

Muslim Religious Openness and *Ilm*

Relationships with Islamic Religious Reflection, Religious Schema, and Religious Commitments in Malaysia

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Summary

Religious Reflection Scales yield cross-cultural data suggesting that religious traditions have potentials to integrate intellect with faith. This investigation extended analysis of that possibility to Sunni Muslim university students in Malaysia ($N = 211$) and also examined the hypothesis that Islamic commitments to knowledge (*Ilm*) promote religious openness. Faith and Intellect Oriented Religious Reflection correlated positively and predicted openness. The Truth of Texts and Teachings factor from the Religious Schema Scales essentially assesses a form of fundamentalism and displayed direct linkages with religious openness as well. *Ilm* factors from the Ummatic Personality Inventory correlated positively with religious openness and mediated associations of Islamic Religious Reflection with other constructs. Quest as a presumed index of religious openness proved to be incompatible with sincere Muslim commitments. These findings supplemented previous Muslim, Christian, and Hindu data in confirming the potential openness of religious traditions.

Keywords

religious openness – Islamic Religious Reflection – Religious Schema Scales – *Ilm* – quest – Malaysia

Introduction

Greater precision in understanding the psychological and social openness of religious persons may require answers to a pivotal question. Relative to what standard is openness to be evaluated? This question emerges from a theoretical perspective that describes cultural processes as manifestations of social rationalities which operate within an ideological surround (Watson, 1993, 2011; Ghorbani, Watson, Saeedi, Chen, & Silver, 2012). “Social imaginaries,” as defined by Taylor (2007), are cultural constructs in which people “imagine their social existence, how they fit together with others, how things go on between them and their fellows, the expectations which are normally met, and the deeper normative notions and images which underlie these expectations” (p. 171). Social rationalities, therefore, reflect the “deeper normative notions and images” that organize thought and practice within the surround of ideological assumptions that define life in a community.

As interpreted within this Ideological Surround Model (ISM) of cultural life, religions and the social sciences operate as distinct social rationalities (Watson, 1993, 2011). Religious traditions typically use a social rationality organized around norms derived from some vision of God as the standard. Most social scientific communities organize their thought and practice around norms reflecting some at least implicitly shared reading of nature as the standard. For those committed to a religious rationality, God as the ultimate standard will not and indeed cannot justify the norm-determining status of nature. Instead, the creational power of God will explain nature. For those committed to a social scientific rationality, nature as the ultimate standard will not and indeed cannot justify the norm-determining status of “God.” Instead, the causal processes of nature will explain and sometimes explain away “God.” More basically, this means that the social sciences and religions lack a shared standard more ultimate than God and nature to which they can appeal and agree to be judged. They lack a common metric of ultimate evaluation. Religions and the social sciences are, therefore, incommensurable by definition (MacIntyre, 1988).

The ISM argues that incommensurability as an empirical reality reveals a need for three distinct forms of inquiry based upon etic, emic, and dialogical standards of social rationality (Ghorbani, Watson, Rezazadeh, & Cunningham,

2011). Etic research would construct knowledge based upon a standard “outside” of religion and would, for example, reflect social scientific commitments to ontological naturalism. Emic research would instead construct knowledge based upon a standard “inside” of religion and would reflect commitments to some specific religious tradition. Finally, dialogical research would construct knowledge based upon some shared, though not ultimate standard that exists “between” social science and religion. Such a standard would reflect a commonality capable of promoting greater understanding by clarifying the compatibilities, incompatibilities, and irrelevances that exist across social rationalities. Given the not uncommon gravity of current events, “peace” might be a useful dialogical standard (Ghorbani et al., 2012; Watson, 2006). One aspect of the ISM has been to develop specific methods that can advance the goals of dialogue based upon this standard (Watson, 2011). The identification of any particular dialogical standard would, nevertheless, be at least somewhat arbitrary. Standards other than peace might make sense.

Research programs sensitive to the empirical challenges of incommensurability should include all three forms of social science. Indeed, when it is possible to do so, analysis of all three within a single project may have special advantages. That possibility appeared in a recent attempt to bring Darwinian and Muslim perspectives on self-control into dialogue within a sample of Islamic seminarians in Iran (Ghorbani, Watson, Tavakoli, & Chen, 2015). Use of an ISM dialogical method made it clear that a secular expression of self-control could be functionally translated into Muslim language. Emic perspectives on how self-control might be relevant to the “pillars” of Islam then received empirical support when this Muslim measure of self-control predicted religious and psychological adjustment. Perhaps most importantly, however, the etic secular expression of self-control also predicted religious and psychological adjustment in ways that were sometimes superior to the Muslim measure. A research sensitivity to “inside” emic and “between” dialogical perspectives, therefore, did not operate an unscientific apologetics for Islam. Instead, this sensitivity to “inside” and “between” perspectives improved the explanatory reach of even the “outside” etic perspective. More generally, such findings also produced an ideologically broader analysis of the issue that more closely matched the empirical reality of incommensurability. An empiricism that better mirrors reality would presumably be better social science.

A critical background assumption of the ISM is that religions have resources for engaging in dialogue (see e.g., Spiegel, 2014; Wani, Abdullah, & Chang, 2015). Otherwise, the development of dialogical perspectives would be impossible because only the social sciences would display the openness to other perspectives that dialogue requires. The general purpose of the present project

was to supplement previous investigations in further documenting potentials for openness within religion. More specifically, procedures evaluated emic resources for openness that may exist within Muslim traditions.

Social Rationalities and Two Forms of Openness

Understanding the possibilities for religious openness may require reconsideration of the previously mentioned question. "Relative to what standard is openness to be evaluated?" The problem of incommensurability suggests that analyses of religious openness may actually demand answers to two more particular questions. First, to what extent do religions include norms that define an emic, intra-traditional potential for openness? Second, to what extent do religions include norms supporting an extra-traditional openness in which they can integrate compatible but also peacefully reject the incompatible insights of different social imaginaries?

Research into religious motivation has already suggested the need to distinguish between these two types of openness. In their pioneering work, Allport and Ross (1967) differentiated intrinsic from extrinsic reasons for being religious. Their Intrinsic Religious Orientation theoretically reflected a sincere desire to have religious social imaginaries define the ultimate end in a person's life. Their Extrinsic Religious Orientation instead involved a more utilitarian use of religion as a sometimes selfish means to other more ultimate, nonreligious ends. Studies generally confirmed their expectations that Intrinsic and Extrinsic Religious Orientation Scales would predict adaptive and maladaptive psychosocial functioning, respectively (Donahue, 1985).

