

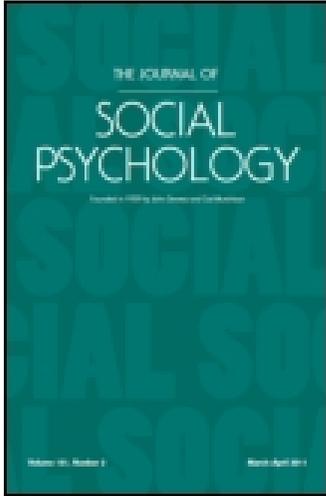
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### Private Self-Consciousness Factors: Relationships With Need for Cognition, Locus of Control, and Obsessive Thinking in Iran and the United States

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# Private Self-Consciousness Factors: Relationships With Need for Cognition, Locus of Control, and Obsessive Thinking in Iran and the United States

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**ABSTRACT.** The authors measured Internal State Awareness (ISA) and Self-Reflectiveness (SR) factors from the Private Self-Consciousness Scale in Iranian ( $N = 325$ ) and U.S. ( $N = 401$ ) university students. In both societies, positive correlations with Need for Cognition and Internal Control and negative correlations with external control and obsessive thinking confirmed ISA as an adaptive form of self-consciousness. In partial correlations in which the authors controlled for ISA, SR was associated cross-culturally with greater Obsessive Thinking. This outcome conformed with the authors' expectations that SR would have negative mental health implications, but other data revealed complexities in the SR association with adjustment. Differences between samples failed to yield any simple support for F. Fukuyama's (1992) suggestion that Iranians might be more "alienated" (pp. 236–237) in their psychological functioning. The present study most importantly offered cross-cultural evidence in favor of the claim that better measures of an introspective self-awareness need to be developed.

**Key words:** Iran, private self-consciousness factors, psychological adjustment, United States

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SELF-AWARENESS is a common religious, philosophical, and therapeutic ideal, but greater self-focused attention also correlates with a broad array of psychological dysfunctions (Ingram, 1990). The paradoxical consequences of self-awareness have in fact been demonstrated in studies of the Private Self-Consciousness Scale (Fenigstein, Scheier, & Buss, 1975). Although widely used for over a quarter of a century (e.g., Davies, 1982; Harrington & Loffredo, 2001; Schrum & McCarty, 1992), this full scale nevertheless contains two factors with opposite implications for mental health (Burnkrandt & Page, 1984; Mittal & Balasubramanian, 1987). Internal State Awareness (ISA) associates with adjustment and appears in such self-reports as "I'm alert to changes in my moods" (Watson & Biderman, 1993; Watson, Milliron, & Morris, 1995). Self-Reflectiveness (SR) tends to correlate with maladjustment and appears in the claim that "I'm constantly examining my motives" (Watson, Hickman, Morris, Stutz, & Whiting, 1994; Watson, Morris, Ramsey, Hickman, & Waddell, 1996). Even clearer contrasts between these factors become obvious when the investigator reexamines ISA after controlling for SR and vice versa (e.g., Reeves, Watson, Ramsey, & Morris, 1995; Scandell, 2001).

Empirical distinctions between ISA and SR supply useful guidance in the attempt to develop less ambiguous measures of introspective self-awareness (Creed & Funder, 1999; Ghorbani, Watson, Bing, Davison, & LeBreton, 2003). Such guidance would point toward more broadly important psychological processes if the contrasting mental health implications of the two factors proved to be cross-culturally consistent. Indeed, the two factors have differed from each other in at least Polish (Piliavin & Charng, 1988), Swedish (Nystedt & Ljungberg, 2002), and Israeli (Ben-Artzi & Hamburger, 2001–2002) samples. In one recent study, however, SR failed to correlate with maladjustment in a group of Iranians, although both Iranians and Americans did display an association of ISA with a stronger sense of identity, lower narcissism, and greater self-actualization (Ghorbani, Watson, Krauss, Bing, & Davison, in press).

In the present reexamination of Iranian and U.S. samples, we assumed that two opposite tendencies might define the relationship of a self to its own psychological states. On the one hand, the self might experience some adaptive control over its own operations. A healthy self-consciousness, in this instance, would function as an active cognitive process in which the self assumes some command over external life events and internal psychological experiences. On the other hand, mental states and external events could control the self. An unhealthy self-consciousness would thus reflect a self in reaction to potentially disturbing internal and external events over which it had little perceived influence. In a previous U.S. study, ISA and SR in fact exhibited linkages with attributions of personal

control that conformed in general terms to this theoretical possibility (Watson, Headrick, & McKinney, 1989).

