



## RESEARCH: Negatively Reinforcing Personal Extrinsic Motivations: Religious Orientation, Inner Awareness, and Mental Health in Iran and the United States

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RESEARCH

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Negatively Reinforcing Personal  
Extrinsic Motivations: Religious  
Orientation, Inner Awareness, and  
Mental Health in Iran and  
the United States

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In Iranian and American samples, a new Negatively Reinforcing Personal Extrinsic Religious Motivations Scale contained four factors. These four Personal-Negative factors correlated positively with the Allport and Ross Intrinsic and Extrinsic Religious Orientation Scales. In correlations with measures of an inner psychological awareness, Intrinsic and Extrinsic constructs predicted greater Self-Consciousness and Self-Knowledge in Iran, but not in the United States. In both cultures, however, intrinsicness was associated with lower Alexithymia and greater Emotional Intelligence whereas the opposite was true of extrinsicness, especially after partialing out the Intrinsic Scale. A few findings suggested that Extrinsic motivations might have positive mental health implications, but linkages with Anxiety, Depression, Perceived Stress, and Self-Esteem overwhelmingly depicted intrinsicness as adjusted and extrinsicness as maladjusted. Each Personal-Negative factor displayed evidence of incremental validity. Factor analysis of all religious orientation variables in each sample yielded two components, a general religious motivation factor and a bipolar Intrinsic dimension. Iranians were higher on several Extrinsic measures. Americans displayed higher Intrinsic scores. These data suggested that religious motivation was more highly integrated within the Iranians and that Allportian concepts supplied a productive conceptual framework for understanding Iranian Muslim as well as American Christian religious commitments.

Progress in a truly international psychology of religion presumably will parallel progress in other areas of cross-cultural psychological research. McCrae (2001) recently described the challenges in terms of a need for three levels of analysis. Relative to the psychology of religion, *transcultural* concerns would involve the search for universals in religious psychological functioning in contrast to the culturally specific focus of *intracultural* studies. *Intercultural* investigations would explore differences between religious traditions. McCrae applied these categories to an extensive cross-cultural literature on personality traits. Specifically, he reexamined data from over 23,000 subjects representing 26 different cultures in an intercultural “pilot study” of the Big-Five personality traits. Cross-cultural work in the psychology of religion is obviously at a much more preliminary stage of development. Even tentative generalizations about the three levels of analysis require many more studies that simultaneously examine believers from different traditions and that sample more than the typically employed English-speaking, primarily Christian subjects (Hood, Spilka, Hunsberger, & Gorsuch, 1996, p. 448).

The promise of such research was illustrated in a recent extension of Allport’s (1950) interpretation of religious motivation to Iranian Muslims along with American Christians (Ghorbani, Watson, Ghramaleki, Morris, & Hood, 2002). Allport distinguished between non-instrumental and instrumental reasons for being religious and developed Intrinsic and Extrinsic Religious Orientation Scales to measure the difference (Allport & Ross, 1967). Within a non-instrumental, Intrinsic motivation, religion theoretically serves as a master motive with the believer sincerely trying to live his or her faith. Within an instrumental, Extrinsic orientation,

religion instead serves as a means to sometimes-selfish ends. Allport hypothesized—and research usually, though not invariably—has confirmed that the Intrinsic and Extrinsic Scales predict adjustment and maladjustment, respectively (Donahue, 1985). Iranian Muslims in fact displayed that basic pattern.

Kirkpatrick (1989) used factor analysis to document the multidimensional complexity of the Extrinsic Scale. An Extrinsic–Personal (E–P) factor reflected the use of religion to accomplish positive personal outcomes (e.g., “the primary purpose of prayer is to gain relief and protection”). An Extrinsic–Social (E–S) factor described the use of religion as a means for achieving social benefits (e.g., “one reason for my being a church member is that such membership helps establish a person in the community”). A remaining group of Extrinsic–Residual (E–R) items expressed a form of commitment that was antithetical to intrinsicness (e.g., “although I am a religious person, I refuse to let religious considerations influence my everyday affairs”). In the Iranian and American samples, these Extrinsic measures displayed similar though not identical relationships with other religious variables. With the Iranians, they also predicted maladjustment.

Recent speculation has suggested that Allport was overly pessimistic in his evaluation of extrinsicness (Pargament, 1992). The previous Iranian–American study analyzed that possibility by attempting to accomplish a more comprehensive assessment of the Extrinsic motivation. New Extrinsic Scales first assumed that religious motivations could be directed toward accomplishing “this-worldly” goals or toward reaching heaven in the next. They also might point toward positively reinforcing consequences by describing efforts to achieve a perceived “good” or toward negatively reinforcing outcomes by defining attempts to avoid or escape from a perceived “bad.” With regard to this-worldly concerns, goals might focus on personal psychological functioning, the social circumstances of an individual, or cultural well-being. Use of these new measures yielded only slight support for the hypothesis that positively rather than negatively reinforcing motivations would predict adjustment. The data instead revealed that all aspects of extrinsicness were associated with undesirable mental health implications.

## PRESENT STUDY

In the present project, additional Iranian and American samples were examined in order to clarify the Negatively Reinforcing Personal Extrinsic Motivations Scale developed in the earlier investigation. This 23-item Personal–Negative Scale was an especially clear predictor of unhealthy psychological functioning. It also displayed linkages with maladjustment in the second step of multiple regressions after the Intrinsic, E–P, E–S, and E–R measures had been entered in on the first step. This instrument, in other words, displayed incremental validity. In this study, Personal–Negative items were factor analyzed, and the obtained components then

were utilized to accomplish three basic objectives. First, the religious motivational implications of these factors were ascertained in correlations with the Allport and Ross Scales and in multiple regressions that examined their incremental validity.

Second, the Personal–Negative and other religious orientation measures were used to test Browning’s (1987) assertion that religions supply “concepts and technologies for the ordering of the inner life” (p. 2). This idea seemed consistent with Muslim and Christian claims that knowledge of God is intimately connected with knowledge of the self. Early Muslim leaders, for instance, argued that “someone who knows oneself, knows God” (Frozanfar, 1370/1991, p. 167) and that “self-knowledge is the most useful form of knowledge” and a sign of wisdom (Khansari, 1366/1987, p. 25, p. 297). Within Christian traditions, Calvin (1559/1960) argued that “without knowledge of self there is no knowledge of God” and that “without knowledge of God there is no knowledge of self” (pp. 35–37). Religious orientation variables, therefore, were correlated with constructs that presumably would reflect an “ordering of the inner life” of the self. These included measures of Self-Consciousness, Self-Knowledge, Alexithymia, and Emotional Intelligence.