The Intrinsic Orientation, nevertheless, displayed robust linkages with conservative religiosity, and this and other findings supported an argument that the Intrinsic Religious Orientation actually reflects a cognitively closed religiosity that merely predicts adjustment out of social desirability concerns (Batson, Schoenrade, & Ventis, 1993). Creation of a Quest Scale made it possible to assess a supposedly more flexible religious motivation in which "religion involves an open-ended, responsive dialogue with existential questions raised by the contradictions and tragedies of life" (Batson et al., p. 169).

Like the Intrinsic Religious Orientation, Quest itself became the subject of controversy (e.g., Hood & Morris, 1985). An Islamic critique, for example, appeared in the arguments of Dover, Miner, and Dowson (2007). The Quest Scale identifies doubt as an important element of religious openness, but Dover et al. deemed this approach to be invalid within the Muslim social imaginary. This was so because Islam presumes that openness "operates *within* a faith

tradition, and for the purpose of finding religious truth" (Dover et al., 2007, p. 204). Using Australian and Malaysian Muslim samples, these researchers developed an Islamic Religious Reflection Scale that essentially recorded an openness in which those "committed to Islam . . . use reflection, and value and engage in intellectual inquiry associated with that reflection" (Dover et al., 2007, p. 206).

In further exploring religious openness, an American study "translated" Islamic Religious Reflection into Christian language (Watson, Chen, & Hood, 2011). This Christian Religious Reflection Scale included two factors. Faith Oriented Reflection operationalized an intra-traditional openness and appeared in such claims as, "Faith in Christ is what nourishes the intellect and makes the intellectual life prosperous and productive." Intellect Oriented Reflection instead assessed an extra-traditional openness in such self-reports as, "I believe as humans we should use our minds to explore all fields of thought from science to metaphysics." A negative correlation between these two factors suggested that American Christians in fact maintained a closed religious perspective in which their Faith Oriented Reflection walled out their Intellect Oriented Reflection. Faith Oriented Reflection also predicted higher Intrinsic and lower Quest scores, whereas an opposite pattern appeared for Intellect Oriented Reflection. Statistical procedures controlling for the Altemeyer and Hunsberger (1992) Religious Fundamentalism Scale, nevertheless, revealed that American commitments to the Bible could predict higher Intellect, as well as Faith Oriented Reflection.

This negative correlation between Faith and Intellect Oriented Reflection suggested a complexity in religious openness that Dover et al. (2007) had not considered with their Muslim samples. A subsequent Iranian investigation, therefore, administered the Islamic Religious Reflection Scale to university students in Tehran and to Islamic seminarians in Qom (Ghorbani, Watson, Chen, & Dover, 2013). Faith and Intellect Oriented Reflection correlated positively rather than negatively as they had done in the United States. They also predicted higher levels of psychological openness and the Intrinsic Religious Orientation. In addition, Faith Oriented Reflection correlated negatively, and Intellect Oriented Reflection displayed no linkage with Quest. Broadly speaking, these data suggested the full intra- and extra-traditional openness of the Iranian Muslim social rationality and questioned Quest as a valid index of religious openness within this Islamic social imaginary.

Further analysis of religious openness next examined the very different cultural context of India (Kamble, Watson, Marigoudar, & Chen, 2014a). Graduate students in southern India responded to a Hindu Religious Reflection Scale, and once again, Faith and Intellect Oriented Reflection correlated positively

and predicted greater psychological openness. Both forms of religious reflection also displayed direct linkages with the Intrinsic Religious Orientation, and Intellect Oriented Reflection correlated positively and Faith Oriented Reflection correlated non-significantly with Quest. With Indian Hindus as with Iranian Muslims, therefore, religion appeared to encourage an integration of intra- and extra-traditional openness, but a positive correlation with Intellect Oriented Reflection also suggested that Quest was not irrelevant to Hindu extra-traditional openness as it had been in Iran.

Especially noteworthy in this Hindu study were additional findings for Religious Schema Scales (Streib, Hood, & Klein, 2010). This instrument includes a Truth of Texts and Teachings measure that essentially assesses a form of fundamentalism. One item within this measure says, for example, "What the texts and stories of my religion tell me is absolutely true and must not be changed." Fairness, Tolerance, and Rationality instead operationalizes "a religious style in which openness for fairness and tolerance stands in the foreground," and Xenosophia represents "a religious style which is characterized by an appreciation of the alien and thus by interreligious dialog" (Streib et al., 2010, p. 167). In German and American samples, Truth of Texts and Teachings displays a negative zero-order correlation with Xenosophia, suggesting that it reflects a religiously closed perspective that rejects dialogue (Streib et al., 2010; Watson, Chen, Ghorbani, & Vartanian, 2015; Watson, Chen, Morris, & Stephenson, 2015). In this Hindu sample, however, this relationship proved to be positive. Indian data, therefore, pointed toward a Hindu religious openness that seemed to extend even to aspects of fundamentalism.

Finally, this Indian investigation also clarified how Hindu attitudes might influence openness by examining interactions between the Attitude toward Hinduism (Francis, Santosh, Robbins, & Vij, 2008) and Intrinsic Religious Orientation scales. When the Intrinsic Orientation was high, Attitude toward Hinduism exhibited direct associations with Faith Oriented Reflection; Truth of Texts and Teachings; Fairness, Tolerance, and Rationality; and Openness to Experience. When the Intrinsic Orientation was low, these associations all became negative. Hence, moderation effects supplied even more compelling evidence that sincere Hindu commitments had a potential to encourage both intra- and extra-traditional openness.

Present Project

The present project broadened the analysis of religious openness by examining six basic issues. First, and most importantly, this study directly assessed the claim that openness for Muslims "operates *within* a faith tradition, and for the

purpose of finding religious truth" (Dover et al., 2007, p. 204). The Ummatic Personality Inventory operationalizes personality adjustment as defined within the Muslim community or *ummah* (Othman, 2011). Included in this instrument is an *Ilm* measure that expresses the Muslim belief that each individual is "given an intellect (*aq'l*) to enable him to seek knowledge (*ilm*) and to put this knowledge into practice to benefit mankind" (Othman, 2011, p. 38). As Rahman (1988) points out, "Ilm, *knowledge*, is a key concept in the Quran and the second most used word after Allah" (p. 167). Islamic social rationality nevertheless assumes, "Knowledge is not mere information; it requires the believers to act upon their beliefs and commit themselves to the goals which Islam aims at attaining" (Azram, 2011, p. 186). The *Ilm* Scale includes two dimensions that make this complexity clear. Exemplifying the Knowing *Ilm* factor is a self-report that "I feel closer to Allah when I gain more knowledge." The Doing *Ilm* factor appears in such claims as "I apply the relevant knowledge in my daily life." The argument that openness operates within Muslim traditions suggests that Knowing and Doing should correlate positively with religious and psychological openness and with Muslim commitments more generally.