Again, in the present study, we assumed that a healthy self-consciousness functions as an active cognitive process. We assessed individual differences in active cognitive processing with the Need for Cognition Scale (Cacioppo, Petty, Feinstein, & Jarvis, 1996). Those participants who scored high on this instrument “are characterized generally by active, exploring minds and through their senses and intellect, reach and draw out information from their environment” (Cacioppo et al., p. 199). Illustrative items include assertions that “I find satisfaction in deliberating hard and for long hours” and that “I prefer my life to be filled with puzzles that I must solve” (p. 253). Osberg (1987) argued that a need for cognition contributes to self-insight and confirmed this expectation in a positive correlation of Private Self-Consciousness with the Need for Cognition Scale. A later investigation discovered the same relationship for both ISA and SR, but partial correlations showed that this outcome was due primarily to ISA (Reeves et al., 1995).

In the present study, we recorded a sense of control over external events by administering the Levenson (1973) Multidimensional Locus of Control Scales. The Internal Locus of Control Scale monitors an adaptive sense of control over personal circumstances and is made evident by such claims as “I am usually able to protect my personal interests” and “I can pretty much determine what will happen in my life.” Two other Levenson scales assess a maladaptive external locus of control: the Chance scale (e.g., “I have often found that what is going to happen will happen”) and the Powerful Others scale (e.g., “I feel like what happens in my life is mostly determined by powerful people”).

In the present study, we measured self-control over internal psychological experiences, or rather the lack thereof, with the Impaired Control over Mental Activities (ICMA) factor from the Padua Inventory (Sanavio, 1988). The two items that load most strongly on this index of Obsessive Thinking state that “when I start thinking of certain things, I become obsessed with them” and that “unpleasant thoughts come into my mind against my will and I cannot get rid of them.” Overall, the ICMA records a “lower ability to remove undesirable thoughts, difficulties in coping with simple decisions and doubts, uncertainty about responsibility in occasional accidents, ruminative thinking about low-probability dangers” (Sanavio, p. 172).

In the present study, we were interested in possible Iranian and U.S. mean differences in these measures also because of recent developments in social theory. On the basis of the Hegelian assumption that all humans have a fundamental desire to be desired, Fukuyama (1992) argued that the West has reached an end of history. This is the end of history because the dialectical unfolding of “absolute self-consciousness” has culminated in the best possible form of social life (Fukuyama, p. 64). Rationally organized Western societies have used modern natural science, capitalist economics, and democratic social structures to resolve the master–slave dialectic. The expanded prospects of such societies mean that the human struggle for recognition can occur without the collapse of

social life into violent conflicts over prestige between eventual masters and slaves. No longer must the self be alienated from itself like a slave to survive. A less alienated form of self-consciousness becomes possible as individuals can increasingly achieve a self-awareness in which the innate human desire to be desired can be satisfied in an increasingly vast array of cultural, economic, and political opportunities. Individual purpose and social development are brought into as perfect a harmony as is humanly possible.

The end of history is not the end of noteworthy events, however. Cultural transformations must overcome resistances as they spread and deepen worldwide. Fukuyama, for example, identifies Iran as a society that actively resists these transformations. His analysis, therefore, implies that Iranians might score higher on the presumably more alienated psychological functioning of SR and lower on the apparently less alienated ISA dimension of self-consciousness. His emphasis on the greater rationality of Western social life also suggests that Iranians might score lower on Need for Cognition.

In several previous investigations, Iranians have often displayed greater maladjustment than Americans (Ghorbani, Bing, Watson, Davison, & Mack, 2002; Ghorbani, Watson, Ghramaleki, Morris, & Hood, 2002). A further expectation of the present study, therefore, was that Iranians would score higher than Americans on Obsessive Thinking. Previous attempts to explain such differences have centered on sociological and economic variables. In contrast to the United States, Iran is an emerging society with newly developing political institutions and limited economic opportunities (e.g., Mason, 2002). Such circumstances might promote an external locus of control. With regard to just the economic factors, for instance, at least some evidence suggests that poorer socioeconomic circumstances correlate with an external locus of control (Rabinowitz, 1978). Hence, the hypothesis of the present study was that Iranians would exhibit a lower internal locus of control and a higher external locus of control. Linkages of lower socioeconomic status with poorer self-concept (Maqsd & Rouhani, 1991) and with greater inaccuracy in making self-predictions (Bain, Holliman, & McCallum, 1989) also have suggested that the locus of control data might have implications for understanding possible cultural differences in self-consciousness.