The Self-Consciousness Scales of Fenigstein, Scheier, and Buss (1975) include Private Self-Consciousness, Public Self-Consciousness, and Social Anxiety subscales. Private Self-Consciousness monitors an introspective openness to inner thoughts and feelings and contains two factors (Mittal & Balasubramanian, 1987). The Self-Reflectiveness factor is evident in such self-reports as, “I’m always trying to figure myself out.” Internal State Awareness is illustrated in the claim that “I’m generally attentive to my inner feelings.” Public Self-Consciousness records attentiveness to how the self appears to others and also includes two factors: Appearance Consciousness (e.g., “I’m usually aware of my appearance”) and Style Consciousness (e.g., “I’m concerned about what other people think about me”). Social Anxiety measures emotional discomfort in the presence of others (e.g., “I have trouble working when someone is watching me”). In previous research, the Public Self-Consciousness factors have displayed positive, negative, and nonsignificant relationships with a broad array of mental health variables. Internal State Awareness, in contrast, usually predicted adjustment whereas Self-Reflectiveness and Social Anxiety were indicative of maladjustment (e.g., Watson, Hickman, Morris, Stutz, & Whiting, 1994; Watson, Morris, & Hood, 1988a; Watson, Morris, Ramsey, Hickman, & Waddell, 1996).

Reflective and Experiential Self-Knowledge Scales were created in this and a series of associated studies in order to operationalize an adaptive form of knowing the self (Ghorbani, Watson, Bing, Davison, & LeBreton, 2002). Reflective Self-Knowledge represents an active cognitive processing of information about the self in terms of its past and involves efforts to develop progressively more sophisticated schemas of self-understanding. This form of Self-Knowledge is illustrated in the self-report, “Through reflection, I am able to see how both my positive

and negative moods influence how I communicate with others.” Experiential Self-Knowledge theoretically represents a dynamic openness to experiences of the self in the present. This openness provides the principal data of personal experience that the self presumably needs to meet the challenges that confront it and to achieve the goals that motivate it. One item states, for instance, “I am immediately aware of the ongoing changes in my feelings.”

Alexithymia literally means “without words for emotions,” and the 20-item Toronto Alexithymia Scale (Bagby, Parker, & Taylor, 1994) includes three components of this maladjusted lack of an “inner awareness” (Bagby, Taylor, & Parker, 1994; Parker, Taylor, & Bagby, 2001). The Externally Oriented Thinking factor is exemplified in the statement that “I prefer to just let things happen rather than to understand why they turned out that way.” Difficulty Identifying Feelings is obvious in such self-reports as, “When I am upset, I don’t know if I am sad, frightened, or angry.” Difficulty Describing Feelings appears in the assertion, “It is difficult for me to find the right words for my feelings.”

Trait Meta-Mood Scales operationalize an input–process–output information-processing model of a psychologically healthy Emotional Intelligence (Salovey, Mayer, Goldman, Turvey, & Palfai, 1995). The Attention Scale records the psychological input of emotional information (e.g., “I pay a lot of attention to how I feel”). A Clarity Scale expresses an active processing of those inputs (e.g., “I almost always know exactly how I am feeling”). The Repair Scale describes efforts to respond adaptively to emotional information that has been processed (e.g., “I try to think good thoughts no matter how badly I feel”).

Third and finally, the adjustment implications of all religious orientation variables were examined by administering measures of Self-Esteem (Rosenberg, 1965), Perceived Stress (Cohen, Kamarck, & Mermelstein, 1983) and Anxiety and Depression (Costello & Comrey, 1967). The Rosenberg instrument is an often-used index of healthy global self-esteem (e.g., “on the whole, I am satisfied with myself”). As a correlate of disturbed psychological functioning (e.g., Chang, 1998), the Perceived Stress Scale presents a series of questions that ask how frequently a person experiences stressful life events (e.g., “in the last month, how often have you felt difficulties were piling up so high that you could not overcome them?”). Costello and Comrey Scales monitor dispositional depression (e.g., “I wish I were never born”) and anxiety (e.g., “I am a very nervous person”).

## HYPOTHESES

In summary, factors from the 23-item Personal–Negative Scale were identified and then correlated with religious orientation, inner awareness, and mental health. Relative to an Allportian perspective, the hypothesis was that the Intrinsic Scale would correlate directly with adjustment (Self-Esteem, Self-Knowl-

edge, Emotional Intelligence, and Internal State Awareness) and inversely with maladjustment (Anxiety, Depression, Perceived Stress, Alexithymia, Self-Reflectiveness, and Social Anxiety). Expectations for the Extrinsic measures were opposite. Appearance and Style Consciousness have displayed no consistent mental health implications, but as operationalizations of inner awareness, the hypothesis was that they would predict greater religious motivation generally. The prior Iranian–American study documented that unambiguous understandings of religious orientation sometimes required the use of partial correlations (Ghorbani, Watson, Ghramaleki, Morris, & Hood, 2002). Especially in Iran, some Extrinsic associations with unhealthy self-functioning appeared only after partialing out the Intrinsic Scale. Hence, positive Extrinsic correlations with adjustment, for instance, might support recent, more sanguine descriptions of extrinsicness (Pargament, 1992), or they might merely reflect the beneficial influences of intrinsicness that Allport originally emphasized. In such cases, interpretative clarity obviously would require partial correlations controlling for the Intrinsic Scale.

## METHOD

### Participants

Research participants were university student volunteers from Iran and the United States. The Iranian sample was from Tehran and included 116 females, 111 males, and 4 individuals who failed to indicate gender. Their average age was 21.97 ( $SD = 2.91$ ). Of the Americans, 86 were females with 134 males. The average age of this sample was 20.30 ( $SD = 3.81$ ). All Iranians were Persian Muslims. The Americans attended a branch campus of a large southeastern state university system and displayed greater racial and religious diversity. These students were 68.2% Caucasian, 25.0% African–American, and 6.8% various other racial groups. Religious commitments were 41.4% Baptist, 11.8% Methodist, 9.5% Catholic, 9.5% Presbyterian, 5.0% Church of Christ, 2.3% Church of God, 7.3% “Other Protestant,” and 13.2% simply “other.”

### Measures

Two questionnaire booklets were created by the researchers to include scales for use in several related investigations. Booklets were constructed to be as similar as possible across both samples. Through extensive e-mail conversations, the first two authors discussed meanings and nuances of English terms before settling upon appropriate Persian translations for all instruments. The accuracy of those transla-

tions was confirmed by having someone unfamiliar with the project translate the Persian statements back into English.

Except for the Perceived Stress, Self-Knowledge, and Religious Orientation Scales, participants responded to all questionnaire items along a 5-point Likert scale ranging from 0 (*strongly agree*) to 4 (*strongly disagree*). Options for Perceived Stress varied along a 0 (*never*) to 4 (*very often*) response format. For Self-Knowledge, possible responses were 0 (*largely untrue*), 1 (*somewhat untrue*), 2 (*neither true nor untrue*), 3 (*somewhat true*), and 4 (*largely true*). Personal-Negative statements were associated with a 4-point Likert scale: 0 (*I definitely disagree*), 1 (*I tend to disagree*), 2 (*I tend to agree*), and 3 (*I definitely agree*). Allport and Ross Scales were administered according to standard instructions (Robinson & Shaver, 1973).