Second, procedures tested the hypothesis that Muslims in Malaysia would display a positive correlation between Faith and Intellect Oriented Reflection, just as they have done with Muslims in Iran (Ghorbani et al., 2013). Iran is a largely Shiite society, whereas Malaysia is more predominately Sunni. Parallel relationships across these two different societies would suggest an integration of intra- and extra-traditional openness as a more general potential of Islam.

Third, this investigation examined the possibility that the fundamentalism of Truth of Texts and Teachings would predict greater religious and psychological openness in Malaysian Muslims just as it has done in Indian Hindus (Kamble et al., 2014a). Research demonstrates that empirical markers of fundamentalism predict greater religious and psychological openness in Iran (Ghorbani, Watson, Shamohammadi, & Cunningham, 2009); so, evidence already suggests that "fundamentalism" in Muslim society may have more positive implications than the liabilities sometimes emphasized in the West (e.g., Altemeyer & Hunsberger, 1992). Use of Xenosophia; Fairness, Tolerance, and Rationality; and Islamic Religious Reflection scales also made it possible to offer a more extensive analysis of religious openness within a Muslim cultural context. Previous studies in Iran (Ghorbani et al., 2013) and India (Kamble et al., 2014a) used Openness to Experience (Goldberg, 1999) and Integrative Self-Knowledge (Ghorbani, Watson, & Hargis, 2008) scales to assess psychological openness, and these two constructs accomplished the same purpose in the present project.

In addition to Truth of Texts and Traditions, measures of Muslim commitments included the Attitude toward Islam (Sahin & Francis, 2002) and the

Intrinsic and Extrinsic Religious Orientation (Gorsuch & McPherson, 1989) scales. This extrinsic measure includes separate personal and social factors. An Extrinsic Personal Orientation reflects the use of religion to achieve individual well-being, The Extrinsic Social factor records the use of religion to obtain social gains. Previous investigations in Iran and Pakistan have identified the Intrinsic and especially the Extrinsic Personal Orientations as indices of Muslim religious and psychological adjustment. The Extrinsic Social Orientation displays an ambiguous pattern of relationships (Ghorbani, Watson, & Khan, 2007) and is also the weakest religious orientation not only in Iran and Pakistan, but also in India (Kamble, Watson, Marigoudar, & Chen, 2014b) and in the United States (Watson, Chen, & Ghorbani, 2014). Hypotheses that *Ilm* Knowing and Doing factors should predict Muslim religious commitments, therefore, applied to the Intrinsic and the Extrinsic Personal, but not necessarily to the Extrinsic Social Religious Orientation.

Fourth, the idea that religious openness operates within Muslim religious traditions suggests not only that *Ilm* factors should correlate positively with each other and with indices of religious and psychological adjustment, but that they also should help explain other evidence of Muslim religious openness. In other words, Doing and Knowing should display at least some ability to mediate relationships of Faith and Intellect Oriented Islamic Religious Reflection with other variables.

Fifth, administration of the Quest Scale (Batson & Schoenrade, 1991) made it possible to assess the argument that Quest is incompatible with Muslim commitments (Dover et al., 2007).

Sixth, and finally, research in India demonstrates that the influences of sincere Hindu commitments on religious openness become more apparent in interactions between Hindu attitudes and the Intrinsic Religious Orientation (Kamble et al., 2014a). Analysis of a parallel possibility in Malaysia required an examination of moderation effects involving the Attitude toward Islam and the Intrinsic Religious Orientation scales. Relative to assumptions of the ISM, significant moderation effects should confirm that opportunities for openness and thus dialogue increase as Islamic attitudes reflect an increasingly sincere intrinsic form of faith.

Hypotheses

In summary, this study broadened the analysis of intra- and extra-traditional religious openness by analyzing the previously unexamined Muslim cultural context of Malaysia. Procedures tested six most important sets of hypotheses.

First, the two *Ilm* factors should broadly predict religious and psychological openness and Muslim religious commitments. In other words, Knowing and Doing should correlate positively with each other and with Islamic Religious Reflection, Religious Schema, Openness to Experience, Integrative Self Knowledge, Attitude toward Islam, and the Intrinsic and Extrinsic Personal Religious Orientations.

Second, Faith and Intellect Oriented Reflection should correlate positively with each other and also with indices of religious (i.e., Xenosophia and Fairness, Tolerance, and Rationality) and psychological (i.e., Openness to Experience and Integrative Self-Knowledge) openness.

Third, Truth of Texts and Teachings should also display direct associations with Xenosophia and with Fairness, Tolerance, and Rationality.

Fourth, Knowing and Doing should mediate at least some relationships of Faith and Intellect Oriented Reflection with other variables.

Fifth, Quest should correlate negatively with *Ilm*, Faith Oriented Reflection, Truth of Texts and Traditions, Attitude toward Islam, and the Intrinsic and Extrinsic Personal Religious Orientations.

Sixth, and finally, evidence confirming hypotheses about Muslim openness should become more apparent in the analysis of moderation effects involving the interaction between Attitude toward Islam and the Intrinsic Religious Orientation.

Method

Participants

Research participants were Sunni Muslims enrolled in classes at the International Islamic University in Kuala Lumpur, Malaysia. These 94 men, 107 women, and 4 individuals who failed to indicate their gender were 22.8 years old on average ($SD = 4.8$). In terms of ethnicity, the sample was 81.7% Malay; 3.2% Bengali; 2.8% Arab; 1.8% each Afghan, Caucasian, and Somali; 1.4% Chinese; and 5.5% various other racial groups.

Measures

English versions of all psychological instruments appeared in a single booklet. A first page obtained background information. Placement of all scales within the booklet then followed the order in which their descriptions appear below. Unless otherwise noted, each measure used a 1 (strongly disagree) to 5 (strongly agree) Likert scale. Elimination of items displaying negative item-to-total correlations maximized internal reliabilities. This procedure was in conformity

with previous studies of religious openness. The scoring of all instruments focused on the average response per item.