In summary, in the present study we administered the Private Self-Consciousness Scale to Iranian and U.S. participants to determine whether contrasts between ISA and SR might reflect differences in perceived control over external circumstances and internal psychological processes. Fukuyama (1992) essentially claimed that the dynamics of the self-functioning are constant across cultures; so, we expected parallel correlational data for the Iranian and U.S. samples. Specifically, in partial correlations removing one dimension of self-consciousness while looking at the other, we assumed that ISA would correlate positively with Need for Cognition and Internal Control and that SR would correlate negatively with Need for Cognition and Internal Control, whereas opposite patterns of relationship were expected with Chance, Powerful Others, and Obsessive Thinking. In

terms of mean differences, a further hypothesis was that Iranians would display lower ISA, Internal Control, and Need for Cognition and higher SR, External Control, and Obsessive Thinking.

## Method

### *Participants*

All research participants were volunteers.

Iranian participants were 325 university students from Tehran. Their average age was 21.7 years ( $SD = 2.40$  years). This sample included 186 men, 127 women, and 12 individuals who did not indicate their gender.

American participants were 401 students who attended a branch campus in a state university system in the southeastern United States. This group of 174 men, 222 women, and 5 people with unreported gender was 72.1% Caucasian, 18.5% African American, and 9.4% from various other racial groups.

The Americans were slightly younger than the Iranians ( $M = 19.82$  years,  $SD = 4.69$  years). This age contrast occurred because Iranians can take several years to pass highly competitive entrance examinations before being admitted into a university and because some Iranian men continue their education only after compulsory military service.

### *Measures*

We presented the scales in a questionnaire–booklet that included measures that investigators have used in several studies. Booklets for the two samples were as similar as possible, with the Iranians, of course, receiving a Persian version of the booklet. We fully discussed the nuances of all English statements via e-mail before settling on appropriate Persian translations. We examined the adequacy of the initial Persian translation by having it translated back into English by someone unfamiliar with the hypotheses of this project. We then compared the back-translated English versions with the original measures and all necessary changes were made in the final Persian questionnaire. No significant difficulties in translation were encountered.

Participants responded to the Private Self-Consciousness Scale (Fenigstein et al., 1975) along a 5-point Likert scale ranging from 0 = “strongly disagree” to 4 = “strongly agree.” Following Mittal and Balasubramanian (1987), we split this measure into Internal State Awareness (ISA) and Self-Reflectiveness (SR) scales, each of which had four items.

We used the 18-item version of the Need for Cognition Scale (Cacioppo et al., 1996). Response options ranged from 0 = “strongly characteristic of me” to 4 = “strongly uncharacteristic of me.” Cacioppo et al. summarized an extensive research literature documenting the validity of this instrument.

Each of the three Multidimensional Locus of Control Scales (Levenson, 1973) had eight items, to which participants reacted along a 5-point Likert scale ranging from 0 = "strongly disagree" to 4 = "strongly agree." Pargament, Sullivan, Tyler, and Steele (1982), Kunst, Bjorck, and Tan (2000), and other investigators have documented the validity of these measures.

The ICMA subscale from the Padua Inventory has 17 items (Sanavio, 1988) and uses a response format ranging from 0 = "not at all" to 4 = "very much." Numerous studies have shown that this subscale serves as a valid measure of obsessive thinking (e.g., Mancini, Gragnani, & D'Olimpio, 2001; Rhéaume, Ladouceur, & Freeston, 2000; Sica, Novara, & Sanavio, 2002).

### *Procedure*

We applied all procedures to groups of various sizes, but with none having more than approximately 75 members. Completion of all measures took less than an hour in virtually every instance. U.S. students noted their responses to all scales on standardized answer sheets. Optical scanning equipment subsequently read data from these sheets into a computer file. Iranian participants wrote their reactions to all questionnaire items directly on paper answer sheets. We transferred their responses into a computer data file by hand, and this file was double-checked to ensure the accuracy of data entry.