Prior to other data analyses, internal reliabilities were computed for all scales in each sample separately. Any item that failed to display a positive item-to-total correlation in either sample was eliminated from both. This procedure in the present and previous Iranian-American studies improved internal reliabilities, produced more robust and consistent correlations, and yielded data that conformed with theoretical expectations. Based on this criterion, single statements were dropped from the Attention, Externally Oriented Thinking, and Perceived Stress measures. Except for the Self-Consciousness and Self-Knowledge variables, details about all psychological measures were reported in a previous cross-cultural analysis of emotional information processing (Ghorbani, Bing, Watson, Davison, & Mack, in press), including the number of items associated with each construct, the specific statements that were eliminated, culture-specific alphas, descriptive statistics, and correlations among all nonreligious measures. This manuscript is available from the authors upon request.

With regard to measures not explored in this earlier investigation, two statements dealing with religious behaviors were removed from the Intrinsic Scale because they exhibited slightly negative item-to-total correlations in the Iranians. One stated, "If I were to join a church/religious group, I would prefer to join (1) a Bible/Qur'an study group or (2) a social fellowship," with tendencies to favor the first choice reflecting an Intrinsic motivation. The other said, "If not prevented by unavoidable circumstances, I attend church/the mosque" from "more than once a week" to "less than once a month."

For theoretical reasons, the earlier cross-cultural analysis of emotion information processing examined only the Private and Public Self-Consciousness subscales, not Social Anxiety nor the four more specific Self-Consciousness factors. Acceptable coefficient alphas were observed for the 4-item Social Anxiety subscale (Iran,  $\alpha = .77$ ,  $M$  response per item = 2.16,  $SD = 1.01$ ; United States,  $\alpha = .64$ ,  $M = 2.13$ ,  $SD = 0.88$ ). Slightly lower reliabilities were obtained for the 4-item Internal State Awareness factor (Iran,  $\alpha = .61$ ,  $M = 2.65$ ,  $SD = 0.75$ ; United States,  $\alpha = .56$ ,  $M = 2.96$ ,  $SD = 0.60$ ) and for the 4-item Self-Reflectiveness measure (Iran,

$\alpha = .67$ ,  $M = 2.46$ ,  $SD = 0.83$ ; United States,  $\alpha = .60$ ,  $M = 2.15$ ,  $SD = 0.77$ ). Similar values were obvious for the 3-item Appearance Consciousness (Iran,  $\alpha = .69$ ,  $M = 2.76$ ,  $SD = 0.95$ ; United States,  $\alpha = .51$ ,  $M = 2.73$ ,  $SD = 0.81$ ) and for the 4-item Style Consciousness (Iran,  $\alpha = .66$ ,  $M = 2.66$ ,  $SD = 0.83$ ; United States,  $\alpha = .64$ ,  $M = 2.13$ ,  $SD = 0.88$ ) factors. For the two 13-item Self-Knowledge Scales, acceptable internal consistencies were evident for both Reflective (Iran,  $\alpha = .86$ ,  $M = 2.45$ ,  $SD = 0.71$ ; United States,  $\alpha = .81$ ,  $M = 2.76$ ,  $SD = 0.55$ ) and Experiential (Iran,  $\alpha = .90$ ,  $M = 2.45$ ,  $SD = 0.72$ ; United States,  $\alpha = .86$ ,  $M = 2.74$ ,  $SD = 0.56$ ) Self-Knowledge.

## Procedure

Scales were administered to both samples in the same order and with the same basic instructions. The first booklet contained all but the Self-Knowledge measures of inner awareness and mental health. The second booklet began with statements used to create the new Self-Knowledge Scales. Religious orientation measures came next with Personal–Negative items interspersed among those from the Allport and Ross Scales. Participants responded to these questionnaire booklets in groups of approximately 50 or less. Completion of all measures was accomplished within an hour and a half in virtually every instance.

Americans marked their reactions to all questionnaire items on standardized answer sheets that subsequently were read by optical scanning equipment into a computer data file. Iranians noted their responses on paper answer sheets, and these data were entered into the computer manually. To insure accuracy, the Iranian data were double-checked after they had been entered into the data file.

After internal reliabilities of all instruments were maximized, items from the Personal–Negative Scale were factor analyzed. Components then were constructed and correlated with all other variables in each sample separately. Partial correlations helped clarify some of these data. Multiple regressions examined the incremental validity of the Personal–Negative factors, and a description of all religious orientation variables in each sample was accomplished in a summarizing factor analysis. Finally, a MANOVA followed by ANOVAs where appropriate were used to assess all religious orientation variables in terms of Culture, Gender, and Culture  $\times$  Gender interaction effects.

## RESULTS

In this investigation, data analysis focused on the religious orientation measures. Relationships among the inner awareness and mental health variables were described in the previously mentioned study (Ghorbani, Bing, Watson, Davison, & Mack, in press). Four generalizations about those data supplied the necessary inter-

pretative background for this project. First, no major contrasts appeared in the cross-cultural implications of any measure. A clear index of psychological health in America, for example, never predicted psychological dysfunction in Iran, or vice versa. Second, correlations matched expectations for operationalizations of adjustment (e.g., Self-Esteem and Emotional Intelligence) and maladjustment (Depression, Anxiety, Perceived Stress, Alexithymia, and Social Anxiety). Third, Private and Public Self-Consciousness factors displayed no conceptually noteworthy deviations from previously published findings (e.g., Watson et al., 1988a; Watson et al., 1994; Watson et al., 1996). Finally, the new Reflective and Experiential Self-Knowledge instruments in fact recorded healthier psychological functioning.

Several strategies were pursued in factor analyzing the Personal-Negative items. Culture-specific analyses defined roughly similar factor structures across both samples, but with cross-cultural variations in the loadings of some statements on different factors. With the two samples combined, the same general factors appeared, and item loadings described clear and meaningful components. The combined data, therefore, were employed. A principal components analysis with a varimax rotation yielded the four factors presented in Table 1. The *Religion Dependent Self* factor contained 10 statements describing the use of religion to avoid negative feelings of depression, anxiety, guilt, and inadequacy. The four *Insecurity* items articulated the perhaps effortful attempts of an individual to use religion to cope with insecurity, meaninglessness, and guilt. The Prayer and Practice factor contained four statements that most importantly reflected the use of prayer for negatively reinforcing psychological purposes. Five statements expressing a motivation to avoid the anger and punishment of God formed a final *Fear of God* factor.