Religious Orientation

Minor modifications in the Gorsuch and McPherson (1989) Religious Orientations Scales made these measures more appropriate for use with Muslims. Removal of one item enhanced the internal reliability of the Intrinsic Religious Orientation Scale ($M = 3.97$, $SD = 0.54$, $\alpha = .59$). Representative of this 7-item instrument was the self-report, "My whole approach to life is based on my religion." Elimination of one item from both the Extrinsic Personal ($M = 4.35$, $SD = 0.78$, $\alpha = .64$) and Extrinsic Social ($M = 2.47$, $SD = 0.99$, $\alpha = .75$) factors improved their internal consistency as well. Illustrating the 2-item Extrinsic Personal Orientation was the belief, "What religion offers me most is comfort in times of trouble and sorrow." The 2-item Extrinsic Social motivation appeared in such claims as, "I go to the mosque mainly because I enjoy seeing people I know there."

Religious Schema

Five statements made up each Religious Schema Scale (Streib et al., 2010). Truth of Texts and Teachings displayed an improved internal reliability following removal of one item ($M = 4.31$, $SD = 0.62$, $\alpha = .67$). Again, illustrating this construct was the assertion, "What the texts and stories of my religion tell me is absolutely true and must not be changed." Representative of Fairness, Tolerance, and Rationality ($M = 4.18$, $SD = 0.59$, $\alpha = .67$) was the belief, "We should resolve differences in how people appear to each other through fair and just discussion." Indicative of Xenosophia ($M = 3.53$, $SD = 0.78$, $\alpha = .79$) was the self-report, "The truth I see in other world views leads me to re-examine my current views."

Openness to Experience

Ten items made up the Openness to Experience Scale from the International Personality Item Pool (Goldberg, 1999). Removal of one statement enhanced internal reliability ($M = 3.40$, $SD = 0.52$, $\alpha = .62$). A representative expression of openness said, "I enjoy hearing new ideas."

Attitude toward Islam

The Sahin and Francis (2002) Attitude toward Islam Scale included 23 statements (also see Francis, Sahin, & Al-Failakawi 2008). Representative of such attitudes were self-reports that "I find it inspiring to listen to the *Qur'an*" and that "I love to follow the life of the Prophet" ($M = 4.49$, $SD = 0.50$, $\alpha = .91$).

Research has confirmed the reliability and validity of this instrument as the index of a positive affective response to Islam (Abu-Raiya & Hill, 2014).

Islamic Religious Reflection

The Islamic Religious Reflection Scale (Dover et al., 2007) included the 7-item Faith Oriented ($M = 4.29$, $SD = 0.66$, $\alpha = .81$) and the 5-item Intellect Oriented ($M = 4.04$, $SD = 0.72$, $\alpha = .69$) subscales. Representative of the former measures was the assertion, "Faith in Allah is what nourishes the intellect and makes the intellectual life prosperous and productive." Exemplifying the latter was the claim, "I believe as humans we should use our minds to explore all fields of thought from science to metaphysics."

Ilm

The *Ilm* Scale included the 5-item Knowing ($M = 4.92$, $SD = 0.82$, $\alpha = .76$) and the 6-item Doing ($M = 4.36$, $SD = 0.78$, $\alpha = .80$) factors. Representative items were introduced previously. Responses to these two measures from the Ummatic Personality Inventory (Othman, 2011) ranged from 1 (I never do this) to 6 (I always do this).

Integrative Self-Knowledge

The Integrative Self-Knowledge Scale ($M = 3.31$, $SD = 0.59$, $\alpha = .78$) included 12 statements that describe tendencies to unite past, present, and desired future self-experience into a meaningful whole (Ghorbani et al., 2008). This instrument, therefore, assessed openness to self-experience. One item said, for instance, "If I need to, I can reflect about myself and clearly understand the feelings and attitudes behind my past behaviors." Response options for this instrument ranged from 1 (largely untrue) to 5 (largely true).

Quest

Procedures removed two items displaying negative item-to-total correlations in order to produce a more internally reliable 10-item Quest Scale (Batson & Schoenrade, 1991; $M = 4.18$, $SD = 1.45$, $\alpha = .80$). One of the eliminated statements made direct reference to the element of doubt that so concerned Dover et al. (2007): "I find religious doubts upsetting." The other reverse-scored statement did not directly but did indirectly relate to doubt: "I do not expect my religious convictions to change in the next few years." The final scale, nevertheless, included other expressions of doubt (e.g., "it might be said that I value my religious doubts and uncertainties" and "for me, doubting is an important part of what it means to be religious").

Procedures

All aspects of this project conformed to institutional guidelines for the conduct of ethical research. Involvement in the study was voluntary and confidential. Participants had an option to be included in a lottery for a gift book as a possible reward for contributing to the project. Researchers administered research booklets to individuals or to student groups of varying size in a classroom setting, the library, or various other campus locations. Completion of the questionnaire took less than an hour.

Again, the scoring of all scales involved use of the average response per item. Preliminary analyses assessed whether this Malaysian sample differed in average levels of the three Religious Orientations, as has been the case in other societies. A multivariate analysis of variance (MANOVA) also evaluated whether gender affected responding and should thus be controlled in subsequent analyses.

Focus on the empirical hypotheses then began with an examination of relationships among variables. Procedures next tested the prediction that the Knowing and Doing *Ilm* factors would mediate associations of Faith and Intellect Oriented Reflection with other constructs (Hayes, 2012). Relative to the issue of moderation, multiple regression procedures tested the possibility that Attitude toward Islam and the Intrinsic Religious Orientation would interact in predicting other constructs (Baron & Kenny, 1986). These analyses addressed the problem of multicollinearity by standardizing the Attitude toward Islam and Intrinsic Religious Orientation data prior to computation of their cross-product (Aiken & West, 1991). Evidence of moderation appeared if the cross-product increased the variance explained in a measure after these two scales had been entered into the prediction equation on the previous step.

Results

Preliminary Analyses

Across religions and societies, the Extrinsic Social motivation has consistently been lowest among the three Religious Orientations. A first preliminary analysis uncovered the same effect with Muslims in Malaysia, Greenhouse-Geisser $F(2, 340.90) = 367.87, p < .001$. All post hoc comparisons proved to be statistically significant with the Extrinsic Social Orientation ($M \pm S.E.M. = 2.48 \pm .05$) lowest, the Extrinsic Personal Orientation ($4.35 \pm .05$) highest, and the Intrinsic Orientation ($3.97 \pm .04$) in between.

