contemplative religious traditions (Ryan & Brown, 2003) that seem to include Islamic mysticism (Nicholson, 1914/1989; Stace, 1960). The failure of Mindfulness to predict higher Extrovertive Mysticism, therefore, perhaps revealed a need for additional conceptual refinements in the attempt of Self-Determination Theory to understand contemplative religious traditions.

Robust correlations with the Religious Interpretation and Extrovertive factors confirmed that the Introvertive measure had at least some empirical validity as an index of self-reported mystical experience. As in a previous Iranian and American study (Hood et al., 2001), Introvertive Mysticism also predicted maladjustment, in contrast to the more adaptive implications of the other two factors. Specifically, Introvertive Mysticism correlated positively with Obsessiveness and negatively with Mindfulness. Inverse associations with Basic Need Satisfaction also became apparent in the multiple regressions. Such observations seemed to usefully delimit the assertion that Mindfulness is related to contemplative religious traditions that practice meditation (Ryan & Brown, 2003). Mindful attentiveness to the present seemed far removed from an Introvertive experience of void; so, negative associations with Mindfulness and Basic Need Satisfaction had been predicted and seemed to be consistent with Self-Determination Theory.

However, Introvertive linkages with maladjustment may need to be evaluated cautiously, especially in light of the claims of Stace (1960) that this dimension of mysticism assumes a central religious significance and is sometimes associated with experiences of joy. Stace based much of his analysis on the written accounts of mystical adepts, whereas the present project relied upon the self-report of university students. Strikingly different results could appear in studies of older Iranians who are more experienced in the practices of their Muslim traditions. Indeed, the previously discussed failure of the Extrovertive factor to display the predicted positive correlation with Mindfulness may similarly have reflected a focus on university students. Still, even Stace (1960, p. 92) found one case in which the Introvertive experience was evaluated as unpleasant. Autobiographical (e.g., Boison, 1960) and social scientific (Wulff, 1997, p. 508; Hood, Spilka, Hunsberger, & Gorsuch, 1996, 410-411) observations have also confirmed that mystical experiences can be

psychologically troubling, and this is true even with regard to the Extrovertive factor (Byrd et al., 2000). In short, complexities in the mental health consequences of mystical experiences clearly deserve additional research scrutiny, and attempts to understand data for especially the Introvertive factor may require further analysis from a diverse array of theoretical perspectives.

The Quest Scale was designed to operationalize a cognitively complex search for religious answers to basic existential questions of life (Batson *et al.*, 1993). Positive linkages with Attributional Complexity and all three Mysticism factors confirmed the validity of this instrument in Iran both as a measure of cognitive complexity and of psychological processes associated with religion. Quest, nevertheless, predicted greater Obsessiveness, and multiple regressions revealed that all connections with Mysticism were explained by the more problematic Introvertive factor. Previous research has demonstrated that Quest can have both positive and negative mental health implications in American samples (e.g., Watson *et al.*, 1989). The present and previous data have confirmed the same thing for Iranian and Pakistani Muslims (Ghorbani *et al.*, 2007; Khan *et al.*, 2005).

Interpretation of the present findings must, of course, be conditioned by numerous caveats. The use of university students to study mystical experience has already been mentioned. In addition, questionnaire studies may be of limited usefulness when studying mystical experiences that are sometimes described as ineffable. An analysis of more spontaneously occurring mystical experiences might not be fully relevant to meditative practices of the contemplative religious traditions emphasized by Self-Determination Theory (Ryan & Brown, 2003). Finally, relationships of Mysticism factors with Basic Need Satisfaction and Mindfulness in no way demonstrated that mystical experiences were a cause of eudaemonic functioning. The direction of causality could have been reversed, or some unspecified other variable could have produced the observed relationships. Despite these important equivocations, the present data clearly supported the broader contention that studies of self-reported mystical experience might clarify and also be clarified by processes emphasized by positive psychology.

In conclusion, this investigation supplied yet one more example of how constructs developed in the West might usefully clarify the psychology of religious experience across traditions. Scales developed in the West will certainly be constrained in what they can say about other faiths and will undoubtedly need to be supplemented with operationalizations of tradition-specific variables (e.g., Khan & Watson, 2006; Ghorbani, Watson, & Khan, in press). It should also be realized, however, that measures of mental health can be constrained

even in how they characterize Western forms of faith (e.g., Watson, 1993). Cultural factors will just necessarily influence the psychology of religion and of mental health and will invariably present important challenges in any attempt to examine relationships between the two. Still, efforts to understand the more unique features of all traditions presumably will require studies that integrate these specific elements of faith into a broader research literature. The most general suggestion of the present data was that the multidimensional complexity of mysticism and the assumptions of Self-Determination Theory may be useful in that future process.

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