Correlations among and means, standard deviations, and coefficient alphas for all religious variables are presented in Table 2. All or almost all but the E-R religious orientation measures co-varied directly in both cultures. In the United States, E-R items predicted lower intrinsicness while also displaying positive associations with E-S and with 3 out of the 4 Personal-Negative factors. In Iran, these residual items correlated positively with E-S and negatively with the Intrinsic and E-P constructs. Most internal reliabilities were acceptable for research purposes ( $> .60$ ), but lower coefficient alphas for some of these religious (e.g., for E-S and E-R in Iran) and also for some of the inner awareness variables (e.g., Internal State Awareness and Appearance Consciousness) revealed a need for caution in interpreting these data.

Striking cultural contrasts appeared in linkages of religious orientation with the Self-Consciousness and Self-Knowledge Scales (see Table 3). In the Iranians, all but the E-S and E-R religious variables displayed consistent direct associations with all of these constructs. In contrast, absolutely no relationships appeared between these two sets of variables in the Americans. E-R items correlated positively with Social Anxiety in Iran and negatively with Reflective Self-Knowledge in America. No significant relationship with any measure of self-functioning appeared for the E-S factor.

TABLE 1  
Factors From Extrinsic Personal Negative Scale

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Factor 1: Religion Dependent Self (Eigenvalue = 8.91; Percent Variance = 38.75%)

1. If I did not believe in God, I would have no reason for getting out of bed in the morning. (.70)
2. Religion is my only hope for overcoming the imperfections in my personality. (.69)
3. If I do not follow the commands of my religion, I see myself as a bad person. (.65)
4. I always try to think about God so that I can avoid unhappiness. (.61)
5. I try not to neglect my religious duties, because if I do, I feel tense. (.61)
6. If I were not religious, I would be depressed all the time. (.60)
7. Without the demands of my religion, I would be unable to control my emotions. (.56)
8. I believe that personal misery results when we behave in ways that our religion identifies as evil. (.50)
9. If I did not do all that my religion required of me, I would be a bad person in my own eyes. (.49)
10. An awareness of my own personal inadequacies is a main reason why I need God. (.44)

Factor 2: Insecurity (Eigenvalue = 1.56; Percent Variance = 6.79%)

1. I try to believe in God because I am constantly tortured by the seeming meaninglessness of life. (.75)
2. An attempt to overcome my sense of insecurity is a main reason for my being religious. (.73)
3. A sense of insecurity is my main reason for having a religious life. (.65)
4. I try to follow the morality of my religion because I know that God will make me feel guilty if I do not. (.62)

Factor 3: Prayer and Practice (Eigenvalue = 1.37; Percent Variance = 5.95%)

1. I pray in order to eliminate my feelings of misery. (.82)
2. I pray mainly to eliminate my unhappiness. (.70)
3. I pray because I do not want to experience the anxiety and worry that I feel when I do not pray. (.64)
4. I follow the commands of my faith because I do not want to feel like a failure. (.57)

Factor 4: Fear of God (Eigenvalue = 1.14; Percent Variance = 4.94%)

1. My fear of God's authority is the primary motivation behind my attempt to follow the commands of my religion. (.71)
2. My fear of angering God is the primary motivation behind my attempt to avoid sin. (.66)
3. I am religious because I know God sometimes punishes people when they fail to be as religious as they should. (.60)
4. We should remain faithful so that God does not punish us. (.52)
5. If I behave immorally, I am sure that God will punish me and make me miserable. (.45)

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*Note.* Factor loadings are indicated in the parentheses.

To what extent did the adjustment of intrinsicness mediate linkages of extrinsicness with the Self-Consciousness and Self-Knowledge variables? Again, this question was answered in partial correlations that controlled for the Intrinsic Scale. In the Iranians, many, but not all, of the significant zero-order relationships were explained by Intrinsic variance. Findings for Social Anxiety were largely unaffected, but Personal-Negative factors no longer displayed reliable associations with Internal State Awareness or with Reflective and Experiential Self-Knowledge. Only Fear of God remained tied to Self-Reflectiveness (.14,  $p < .05$ ). The Religious Dependent Self factor no longer predicted Appearance Consciousness, and other Personal-Negative relationships with Public Self-Consciousness were reduced, ranging from .15 ( $p < .05$ ) between Insecurity and Appearance Con-

sciousness to .22 ( $p < .05$ ) between Fear of God and Style Consciousness. The E–P linkage with Internal State Awareness was eliminated. Other E–P associations were diminished and varied from .28 ( $p < .05$ ) with Self-Reflectiveness to .38 ( $p < .05$ ) with Style Consciousness. Negative relationships appeared for E–S with Reflective ( $-.17, p < .07$ ) and Experiential ( $-.13, p < .05$ ) Self-Knowledge, and positive correlations of .14 ( $ps < .05$ ) emerged for E–R with both Appearance and Style Consciousness. In the American sample, partial correlations produced only two effects. The Religious Dependent Self factor correlated positively with Appearance Consciousness (.15,  $p < .05$ ), and Fear of God correlated negatively with Reflective Self-Knowledge ( $-.16, p < .05$ ).

Iranian religious orientation relationships with Alexithymia, Emotional Intelligence, and mental health are summarized in Table 4. The Intrinsic Scale and, to a lesser extent, the E–P factor predicted adjustment, whereas the E–R items correlated with maladjustment. Other Extrinsic measures displayed positive connections with the Difficulty Identifying and/or the Difficulty Describing Feelings factors of Alexithymia. Prayer and Practice was associated with slightly higher levels of Anxiety. However, the Prayer and Practice and Religious Dependent Self

TABLE 2  
Correlations Among and Descriptive Statistics for Religious Variables<sup>a</sup>

<i>Variables</i>	1.	2.	3.	4.	5.	6.	7.	8.
<b>Personal Negative Factors</b>								
1. Religious Dependent Self	—	.66***	.69***	.74***	.70***	.66***	.47***	-.01
2. Insecurity	.44***	—	.63***	.72***	.43***	.59***	.35***	.05
3. Prayer and Practice	.53***	.48***	—	.69***	.48***	.69***	.50***	.08
4. Fear of God	.61***	.47***	.51***	—	.50***	.64***	.41***	.10
<b>Allport and Ross Measures</b>								
5. Intrinsic	.63***	.05	.22**	.33***	—	.64***	.31***	-.24***
6. Extrinsic–Personal	.43***	.34***	.64***	.41***	.30***	—	.28***	-.15*
7. Extrinsic–Social	.21**	.51***	.45***	.27***	.02	.37***	—	.15*
8. Extrinsic–Residuals	-.13	.49***	.20**	.16*	-.48***	.12	.42***	—
<b>Descriptive Statistics</b>								
<b>Iran</b>								
Mean <sup>b</sup>	1.63	1.59	1.37	1.60	2.04	1.81	1.07	1.09
Standard Deviation	.68	.71	.83	.72	.63	.82	.72	.59
Coefficient Alpha	.86	.68	.80	.77	.71	.67	.59	.53
<b>The United States</b>								
Mean	1.43	.94	1.34	1.36	2.27	1.77	.89	1.11
Standard Deviation	.65	.68	.77	.76	.66	.73	.70	.65
Coefficient Alpha	.88	.77	.79	.83	.81	.66	.66	.68

<sup>a</sup>Correlations for the Iranian sample are above the diagonal, whereas those for the Americans are below. <sup>b</sup>Means represent the average response per item for each measure.