A second preliminary analysis used a multivariate analysis of variance to evaluate whether gender affected responding. A significant overall effect did

appear, Wilks' Lambda = .757, $F(14, 186) = 4.27, p < .001$. Women scored higher on the Knowing, Attitude toward Islam, Faith and Intellect Oriented Reflection, Truth of Texts and Teachings, and Intrinsic and Extrinsic Personal Orientation measures, and they also scored lower on Xenosophia, $F_s(1, 199) > 5.30, ps < .05$. All subsequent statistical procedures, therefore, controlled for gender.

Correlations

In partial correlations controlling for gender, Knowing displayed direct relationships with Doing (.54); Attitude toward Islam (.54); Faith Oriented Reflection (.46); Intellect Oriented Reflection (.37); Truth of Texts and Teachings (.37); Fairness, Tolerance, and Rationality (.38); and Xenosophia (.22, $ps < .01$). Similarly, Doing predicted higher levels of Attitude toward Islam (.36); Faith Oriented Reflection (.42); Intellect Oriented Reflection (.20); Truth of Texts and Teachings (.23); Fairness, Tolerance, and Rationality (.30); and Xenosophia (.17, $ps < .01$). The Attitude toward Islam, Islamic Religious Reflection, and Religious Schema variables all correlated positively with each other ($M r_{ab,c} = .42, p < .001$) and with the range defined by a .14 ($p < .05$) relationship of Truth of Texts and Teachings with Xenosophia to a .68 ($p < .001$) connection of Attitude toward Islam with Faith Oriented Reflection.

With regard to the Religious Orientation, Quest, and psychological openness constructs, the Intrinsic Orientation exhibited linkages that were positive with the Extrinsic Personal Orientation (.34, $p < .001$) and Integrative Self-Knowledge (.19, $p < .01$) and negative with Quest (-.14, $p < .05$). The Extrinsic Social Orientation correlated negatively with Integrative Self-Knowledge (-.22, $p < .01$). A positive relationship of Openness to Experience with Integrative Self-Knowledge (.24, $p < .01$) suggested that they in fact both assessed aspects of psychological openness. No other significant relationships appeared among these variables.

Table 1 summarizes relationships of the *Ilm*, Attitude toward Islam, and religious openness variables with the Religious Orientation, Quest, and psychological openness constructs. Like Faith, Tolerance, and Rationality, the *Ilm* Knowing and Doing factors predicted higher Intrinsic, Extrinsic Personal, Quest, Openness to Experience, and Integrative Self-Knowledge scores. Faith Oriented Reflection was similar except that it failed to correlate with Quest. Pointing toward greater openness, Intellect Oriented Reflection and Xenosophia displayed direct linkages with Quest and with Openness to Experience and also predicted a stronger Extrinsic Personal Orientation. Truth of Texts and Teaching correlated positively only with the Intrinsic and Extrinsic Personal Religious Orientations. Attitude toward Islam correlated positively with the Intrinsic and Extrinsic Personal, but negatively with the Extrinsic

TABLE 1 *Partial correlations of religious orientation and psychological openness variables with Ilm, Attitudes toward Islam, Islamic Religious Reflection, and Religious Schema Scales*

Measures	INT	EXP	EXS	Quest	OE	ISK
Knowing	.32***	.42***	.03	.16*	.26***	.15*
Doing	.23***	.38***	.05	.19**	.37***	.18*
Attitude toward Islam	.53***	.58***	-.17*	-.12	.09	.18*
Faith Oriented Reflection	.45***	.60***	-.04	.09	.20**	.16*
Intellect Oriented Reflection	.07	.34***	-.10	.33***	.34***	.10
Truth of Texts and Teachings	.46***	.50***	.06	-.07	.09	.00
Fairness, Tolerance, and Rationality	.26***	.35***	-.06	.11	.41***	.24***
Xenosophia	-.12	.29***	.11	.22**	.32***	.02

Note. Partial correlations controlled for gender. Religious Orientation measures included the Intrinsic (INT), Extrinsic Personal (EXP), Extrinsic Social (EXS) and Quest scales. Openness to Experience (OE) and Integrative Self-Knowledge (ISK) assessed psychological openness. $N = 205$. * $p < .05$ ** $p < .01$ *** $p < .001$.

Social Orientations. A positive association with Integrative Self-Knowledge also linked Attitude toward Islam with psychological openness.

Mediation

Statistical procedures next examined whether the *Ilm* factors mediated relationships of Islamic Religious Reflection with other measures. These procedures controlled for gender and maintained the conventional focus on unstandardized regression coefficients (B). As Baron and Kenny (1986) emphasize, the potential mediator of a model should display a significant association with the independent variable. In this study, independent variables included both Faith and Intellect Oriented Reflection. Knowing in fact exhibited positive linkages with Faith (.56) and Intellect (.38) Oriented Reflection. Significant positive linkages also appeared for Doing with Faith (.52) and with Intellect (.22) Oriented Reflection ($ps < .01$). Both Knowing and Doing, therefore, served as possible mediators.

The independent variable of a model must also predict the dependent variable. After controlling for gender, Faith Oriented Reflection displayed significant associations with Intellect Oriented Reflection (.60); Attitude toward Islam

(.51); the Intrinsic (.38) and Extrinsic Personal (.70) Religious Orientations; Truth of Texts and Teachings (.46); Fairness, Tolerance, and Rationality (.46); Xenosophia (.42); Openness to Experience (.16); and Integrative Self-Knowledge (.16). With regard to the other independent variable, Intellect Oriented Reflection exhibited direct connections with Attitude toward Islam (.23); the Extrinsic Personal Orientation (.36), Truth of Texts and Teachings (.19); Fairness, Tolerance, and Rationality (.38), Xenosophia (.54), Openness to Experience (.21), and Quest (.71, all $ps < .05$). These significant outcomes identified dependent variables to be examined in mediation models.

Mediation analyses followed the Hayes (2012) bootstrapping method. Calculation of indirect (i.e., mediation) effects involved the product of the coefficient for the independent variable predicting the mediator times the coefficient observed for the mediator with a dependent variable. Tests of significance used 95% confidence intervals (CI) that were bias corrected and based upon 1000 bootstrap samples. These analyses most generally demonstrated that the two *Ilm* measures mediated at least some Islamic Religious Reflection relationships with other variables. Table 2 underlines the significant mediation effects, which were evident when zero did not fall within the confidence interval. The direct effects listed in Table 2 specify the association between the independent and dependent variables after including mediators in the model. When accompanied by evidence of mediation, a nonsignificant direct effect documents full mediation, whereas a still significant direct effect reveals partial mediation.