## **Results**

To determine whether ISA and SR were factorially distinct, we conducted a preliminary exploratory factor analysis on the items of the two scales separately for each sample. In each sample, a scree plot and eigenvalues over 1.0 indicated the presence of two factors. In the U.S sample, all items had their principal loadings on the expected factor. In the Iranian sample, however, one ISA item loaded on the SR factor (i.e., "I'm generally attentive to my inner feelings"). After we removed this ISA item, the SR factor loadings correlated at .98 across cultures. The ISA factor loadings correlated at .85. These correlations suggested that the SR factor was invariant across cultures and that the ISA factor was nearly so (van de Vijver & Leung, 1997). We removed the one ISA item that failed to load on the right factor to help ensure the proper interpretation of findings across cultures. All of the findings without this item were virtually identical to those with it.

The two Private Self-Consciousness subscales displayed fairly low internal reliabilities in both cultures. For ISA and SR, Cronbach's coefficient alphas were .53 and .60, respectively, for Iran; and .54 and .63, respectively, for the United States. Britt (1992) observed the poor internal consistency of these measures and mentioned it as one reason why new instruments need to be developed. Internal reliabilities for most other constructs were acceptable; see Table 1. In both samples, however, Cronbach's alphas for the Internal Control Scale were unexpectedly low.

In a review of the available literature, Levenson (1981) reported internal consistencies for this measure that ranged from .60 to .85, but Perrewe (1987) later reported a .52 value. The present internal reliabilities, therefore, were at the lowest levels of previous observations and suggested a need for caution in interpreting data from this instrument.

As Table 1 makes clear, relationships among Need for Cognition, Locus of Control, and Obsessive Thinking were consistent with expectations and almost identical across the two samples. In both groups, Need for Cognition and Internal Control appeared to be adaptive characteristics that correlated negatively with the maladaptive traits of Obsessive Thinking and External Control.

In Iran, the correlation between ISA and SR was .36 ( $p < .001$ ). In the United States, it was .25 ( $p < .001$ ). Table 2 displays the zero-order and partial correlations of the two private self-consciousness scales with all other variables. ISA was associated with higher Need for Cognition and Internal Control and lower Chance, Powerful Others, and Obsessive Thinking. As hypothesized, therefore, ISA proved to be an adaptive type of private self-consciousness. A number of unexpected findings appeared for SR. In both samples, SR correlated positively with Need for Cognition, even after we controlled for ISA. SR correlated with higher Internal Control rather than lower Internal Control, although this relationship disappeared in the U.S. sample after we removed ISA. In addition, SR failed to correlate with External Control in either sample. As we had expected, however, SR correlated with greater Obsessive Thinking in both cultures, although this finding in Iran only became apparent after we controlled for ISA.<sup>1</sup>

**TABLE 1. Coefficient Alphas for and Correlations Among Need for Cognition, Locus of Control, and Obsessive Thinking in Iran and the United States**

Variable	1	2	3	4	5
1. Need for cognition	(.83, .91)	.29***	-.35***	-.34***	-.25***
2. Internal control	.23***	(.59, .63)	-.14*	-.13*	-.20***
3. Chance	-.28***	-.11*	(.74, .72)	.59***	.47***
4. Powerful others	-.16**	.02	.56***	(.75, .72)	.43***
5. Obsessive thinking	-.12*	-.20***	.39***	.33***	(.90, .89)

*Note.* Coefficient alphas are presented in parentheses along the diagonal with Iranian values listed first and U.S. ones second. Correlations among variables are above the diagonal for the Iranian participants and below the diagonal for the U.S. participants.

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

**TABLE 2. Zero-Order and Partial Correlations of Internal State Awareness (ISA) and Self-Reflectiveness (SR) With Other Measures in Iran and the United States**

Variable	Iran			United States		
	ISA		SR	ISA		SR
	<i>r</i>	<i>r</i> <sub><i>x,y</i></sub>	<i>r</i>	<i>r</i>	<i>r</i> <sub><i>x,y</i></sub>	<i>r</i> <sub><i>y,x</i></sub>
Need for cognition	.30***	.18***	.41***	.28***	.23***	.25***
Internal control	.32***	.25***	.28***	.27***	.25***	.12*
Chance	-.15**	-.15**	-.02	-.23***	-.24***	.00
Powerful others	-.23***	-.22***	-.02	-.20***	-.20***	-.01
Obsessive thinking	-.24***	-.26***	.02	-.18***	-.28***	.29***

*Note.* ISA = internal state awareness; SR = self-reflectiveness. Partial correlations involved an examination of ISA after controlling for SR and vice versa.