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

TABLE 3  
Correlations of Personal Negative Factors and Religious Orientation Measures With  
Self-Consciousness and Self-Knowledge in the Iranian and American Samples

<i>Psychological Measures</i>	<i>Religious Measures</i>							
	<i>RDS</i>	<i>INS</i>	<i>PP</i>	<i>FG</i>	<i>INT</i>	<i>E-P</i>	<i>E-S</i>	<i>E-R</i>
<b>Iranian Sample</b>								
Internal State Awareness	.26***	.10	.19**	.18**	.39***	.35***	.04	-.05
Self-Reflectiveness	.34***	.26***	.26***	.31***	.40***	.45***	.04	-.06
Appearance Consciousness	.29***	.27***	.33***	.32***	.32**	.44***	.12	.05
Style Consciousness	.34***	.27***	.34***	.35***	.33***	.48***	.09	.05
Social Anxiety	.23***	.21**	.21**	.19**	.13*	.23***	.10	.15*
Reflective Self-Knowledge	.32***	.28***	.22**	.27***	.45***	.52***	.00	-.12
Experiential Self-Knowledge	.27***	.19**	.19**	.19**	.42***	.47***	.02	-.12
<b>American Sample</b>								
Internal State Awareness	.06	-.06	-.10	-.02	.06	.00	-.08	-.07
Self-Reflectiveness	-.01	.11	.06	-.08	-.07	-.08	.04	-.07
Appearance Consciousness	.10	.05	.07	.07	-.04	.11	.10	.03
Style Consciousness	.02	.06	.06	-.04	-.01	.03	.06	-.06
Social Anxiety	-.07	.02	.00	-.05	-.12	.03	-.02	.05
Reflective Self-Knowledge	-.01	-.06	.00	-.11	.12	-.06	-.06	-.14*
Experiential Self-Knowledge	.06	-.08	-.08	.04	.12	.02	-.05	-.08

*Note.* Personal Negative Factors are Religious Dependent Self (RDS), Insecurity (INS), Prayer and Practice (PP), and Fear of God (FG). Religious Orientation measures are the Intrinsic Scale (INT), the Extrinsic-Personal (E-P) and Extrinsic-Social (E-S) factors, and the Extrinsic-Residual (E-R) items.

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

TABLE 4  
Correlations of Personal Negative Factors and Religious Orientation Measures With  
Alexithymia, Emotional Intelligence, and Mental Health in the Iranian Sample

<i>Psychological Measures</i>	<i>Religious Measures</i>							
	<i>RDS</i>	<i>INS</i>	<i>PP</i>	<i>FG</i>	<i>INT</i>	<i>E-P</i>	<i>E-S</i>	<i>E-R</i>
<b>Alexithymia</b>								
Difficulty Identifying Feelings	.18**	.24***	.24***	.24***	-.05	.10	.18**	.25***
Difficulty Describing Feelings	.14*	.15*	.11	.10	.04	.09	-.03	.00
Externally Oriented Thinking	-.17*	-.03	-.04	-.05	-.31***	-.20**	.03	.11
<b>Emotional Intelligence</b>								
Attention	.04	.04	.00	.11	.13*	.15*	-.12	.00
Clarity	.06	-.03	-.03	-.01	.23***	.12	-.05	-.25***
Repair	.21**	.08	.14*	.20**	.37***	.36***	.03	-.14*
<b>Mental Health</b>								
Anxiety	.11	.12	.14*	.09	-.07	.08	.05	.17*
Depression	-.07	.03	-.01	-.01	-.30***	-.14*	.04	.20**
Perceived Stress	-.04	.07	.06	.05	-.22**	-.05	.03	.12
Self-Esteem	.12	.00	.09	.04	.35***	.21**	-.01	-.22**

*Note.* Personal Negative Factors are Religion Dependent Self (RDS), Insecurity (INS), Prayer and Practice (PP), and Fear of God (FG). Religious Orientation measures are the Intrinsic Scale (INT), the Extrinsic-Personal (E-P) and Extrinsic-Social (E-S) factors, and the Extrinsic-Residual (E-R) items.

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

factors correlated positively with Repair, and the Religion Dependent Self also displayed an inverse connection with Externally Oriented Thinking.

Once again, partial correlations documented the important influence of Intrinsic variance on these Extrinsic relationships. The Religious Dependent Self partial correlation with Externally Oriented Thinking was positive rather than negative (.14,  $p < .05$ ). The direct association of this factor with Repair also was removed, and new linkages appeared with Clarity (-.15), Anxiety (.23), Depression (.21), Perceived Stress (.18), and Self-Esteem (-.19,  $ps < .05$ ). Additional evidence of Insecurity relationships with maladjustment appeared in partial correlations with Externally Oriented Thinking (.18), Clarity (-.16), Anxiety (.18), Depression (.20), Perceived Stress (.23), and Self-Esteem (-.19,  $ps < .05$ ). Similar effects were observed for Prayer and Practice with Externally Oriented Thinking (.21), Clarity (-.19), Depression (.19), and Perceived Stress (.24,  $ps < .05$ ). The positive zero-order Prayer and Practice correlation with Repair also disappeared. Fear of God exhibited partial correlations with Externally Oriented Thinking (.21), Clarity (-.16), Anxiety (.16), Depression (.19), Perceived Stress (.22), and Self-Esteem (-.19,  $ps < .05$ ). The previously observed positive linkage between Fear of God and Repair was eliminated.

In these partial correlations, E-P no longer displayed significant inverse relationships with Externally Oriented Thinking and Depression, nor positive correlations with Attention and Self-Esteem. The reliable E-P connection with Repair was reduced, but not eliminated (.16,  $p < .05$ ), but new associations appeared with Difficulty Identifying Feelings (.18), Anxiety (.18), and Perceived Stress (.14,  $ps < .05$ ). For E-S, significant partial correlations appeared with Externally Oriented Thinking (.19), Attention (-.17), Depression (.14), and Self-Esteem (-.14,  $ps < .05$ ). E-R data remained largely unaffected, except that the inverse tie with Repair became nonsignificant.

Table 5 reviews the same zero-order relationships for the American sample. The Intrinsic Scale and E-R items once again predicted adjustment and maladjustment, respectively. The Religious Dependent Self factor displayed a slight positive correlation with Repair and a small negative association with Depression. The remaining Extrinsic measures exhibited one or more connections with psychological dysfunction, with Insecurity having especially negative mental health implications.