With regard to the Faith Oriented Reflection independent variable, Table 2 makes it clear that Knowing partially mediated relationships with Attitude toward Islam, the Intrinsic and Extrinsic Personal Orientations, and Truth of Texts of Teachings. Doing fully mediated the association with Openness to Experience. Knowing also partially mediated the connection with Intellect Oriented Reflection without the total indirect effect being significant. In contrast, a total indirect effect appeared with Fairness, Tolerance, and Rationality, but without either *Ilm* measure serving as a significant individual mediator.

With Intellect Oriented Reflection as the independent variable, Knowing and Doing together partially mediated associations with the Attitude toward Islam and Extrinsic Personal Orientation dependent variables. Knowing fully mediated the relationship with Truth of Texts and Teachings, and Doing partially mediated the effect observed for Fairness, Tolerance, and Rationality. Doing also partially mediated relationships with Openness to Experience and with Quest, but without the total indirect effects being significant.

TABLE 2 *Ilm knowing and doing factor mediations of religious reflection independent variable (IV) relationships with dependent variable (DV) measures*

IV	DV	Direct Effect	Total Indirect 95% CI	Knowing In-direct 95% CI	Doing Indirect 95% CI
Faith	IOR	.57**	.03 (-.03 to .10)	<u>.07 (.02 to .15)</u>	-.05 (-.11 to .01)
Oriented	ATI	.42*	<u>.09 (.04 to .15)</u>	<u>.10 (.05 to .15)</u>	-.01 (-.04 to .03)
Reflection	Intrinsic	.33*	<u>.05 (.00 to .11)</u>	<u>.06 (.01 to .12)</u>	-.01 (-.06 to .04)
	EXP	.56**	<u>.14 (.06 to .23)</u>	<u>.09 (.01 to .17)</u>	.05 (-.02 to .12)
	TTT	.39**	<u>.07 (.00 to .16)</u>	<u>.09 (.03 to .18)</u>	-.02 (-.07 to .03)
	FTR	.35**	<u>.10 (.04 to .18)</u>	.06 (-.01 to .15)	.04 (-.01 to .10)
	Xenosophia	.42**	.03 (-.06 to .14)	.04 (-.04 to .14)	-.01 (-.11 to .07)
	OE	.06	<u>.11 (.04 to .19)</u>	-.00 (-.06 to .08)	<u>.11 (.06 to .17)</u>
	ISK	.09	.07 (-.01 to .16)	.03 (-.04 to .10)	.05 (-.04 to .12)
	Intellect	ATI	.13**	<u>.11 (.07 to .16)</u>	<u>.09 (.06 to .15)</u>
Oriented	EXP	.22**	<u>.14 (.07 to .21)</u>	<u>.09 (.03 to .16)</u>	<u>.05 (.01 to .10)</u>
Reflection	TTT	.09	<u>.10 (.05 to .17)</u>	<u>.09 (.04 to .17)</u>	.01 (-.01 to .04)
	FTR	.38**	<u>.07 (.03 to .12)</u>	.04 (-.00 to .09)	<u>.03 (.01 to .07)</u>
	Xenosophia	.54**	.02 (-.03 to .08)	.01 (-.04 to .07)	.01 (-.02 to .05)
	OE	.21**	.03 (-.02 to .07)	-.02 (-.06 to .03)	<u>.05 (.02 to .09)</u>
	Quest	.66**	.05 (-.06 to .17)	-.01 (-.10 to .09)	<u>.06 (.01 to .14)</u>

Note. All analyses controlled for gender. Significant mediation effects are underlined. Dependent variables included Intellect Oriented Reflection (IOR); Attitude toward Islam (ATI); Extrinsic Personal (EXP); Truth of Texts and Teaching (TTT); Fairness, Tolerance, and Rationality (FTR); Openness to Experience (OE); and Integrative Self-Knowledge (ISA). $N = 205$. * $p < .05$ ** $p < .01$ *** $p < .001$.

Moderation

As Table 3 makes clear, the Attitude toward Islam and Intrinsic Religious Orientation scales combined to directly explain variance in Faith Oriented Reflection and in Truth of Texts and Teachings. Attitude toward Islam was also a positive and the Intrinsic Scale a negative predictor of Xenosophia. Attitude toward Islam alone displayed positive associations with Knowing and Doing; Intellect Oriented Reflection; Fairness, Tolerance, and Rationality; and the Extrinsic Personal Orientation.

Moderation effects appeared with five variables. Figure 1 clarifies these significant outcomes and, in general terms, identifies Truth of Texts and Teachings; Fairness, Tolerance, and Rationality; and Integrative

TABLE 3 *Multiple regression analyses using Attitude toward Islam (ATI), the Intrinsic (INT) Religious Orientation, and their interaction (ATIXINT) to predict other measures*

Variable	Step 1		Step 2		
	ΔR^2	β		ΔR^2	ATIXINT
		ATI	INT		
Knowing	.27***	.49***	.08	.00	-.01
Doing	.13***	.34***	.06	.00	.02
Faith Oriented Reflection	.46***	.61***	.15*	.01	-.08
Intellect Oriented Reflection	.13***	.42***	-.13	.00	.01
Truth of Texts and Teachings	.37***	.48***	.21**	.02**	.18**
Fairness, Tolerance, Rationality	.11***	.24***	.14	.08***	.32***
Xenosophia	.07***	.30***	-.28**	.01	-.10
Integrative Self-Knowledge	.05**	.11	.15	.03*	.18*
Openness to Experience	.02	.16	-.16	.02	.16
Extrinsic Personal Orientation	.33***	.56***	.05	.02*	-.16*
Extrinsic Social Orientation	.02	-.15	-.01	.00	-.03
Quest	.02	-.09	-.11	.07***	-.31***

Note. A preliminary step controlling for gender preceded Steps 1 and 2. $N = 205$. * $p < .05$
 ** $p < .01$ *** $p < .001$.