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

Before means can be compared between cross-cultural samples, an investigator must establish the structural equivalence of each measure (van de Vijver & Leung, 1997). To do this, we examined the factor structure of each scale separately in both cultures using principal components analyses with orthogonal rotation. To facilitate comparison of the factors, the factor loadings of the U.S. sample were rotated to the loadings of the Iranian sample using orthogonal procrustean rotation. As previously noted, ISA and SR correlated at .85 and .98, respectively, across cultures. In both samples, Need for Cognition exhibited two factors that displayed cross-cultural correlations of .83 and .80. Internal Control, Powerful Others, and Chance all had one factor, which correlated at .86, .77, and .85, respectively, across cultures. The ICMA scale also had one factor that correlated at .74 across cultures. In short, with the exception of SR, all measures appeared to show some nonnegligible differences in structure across cultures (van de Vijver & Leung, 1997). For these measures, investigators should interpret the comparison of means across samples cautiously.

A multivariate analysis of variance uncovered significant mean differences between cultures,  $F(7, 704) = 14.17, p < .001, \eta^2 = .12$ . As Table 3 shows, no reliable contrast appeared for ISA, but Iranians scored higher than Americans on SR, Need for Cognition, Internal Control, Chance, Powerful Others, and Obsessive Thinking. We clarified the Private Self-Consciousness data by reexamining ISA after controlling for SR and vice versa. In these analyses, Americans displayed higher levels of ISA,  $F(1, 711) = 12.29, p < .001, \eta^2 = .02$ , whereas Iranians displayed a higher SR average,  $F(1, 711) = 70.75, p < .001, \eta^2 = .09$ .

**TABLE 3. Descriptive Statistics for and Comparisons Between All Measures for the Iranian ( $N = 325$ ) and U.S. ( $N = 401$ ) Samples**

Measure	Iran		United States		$F$	$\eta^2$
	$M$	$SD$	$M$	$SD$		
Internal state awareness	2.71	.79	2.81	.77	2.63	.00
Self-reflectiveness	2.90	.74	2.43	.79	56.86***	.07
Need for cognition	2.49	.65	2.27	.78	14.84***	.02
Internal control	2.69	.58	2.57	.60	6.69*	.01
Chance	1.69	.72	1.49	.68	13.33***	.02
Powerful others	1.56	.70	1.48	.68	3.97*	.01
Obsessive thinking	1.37	.75	1.15	.69	17.21***	.02

*Note.* Mean ( $M$ ) and standard deviation ( $SD$ ) data are based on the average response per item for each measure.

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

## Discussion

The present study confirmed the cross-cultural complexity of the Private Self-Consciousness Scale (Ben-Artzi & Hamburger, 2001–2002; Nystedt & Ljungberg, 2002; Piliavin & Charng, 1988). In both Iran and the United States, ISA operationalized a clearly adaptive form of self-awareness that was characterized by higher Need for Cognition and Internal Control and by lower External Control and Obsessive Thinking. The data for SR were more ambiguous. As predicted, SR had implications of maladjustment in that it correlated positively with Obsessive Thinking, although this effect in Iran was smaller and apparent only after we controlled for ISA. Yet, SR failed to exhibit hypothesized linkages with External Control and in both societies displayed unexpected associations with greater Internal Control and Need for Cognition.

With regard to the Locus of Control data, the correlation of SR with Internal Control was fully explainable by the more adaptive ISA factor in the United States. In Iran, removing ISA reduced but did not eliminate this relationship. SR was the only variable that was invariant across samples. A difference in the measurement of this factor consequently was an unlikely cause of this cross-cultural contrast. ISA and Internal Control were not invariant, however, and this variability perhaps accounted for the difference. In both societies, Chance and Powerful Others correlated negatively with ISA and nonsignificantly with SR, suggesting that individual differences in External Control might be useful in defining adaptive but not maladaptive forms of self-consciousness.