With the American data, partialing out the Intrinsic Scale removed the positive Religious Dependent Self correlation with Repair and the negative relationship with Depression. New associations of this factor also appeared with Anxiety (.22), Perceived Stress (.26), and Self-Esteem (-.16). Additional linkages emerged for Prayer and Practice with Externally Oriented Thinking (.15) and Self-Esteem (-.17); for Fear of God with Clarity (-.14), Anxiety (.14), and Perceived Stress (.22); and for E-P with Perceived Stress (.19,  $ps < .05$ ). A number of zero-order correlations for the E-R items were eliminated, including direct associations with

TABLE 5  
 Correlations of Personal Negative Factors and Religious Orientation Measures With  
 Alexithymia, Emotional Intelligence, and Mental Health in the American Sample

<i>Psychological Measures</i>	<i>Religious Measures</i>							
	<i>RDS</i>	<i>INS</i>	<i>PP</i>	<i>FG</i>	<i>INT</i>	<i>E-P</i>	<i>E-S</i>	<i>E-R</i>
<i>Alexithymia</i>								
Difficulty Identifying Feelings	-.08	.20**	.15*	.02	-.15*	-.04	.09	.17*
Difficulty Describing Feelings	-.04	.09	.03	-.02	-.12	-.03	.02	.09
Externally Oriented Thinking	.02	.23**	.12	.22**	-.06	.15*	.16*	.19**
<i>Emotional Intelligence</i>								
Attention	.01	-.07	.01	-.09	.05	.03	-.08	-.10
Clarity	.06	-.21**	-.14*	-.06	.21**	.00	-.14*	-.21**
Repair	.14*	-.13*	-.04	.05	.37***	.07	-.15*	-.21**
<i>Mental Health</i>								
Anxiety	.12	.26***	.22**	.10	-.09	.09	.06	.17*
Depression	-.15*	.20**	.04	-.03	-.33***	-.03	.10	.22**
Perceived Stress	.05	.24***	.21**	.13	-.23**	.11	.09	.25***
Self-Esteem	.10	-.21**	-.08	.05	.34***	.08	-.05	-.16*

*Note.* Personal Negative Factors are Religion Dependent Self (RDS), Insecurity (INS), Prayer and Practice (PP), and Fear of God (FG). Religious Orientation measures are the Intrinsic Scale (INT), the Extrinsic–Personal (E–P) and Extrinsic–Social (E–S) factors, and the Extrinsic–Residual items.

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

Difficulty Identifying Feelings and Depression and inverse connections with Clarity, Repair, and Self-Esteem. These and other partial correlations confirmed that E–R items defined variance in a maladjusted anti-intrinsicness that was accounted for by the Intrinsic Scale. In all other partial correlations, no significant relationships were reversed from positive to negative, or vice versa, nor were any other nonsignificant outcomes transformed into significant associations, or vice versa.

Multiple regressions assessed the incremental validity of the Personal–Negative Scale by entering all four of its components into the second step of a regression equation after the Intrinsic, E–P, E–S, and E–R measures had been entered in on the first step. Few findings of incremental validity were evident in the Iranian sample. Prayer and Practice was a reliable predictor of Reflective Self-Knowledge ( $\beta = -.24, p < .05$ ), as was Insecurity of Repair ( $\beta = -.22, p < .05$ ). With the Americans, however, each Personal–Negative factor displayed at least some evidence of incremental validity. Associations appeared between the Religious Dependent Self factor and Difficulty Identifying Feelings ( $\beta = -.26, p < .05$ ) and between Fear of God and Externally Oriented Thinking ( $\beta = .26, p < .01$ ). Prayer and Practice displayed

linkages with Anxiety ( $\beta = .21, p < .05$ ) and Difficulty Identifying Feelings ( $\beta = .31, p < .01$ ). Consistent evidence of incremental validity appeared for Insecurity with seven significant associations observed: Self-Reflectiveness ( $\beta = .27, p < .01$ ), Anxiety ( $\beta = .23, p < .05$ ), Depression ( $\beta = .28, p < .01$ ), Self-Esteem ( $\beta = -.32, p < .01$ ), Difficulty Identifying Feelings ( $\beta = .32, p < .01$ ), Externally Oriented Thinking ( $\beta = .19, p < .05$ ), and Clarity ( $\beta = -.19, p < .05$ ).

In each sample separately, religious orientation measures were combined in a principal components analysis that used a varimax rotation. Table 6 demonstrates that two similar dimensions were obtained in both cultures. The first was a general religious motivation component that was defined by primary (i.e., strongest) or noteworthy secondary (i.e.,  $> .30$ ) loadings by all religious orientation variables except for the E-R items. The second component was a bipolar Intrinsic dimension anchored by E-R at one end and by the Intrinsic Scale at the other.

Examination of all religious variables with a MANOVA revealed significant culture,  $F(8, 432) = 24.63, p < .001$ , but not gender nor culture  $\times$  gender interaction,  $F$ 's  $(8, 423) < 1.81, ps > .05$  effects. With regard to the cultural differences, Americans displayed higher average responses per item on the Intrinsic Scale ( $M \pm SEM: 2.25 \pm 0.04$ ) than did the Iranians ( $2.06 \pm 0.04$ ),  $F(1, 439) = 10.10, p < .01$ . Iranians scored higher on four other measures: Religion Dependent Self ( $1.64 \pm 0.04$  vs.  $1.43 \pm 0.05$ ), Insecurity ( $1.60 \pm 0.05$  vs.  $0.92 \pm 0.05$ ), Fear of God ( $1.60 \pm 0.05$  vs.  $1.34 \pm 0.05$ ), and E-S ( $1.09 \pm 0.05$  vs.  $0.89 \pm 0.05$ ),  $F$ 's  $(1, 439) > 4.14, ps < .01$ .

TABLE 6  
Factors Obtained With Religious Orientation Measures in Samples  
From Iran and the United States

Measure	Iran		United States	
	1	2	1	2
Allport and Ross Measures				
Intrinsic	<u>.73</u>	-.42	<u>.74</u>	-.50
Extrinsic-Personal (E-P)	<u>.82</u>	-.26	<u>.67</u>	.29
Extrinsic-Social (E-S)	<u>.57</u>	.35	.32	<u>.68</u>
Extrinsic-Residual (E-R)	.02	<u>.91</u>	-.16	<u>.89</u>
Personal Negative Factors				
Religion Dependent Self	<u>.89</u>	-.05	<u>.89</u>	-.04
Insecurity	<u>.81</u>	.08	.46	<u>.68</u>
Prayer and Practice	<u>.85</u>	.15	<u>.70</u>	.42
Fear of God	<u>.86</u>	.13	<u>.72</u>	.25
Factor Statistics				
Eigenvalue	4.43	1.24	3.47	1.92
% Variance Explained	55.36%	15.49%	43.38%	24.03%

Note. Maximum loading for each variable is underlined. These data reflected use of a principal components analysis with a varimax rotation.