Self-Knowledge as relatively more consistent and the Extrinsic Personal Orientation and Quest as relatively less consistent with sincere Muslim commitments. Specifically, the positive Attitude toward Islam connection with Truth of Texts and Teachings became stronger as the Intrinsic Orientation increased. With Fairness, Tolerance and Rationality and with Integrative Self-Knowledge, positive relationships with Attitude toward Islam at higher levels of the Intrinsic Orientation became negative at lower levels. The direct Attitude toward Islam association the Extrinsic Personal Orientation became weaker as the Intrinsic Orientation became stronger. Finally, Attitude toward Islam linkages with Quest became more negative at higher than at intermediate levels of intrinsic commitments, but the association became positive at lower levels of the Intrinsic Orientation. In other words, these latter two patterns of results identified the Extrinsic Personal Orientation as less compatible and Quest as basically incompatible with sincere Muslim commitments.

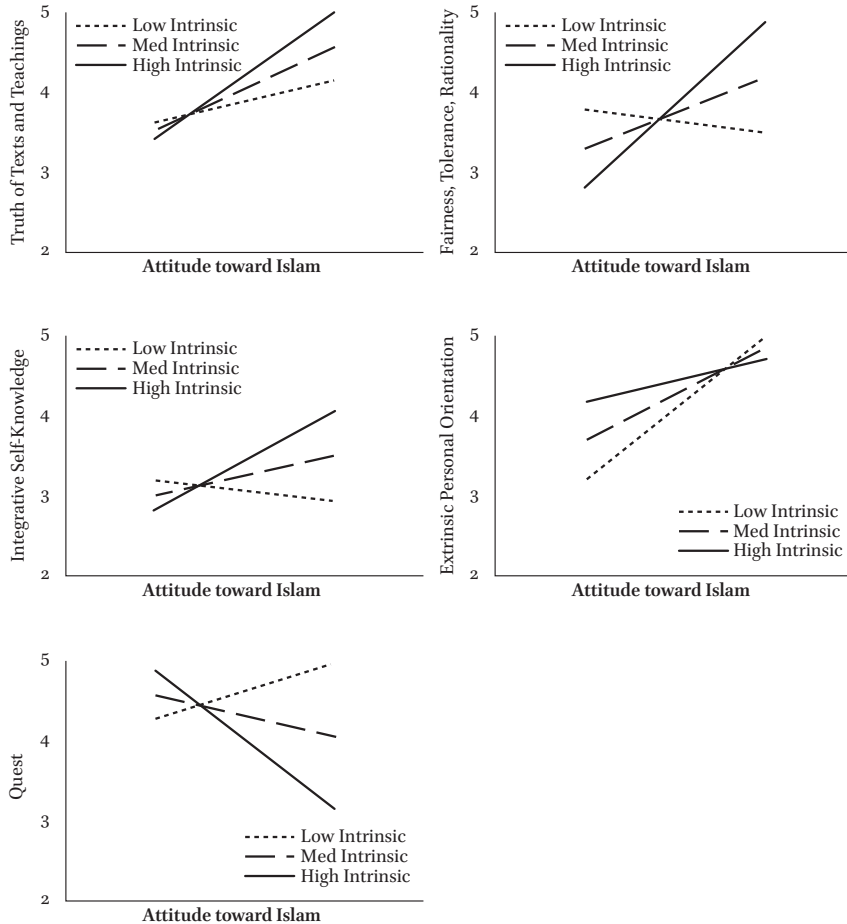


FIGURE 1 Significant Intrinsic Religious Orientation moderation of Attitude toward Islam relationships. Lines on each graph represent the Intrinsic moderator at low (2 SD below its mean), medium (mean), and high (2 SD above its mean) levels.

Discussion

This investigation further supported the suggestion that religions have a potential for openness and thus for dialogue. In a sample of Muslims in Malaysia, the intra-traditional openness of Faith Oriented Reflection correlated positively with the extra-traditional openness of Intellect Oriented Reflection. This outcome within a largely Sunni cultural context paralleled an effect observed previously in the largely Shiite society of Iran (Ghorbani et al., 2013). Both forms of Islamic Religious Reflection also predicted higher levels of Fairness, Tolerance

and Rationality; Xenosophia; and Openness to Experience. Faith Oriented Reflection displayed a direct association with Integrative Self-Knowledge as well. These significant relationships all supplied evidence of a religious and psychological openness associated with Muslim social rationality.

Data for Truth of Texts and Teachings further documented Muslim potentials for openness. This measure operationalizes a fundamental commitment to the texts of a religious tradition and in zero-order correlations predicts a closed-minded religious perspective in America (e.g., Streib et al., 2010). In Malaysia, however, Truth of Texts and Teachings correlated positively with the religious openness of Faith and Intellect Oriented Religious Reflection; Fairness, Tolerance, and Rationality; and Xenosophia. Truth of Texts and Teachings also predicts greater openness in Indian Hindus (Kamble et al., 2014a) and in American Christians after partial correlations control for the Altemeyer and Hunsberger (1992) Religious Fundamentalism Scale (Watson, Chen, Ghorbani, & Vartanian, 2015; Watson, Chen, & Morris, 2014). A previous Iranian investigation also yielded evidence connecting fundamentalism with openness (Ghorbani et al., 2009).

Overall, these results suggest that even so-called fundamentalism may have a potential to encourage openness. A further implication is that fundamentalism may operate differently in the United States than elsewhere. A recent study in fact suggested that a defensive response to secularism may explain this American difference (Watson, Chen, Morris, & Stephenson, 2015). The importance of secularism also seemed evident in the positive correlation of Intellect with Faith Oriented Reflections observed in Christians living in the theocratic and thus non-secular context of Iran (Watson, Ghorbani, Vartanian, & Chen, 2015). In other words, the negative relationship of Intellect with Faith Oriented Religious Reflection cannot be identified as a general feature of Christian commitment, but rather as a reflection of secularism within the cultural context.

Especially noteworthy in confirming Muslim religious openness were findings for the two *Ilm* factors. Dover et al. (2007) argue that for Muslims openness “operates *within* a faith tradition, and for the purpose of finding religious truth” (p. 204). Knowing and Doing record this intra-traditional Islamic pursuit of truth, and both measures clearly predicted Muslim religious commitments along with religious and psychological openness. These two measures also partially or fully mediated at least some Islamic Religious Reflection relationships with other variables. In short, findings for Knowing and Doing demonstrated that Islam did appear to have intra-traditional resources for “finding religious truth.”