Perhaps most surprising were the positive zero-order and partial correlations of SR with Need for Cognition. The relationship of ISA with Need for Cognition supported a previous hypothesis linking healthy forms of self-consciousness to insight (Osberg, 1987). SR, however, does not appear to be a completely healthy form of self-consciousness, as associations with Obsessive Thinking once again made clear. An earlier U.S. study also observed a positive SR relationship with Need for Cognition, but this effect disappeared after the investigators controlled for ISA (Reeves et al., 1995). The failure of partial correlations to work similarly in the present project revealed that the connection of self-consciousness with Need for Cognition can not be reliably attributed to the healthier ISA factor. The active cognitive processing that the Need for Cognition Scale defines, therefore, did not seem useful in differentiating between healthy and unhealthy forms of self-consciousness.

Differences between Iranians and Americans offered only limited support for Fukuyama's end-of-history framework. Analyses of covariance confirmed the suggestion that Iranians would be higher in SR and lower in ISA, although the full meaning of this result was unclear with the more ambiguous mental-health implications of SR in Iran. Higher Iranian scores on Chance, Powerful Others, and Obsessive Thinking also were consistent with predictions, but higher Iranian averages on Need for Cognition and Internal Control were

opposite of expectations. The Internal Control data were especially surprising because at least some descriptions of contemporary Iran point toward circumstances that would seem to work against the development of an internal locus of control (e.g., Mason, 2002). Among other things, these data revealed an obvious need for further study in the important effort to understand the relationship between society and personality. This is an important effort because, as Fukuyama's speculations make clear, the degree of compatibility between societal and individual development must at some level influence the viability of political structures, which—of course—should be a common concern across nations.

Interpretations of these data should occur within the context of numerous caveats. Most measures did not display measurement invariance. Subtle cross-cultural differences, therefore, might exist in the meanings of observed correlations. Very similar patterns of relationship across these samples nevertheless indicated that any such contrasts were probably minor.

More important cautions may revolve around the samples that we used in this project. The use of university students probably facilitated the observation of the many cross-cultural parallels in the correlational data, but such students obviously can not serve as representative samples of either society. We might have obtained very different results if more representative research participants had been used. Even with university student samples, cultural contrasts probably exist and could become obvious with the examination of different personality constructs. At the same time, however, constructive responses to great differences between societies could require a "dialog among civilizations" (Khatami, 1999) in which empirical methods may have a role to play. Such a dialog presumably would be most honest and useful if it helped clarify both cross-cultural similarities and cross-cultural differences. Empirical demonstrations of similarities between societies, therefore, may make some admittedly limited contribution to better mutual understanding, even if those similarities eventually become obvious in only limited segments of the population.

In conclusion, these data confirmed that investigators need better measures of an introspective self-awareness and that findings for the Private Self-Consciousness Scale are useful in that endeavor (Creed & Funder, 1999). Because of a multidimensional complexity that appears cross-culturally, the Private Self-Consciousness Scale is insufficiently precise as an index of either adjusted self-focused attention or maladjusted self-focused attention, and ISA and SR lack the internal reliability that would allow them to serve as effective measures of either (Britt, 1992). In the present study, partial correlations for SR in Iran and the United States identified higher levels of Obsessive Thinking as the sole consistent correlate of maladjustment. Future efforts to operationalize a more purely adaptive form of introspective self-awareness, therefore, may need to remain especially sensitive to any affinity that might exist between obsessive thinking and private self-consciousness.

## NOTE

1. Perhaps most surprising in these findings was the positive correlation of a supposedly maladaptive SR with a presumably adaptive Need for Cognition. In contrast to a previous report (Reeves et al., 1995), this outcome appeared even after we controlled for ISA. Did this result reflect the existence of some unspecified Need for Cognition factor that had negative implications for mental health? To answer that question, we conducted a principal components analysis with a varimax rotation on the Need for Cognition items in both samples separately. The scree plot of both samples revealed 2 factors, which correlated at .83 and .80 across cultures after we used procrustean rotation. These two factors were correlated with all other variables, and each basically correlated with adjustment in both samples. The first factor correlated positively with ISA, SR, and Internal Control. The second factor correlated negatively with Obsessive Thinking and External Control. Hence, one specific Need for Cognition factor did explain the association with SR; but as a correlate of adjustment, this factor did not offer an easy explanation of the relationship between the more adaptive Need for Cognition Scale and the more maladaptive SR factor.

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