## DISCUSSION

Factor analysis of the Personal–Negative Scale uncovered four dimensions of negatively reinforcing personal reasons for maintaining religious commitments. The largest Religious Dependent Self factor recorded reliance upon religion in order to avoid psychological vulnerabilities and a sense of moral inadequacy. The special importance of religion in efforts to overcome extreme meaninglessness and insecurity was demonstrated by the Insecurity factor. The Prayer and Practice component most notably recorded the use of prayer to eliminate personal misery and unhappiness. The final factor described a Fear of God that motivated religious activities. In Iran and the United States, correlations with religious orientation, inner awareness, and mental health confirmed the cross-cultural validity of these factors and of concepts associated with the Allportian research tradition.

In both cultures, Personal–Negative factors displayed consistent positive associations with the Intrinsic, E–P, and E–S measures. Religious Dependent Self linkages with the Intrinsic Scale were especially strong, and correlations once again confirmed that Intrinsic and Extrinsic religious motivations were not incompatible (Kirkpatrick, 1989; Pargament, 1992). At the same time, numerous findings suggested a stronger integration of these motivations in Iran. A direct association appeared between Insecurity and the Intrinsic Scale only in Iran. E–R items essentially reflected an “anti-intrinsicness,” and the inverse E–R linkage with the Intrinsic Scale was less robust in the Iranians. In the United States, but not Iran, the Insecurity, Prayer and Practice, Fear of God, and E–S variables correlated directly with E–R, suggesting a greater polarization of American religious motivations in that these forms of extrinsicness were congruent with an anti-intrinsicness. In contrast, E–P correlated inversely with E–R in Iran, but not the United States. This outcome identified E–P as an “anti–anti-intrinsicness,” again suggesting a greater compatibility between extrinsicness and intrinsicness in Iran. Finally, in the factor analyses, the anti-intrinsicness of E–R was more discriminable from extrinsicness in Iran than in the United States, a phenomenon observed previously (Ghorbani, Watson, Ghramaleki, Morris, & Hood, 2002). Again, these findings indicated that Intrinsic and Extrinsic motivations were more polarized in America and more integrated in Iran.

Taken together, these data suggested that a culture like Iran, in which social and institutional structures are formally organized in religious terms (e.g., Tamadonfar, 2001), may encourage a stronger assimilation of instrumental and non-instrumental reasons for being religious. Other social and religious factors may be important as well. The Qur’an encourages believers to overcome the challenges of life through energetic personal efforts (“Women,” verse 71, p. 110; “The Spoils,” verse 60, p. 204; “The Night Journey,” verse 12, p. 303; Arberry, 1955). It also emphasizes that those who forget God will experience difficulties (“Taha,” verse 124, p. 348) and that God is wholly sufficient for those who trust in him (“Di-

voce,” verses 2-3, p. 284; “Abraham,” verse 12, p. 275). Islam, therefore, promotes an active and organized response to the problems of life that may appear to be “extrinsic,” but that also is grounded in an “intrinsic” reliance upon God. Iran is a developing religious society with major economic problems. Economic problems may encourage Muslims to turn to God, and a turn to God may encourage Muslims to use their faith in coping with personal economic problems. Intrinsic and extrinsic motivations may exist in a dynamic interaction, as Muslim religion supplies “concepts and technologies for the ordering of” both the inner and the outer life.

This cultural contrast also might be described from an opposite perspective. Secularization may promote a polarization of Intrinsic and Extrinsic motivations as the institutional, economic, and other social rewards for maintaining sincere religious beliefs increasingly decline. Positive associations of the anti-intrinsickness of E-R with Insecurity, Prayer and Practice, Fear of God, and E-S in the United States but not in Iran would exemplify this greater polarization within a more secularized society. Of course, such cultural differences might simply reflect differences in specific Muslim and Christian beliefs, since contrasting beliefs undoubtedly have many important effects. Still, correlations of Muslim beliefs with personality in Great Britain (Wilde & Joseph, 1997) differ from those observed in Iran in a manner suggesting that secularization may be a more plausible explanation (Ghorbani, Watson, Ghramaleki, Morris, & Hood, 2000).

Even clearer cross-cultural dissimilarities appeared in the Self-Consciousness and Self-Knowledge data. The Personal-Negative and other religious orientation measures consistently predicted higher values on these variables in Iran but not in the United States. Such contrasts were not explicable in terms of the adjustment implications of the constructs. In Iran – as in the United States–Internal State Awareness, Experiential Self-Knowledge, and Reflective Self-Knowledge have predicted adaptive functioning, whereas Self-Reflectiveness and Social Anxiety have correlated with psychological dysfunction (Ghorbani, Bing, Watson, Davison, & LeBreton, 2002; Watson et al., 1994, 1996). Nor was the difference attributable to some unknown anomalous feature of this particular American sample. Earlier studies using students from the same state university have uncovered similar nonexistent or very small religious orientation relationships with Self-Consciousness (Watson, Morris, Foster, & Hood, 1986; Watson, Morris, & Hood, 1988a, 1988b).

Instead, these cultural differences perhaps revealed that life in a more formally religious society promoted not only a stronger integration among religious motivations, but also a stronger integration of religious motivations with personal understandings of the self. Perhaps supporting this possibility was an earlier observation that even in the United States, students from a Pentecostal Christian college (and thus presumably from a more religious, less “secularized” background) displayed Intrinsic ties with Internal State Awareness (.48) and Style Consciousness (.36)

that were as strong as those obtained with this Iranian sample (Watson et al., 1988a).

Relationships with the other inner awareness variables further confirmed that Muslim religion supplied “concepts and technologies for the ordering of the inner life.” They also established that point for the Americans. With regard to Alexithymia, six Extrinsic measures in Iran and three in the United States predicted greater Difficulty Identifying Feelings. In Iran, the Religion Dependent Self and Insecurity factors also correlated positively with Difficulty Describing Feelings. Data for Externally Oriented Thinking were more complex. Insecurity, Fear of God, E–P, E–S, and E–R displayed direct associations with Externally Oriented Thinking in the United States; but in Iran, the Religion Dependent Self factor and E–P exhibited counterintuitive inverse linkages with Externally Oriented Thinking. However, the Intrinsic Scale correlated negatively with Externally Oriented Thinking in Iran and with Difficulty Identifying Feelings in the United States, and the Extrinsic data became less ambiguous in partial correlations controlling for intrinsicness. In the Iranian partial correlations, for example, the negative Religion Dependent Self relationship with Externally Oriented Thinking became significant in the positive direction, the inverse E–P connection with this aspect of Alexithymia became nonsignificant, and numerous new direct associations appeared between the Extrinsic and Alexithymia variables. In both samples, therefore, extrinsicness reflected greater deficits in the processing of emotional information whereas the opposite was true of intrinsicness.