According to Dover et al. (2007), Quest with its emphasis on doubt is incompatible with the Muslim social imaginary. The present data suggested a more

complex conclusion. A Quest compatibility with Malaysian Muslim religious openness seemed evident in its direct linkages with Knowing, Doing, Intellect Oriented Religious Reflection, and Xenosophia. Four other observations, nevertheless, demonstrated that such outcomes suggest no easy harmony between Quest and Islamic commitments. First, Quest did not previously correlate with Intellect Orientation Reflection in the different Muslim context of Iran (Ghorbani et al., 2013). Second, two items eliminated from the Quest Scale displayed negative item-to-total correlations in the present project and made direct or indirect reference to the doubt that Dover et al. identify as problematic. Third, Quest correlated negatively with the Intrinsic Religious Orientation. Finally, and most importantly, interactions between Attitude toward Islam and the Intrinsic Religious Orientation questioned the appropriateness of Quest for Muslims. Attitude toward Islam correlated positively with Quest only when the Intrinsic Orientation was low, but this relationship became negative when the Intrinsic Orientation was high. In short, the problematic implications of Quest became clearer as personal Muslim commitments become stronger.

Other interactions between Attitude toward Islam and the Intrinsic Religious Orientation supported the ISM in suggesting that opportunities for openness and thus for dialogue would increase as Islamic attitudes reflected a sincerer form of faith. Attitude toward Islam predicted higher levels of the religious openness of Fairness, Tolerance, and Rationality and of the psychological openness of Integrative Self-Knowledge when the Intrinsic Orientation was high. However, these linkages became negative when the Intrinsic Orientation was low. Findings that Islamic attitudes more strongly predict openness when religious commitments are sincere supports the argument that dialogue has cultural validity within the Muslim ideological surround (also see Wani et al., 2015).

As would be expected, the positive linkage of Attitude toward Islam with the fundamentals of faith expressed by Truth of Texts and Teachings became stronger at higher levels of the Intrinsic Orientation. In contrast, the Attitude toward Islam relationship with higher levels of the Extrinsic Personal Orientation became weaker as the Intrinsic Orientation became stronger. This latter result seemed consistent with suggestions that extrinsic religious motivations may in general be less reflective of Islamic ideals (Ghorbani, Watson, Ghramaleki, Morris, & Hood, 2002).

Limitations

As with any investigation, limitations mean that caution is essential in coming to definitive conclusions. Perhaps most obviously, university students served

as research participants, and they were not representative of the Malaysian population as a whole. A more representative sample could yield different outcomes. At the same time, however, Intrinsic Orientation interactions with Attitude toward Islam revealed that Muslim social imaginaries were not homogeneous. In at least some investigations, it may make sense to acknowledge the heterogeneity of religious commitments and to focus on discrete religious rationalities that may exist within a society. With regard to the present and to companion projects in Iran, India, and the United States, university students presumably maintained relatively stronger and more consistent commitments to the intellect and would seem especially germane to efforts designed to assess the positive potentials for openness that may exist within religious traditions.

Direct relationships between the Islamic Religious Reflection Scales in both Iran and Malaysia seem to support a broader generalization about positive Muslim aspirations to integrate intellect with faith. Muslim societies may, nevertheless, exhibit important differences that mean these linkages are not always evident. The present and previous data also say nothing definitive about the religious openness of Muslims living as a minority community in other cultural contexts. Life in the West, for example, might inhibit openness between faith and an intellect that receives its predominate expression in the language of a surrounding social rationality that more strongly reflects secular assumptions (Watson, Ghorbani, Vartanian, & Chen, 2015).

Conclusions about the implications of fundamentalism rested upon use of the Truth of Texts and Teachings factor from the Religious Schema Scale (Streib et al., 2010). Evidence already demonstrates that less optimistic interpretations of a commitment to the fundamentals of a faith can follow from use of the Altemeyer and Hunsberger (1992) Religious Fundamentalism Scale. Such differences suggest that heterogeneity may exist within the social rationalities of "fundamentalism." Possible contrasts in what "fundamentalism" might mean clearly deserve additional research attention (see, for example, Watson et al., 2003).

Internal reliabilities proved to be lower for a number of the scales used in this project. Even more robust patterns of relationship might appear with the development of more internally consistent measures for use with Malaysian Muslims.

Finally, all findings of this project were correlational. Causation cannot be inferred from correlation. The present data, for example, do not prove that *Ilm* causes Muslim religious and psychological openness. Mediation effects were consistent with that possibility, but confident demonstration of causality will require the use of other research designs.

Conclusion

Concluding emphasis should be placed upon the usefulness of the *Ilm* factors in demonstrating that the Muslim intellect “operates *within* a faith tradition, and for the purpose of finding religious truth” (Dover et al., 2007, p. 204). Knowing and Doing expressed a commitment to knowledge that operates explicitly within the Islamic social imaginary. Linkages with indices of openness, therefore, supplied compelling and culturally relevant evidence that Islam has potentials for integrating intellect with faith.

Future studies should further analyze *Ilm* and other measures of Muslim psychological functioning (e.g., Othman, 2011). In the West, social imaginaries emphasize the economy, self-governance, and the public sphere (Taylor, 2003). Muslim social imaginaries, in contrast, will by definition include norms derived from the Islamic vision of God. Results of this investigation suggest that any complete social scientific understanding of Islamic commitments should include at least some sensitivity to Muslim social rationality. A further implication is that researchers should work toward an operationalization of what all religious traditions attempt to “say” within their social life. Empirical “dialogue” between religious-specific (e.g., *Ilm* and Attitude toward Islam) and religious-general (e.g., Intrinsic Religious Orientation and Quest) research constructs should enhance social scientific understandings of religious social imaginaries (e.g., Ghorbani et al., 2011; Watson, 2011). An encouragement of such dialogs would seem essential in developing the extra-traditional openness of the social sciences as they attempt to fulfill potentials inherent in their own intra-traditional openness.

Social scientifically constructed dialogs could have important cultural influences. The periodic violence of contemporary events can present disturbing evidence of “misunderstanding” across social rationalities. A social science that formally sought to decenter itself enough from its originating norms to study the “spaces” between social rationalities might be better equipped to understand the general and specific dynamics of extra-traditional openness. This would include the extra-traditional openness of the social sciences themselves. Insights into extra-traditional openness could then prove useful in building “bridges” between social imaginaries or in making it clear where the building of “bridges” may not be currently possible. As emphasized previously, such inter-traditional research would necessarily reflect a somewhat arbitrary commitment to community-general norms, and peace represents a plausible and worthwhile norm for just such an inter-traditional social science (e.g., Ghorbani et al., 2012; Watson, 2006). Indeed, efforts to study and encourage

intra-traditional potentials for peace could be a critical element in the inter-traditional social scientific promotion of extra-traditional openness.

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