Further support for this conclusion came in the examination of Emotional Intelligence. Linkages of the Intrinsic Scale with greater Clarity and Repair were obvious in both cultures. As with Alexithymia, ambiguities appeared in the zero-order Extrinsic relationships, but with one exception, partialing out the Intrinsic Scale once again identified extrinsicness as a correlate of maladjusted emotional processing. The one exception occurred in the Iranian sample and involved the diminished, but still significant positive partial correlation of E–P with Repair. This outcome perhaps supplied the clearest, though weak evidence that an Extrinsic motivation may at least sometimes have influences that are more favorable than Allport imagined (Pargament, 1992).

Zero-order and partial correlations with mental health supplied a final line of evidence in favor of the Allportian characterization of religious orientation. Intrinsic relationships were nearly identical across the two samples with this scale predicting greater Self-Esteem and lower Depression and Perceived Stress. In the less ambiguous partial correlations controlling for the Intrinsic Scale, Extrinsic measures were associated with lower Self-Esteem and greater Anxiety, Depression, and Perceived Stress.

Beyond correlating with personality and with the other religious orientation variables, the new Personal–Negative measures demonstrated their utility in a number of additional ways. First, multiple regressions established that these nega-

tively reinforcing reasons for being religious had incremental validity. Each component yielded at least one outcome documenting that it explained variance not accounted for by the Allport and Ross constructs. Insecurity proved to be particularly noteworthy in The United States. It was a reliable contributor to seven prediction equations. In Iran, Insecurity displayed only an inverse association with Repair. The reason for this cross-cultural contrast was not clear, but one possibility was that Americans read these items differently than Iranians. This component included phrases like "I try to believe..." and "I try to follow..." Within the context of being insecure, such statements in English may more likely connote a kind of desperation in which the implication is that "I try but seem unable to believe or to follow..." This possible difference might again reflect the secularization issue. Life in a more secularized culture might make attempts to use religion for such purposes seem more desperate.

Indeed, at a higher level of abstraction, multiple regressions may have supplied additional evidence of the importance of cultural differences in secularization. In Iran, only two findings testified in favor of the incremental validity of the Personal–Negative Scale. In the United States, 11 results confirmed such a conclusion. A stronger assimilation among religious motivations presumably would increase the likelihood that only a subset could fully explain religious linkages with inner awareness and mental health. The Allport and Ross variables, in other words, perhaps offered a more nearly sufficient accounting of individual differences in religious commitments under conditions of greater integration. Cultural contrasts in the incremental validity data, therefore, may have further revealed a stronger integration of religious motivations in Iran.

Personal–Negative components also proved to be useful in factor analyses examining all of the religious orientation measures. In both cultures, two factors emerged. These dimensions did not describe Allport's differentiation between Intrinsic and Extrinsic orientations. Instead, they defined a general religious motivation factor and a bipolar Intrinsic dimension. Roughly the same outcome was observed previously (Ghorbani, Watson, Ghramaleki, Morris, & Hood, 2002), and thus seemed to be reliable. Loadings of Intrinsic and Extrinsic measures on the same factor again supported claims that the two motivations can be compatible (Pargament, 1992). Zero-order and partial correlations nevertheless demonstrated that the Intrinsic dimension was more important in predicting positive mental health. In addition, partial correlations in both cultures, but particularly in Iran, suggested that intrinsicness ameliorated the maladjusted psychological implications of extrinsicness.

Finally, use of the Personal–Negative factors resulted in a more detailed analysis of mean cultural differences in religious orientation. Iranians displayed higher scores on the Religion Dependent Self, Insecurity, and Fear of God factors, as well as on E–S, but not E–P. The cross-cultural difference in E–S perhaps supplied an additional indication that Iran was less secularized. Without the Personal–Negative

Scale, however, the misleading conclusion would have been that cultural differences in extrinsicness were limited to the social aspects of religion. The Personal–Negative data helped avoid this misinterpretation and thereby further proved the utility of this new instrument. Moreover, this investigation only sought to establish the basic and incremental validity of the Personal–Negative Scale. While some evidence for incremental validity was limited, especially in Iran, the availability of this instrument now makes it possible to move beyond scale development considerations. For instance, could Extrinsic associations with maladjustment be wholly or largely attributable to negatively reinforcing personal reasons for being religious? This is a plausible hypothesis with important theoretical and perhaps even clinical implications that the Personal–Negative Scale now makes it possible to test.

Of all the findings of this project, the most unexpected was the cultural difference in the Intrinsic Scale. Americans scored higher. This outcome was not obtained in the previous examination of these two cultures, although Americans did surprisingly express nonsignificantly higher levels of an interest in religion (Ghorbani, Watson, Ghramaleki, Morris, & Hood, 2002). Only in the present investigation, however, was the internal reliability of the Intrinsic Scale improved by dropping two items, and this procedure may have explained the difference. In addition, previous samples of similar Americans have displayed noteworthy variations in religious commitments that had important effects on empirical findings (Watson, Morris, & Hood, 1989). The present American sample may simply have been more religious than the one examined in the previous Iranian–American study. More generally, these students lived in a part of the United States that is well known for stronger and more conservative religious beliefs. Observation of this cultural difference might have been less likely with subjects from a different part of the United States. Finally, this outcome perhaps supplied further evidence of secularization. For those who are able to maintain commitments in a more secularized environment, Intrinsic motivations for being religious may need to be stronger and more compelling.

In conclusion, this project has already made it clear that Allport's approach to religion cannot be limited to intracultural Christian concerns (McCrae, 2001). True, factor analysis in both samples failed to describe religious orientation in terms of Allport's Intrinsic–Extrinsic dichotomy. Some findings also revealed that extrinsicness at least sometimes predicted positive psychological functioning. More often than not, however, intrinsicness was associated with adjustment whereas extrinsicness was more indicative of maladjustment, just as Allport would have expected. The negative mental health implications of extrinsicness often became clear only after partial correlations controlled for intrinsicness. Such partial correlations, therefore, documented that unambiguous understandings of religious motivation and mental health require a theoretical and empirical sensitivity to Allport's insights. Of course, no single study can prove that the Intrinsic–Extrinsic distinction will support a broad-based intercultural and transcultural research pro-

gram in the psychology of religion. In addition, the lower internal reliabilities of some extrinsic measures suggested that further refinements might be necessary in some of the measuring instruments. Still, these data demonstrated that an Allportian perspective currently supplies a productive conceptual framework for conducting cross-cultural studies in the psychology of religion and that Personal–Negative constructs may usefully supplement other religious orientation variables in such investigations.

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