Religious Openness Hypothesis: I. Religious Reflection, Schemas, and Orientations within Religious Fundamentalist and Biblical Foundationalist Ideological Surrounds

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Religious Openness Hypothesis: I. Religious Reflection, Schemas, and Orientations Within Religious Fundamentalist and Biblical Foundationalist Ideological Surrounds

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According to the Religious Openness Hypothesis, negative correlations between Faith and Intellect Oriented Religious Reflection in the United States reveal a defensive fundamentalist response to secularization in the West. In an exploration of this hypothesis, 350 undergraduates responded to Christian Religious Reflection, Religious Fundamentalism, Biblical Foundationalism, Religious Schema, Religious Orientation, and Need for Cognition scales. Partial correlations controlling for Biblical Foundationalism sought to highlight a Religious Fundamentalist Ideological Surround described by a defensive commitment to Christian fundamentals. Partial correlations controlling for Religious Fundamentalism attempted instead to define a Biblical Foundationalist embrace of Christian fundamentals without the defensiveness. Biblical Foundationalism predicted greater openness and wide-ranging religious commitments. Religious Fundamentalism pointed toward diminished openness and less extensive religious commitments. Data for Biblical Foundationalism, therefore, confirmed the ability of Western Christians to unite intellect with faith, but results for Religious Fundamentalism suggested the defensive ghettoization of a faith that walled out the intellect.

Central to the Ideological Surround Model (ISM) of psychology and religion is the postmodern claim that religions and social sciences operate as incommensurable social rationalities (Watson, 1993, 2011, 2014; Ghorbani, Watson, Saeedi, Chen, & Silver, 2012). Social rationalities are incommensurable when communities bring their thought and practice into conformity with different ultimate standards (MacIntyre, 1988). In Christianity and other traditional religions, the ultimate standard will be some community-specific vision of God. In the social sciences, the ultimate standard will be some at least implicitly shared reading of nature.

Assertions based upon such different standards will sometimes, but not always, be incompatible. On other occasions, they will be compatible; and quite often, they will simply be irrelevant to each

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other. Unavailable outside these "supernatural" and "natural" rationalities, however, will be a fully objective, standard-independent rationality for judging standards, a fact which makes them "incommensurable" by definition.

Incommensurable rationalities reveal the important role of ideology. MacIntyre (1978) defines ideologies as somewhat non-empirical, normative, and sociological systems of belief. Incommensurable rationalities are somewhat non-empirical because they rest upon faith in some ultimate standard that can help organize but cannot be proven by empirical observations. Research findings of an evolutionary psychologist, for example, will not convince a Christian psychologist of the non-existence of God nor of the ultimacy of nature. Conversely, the social scientific work of a Christian psychologist will not demonstrate to the evolutionary psychologist that nature must be understood under the higher standard of God. The evolutionary psychologist will instead believe that "God" will have a fully natural explanation. These and

other standards within contemporary social life give rise to norms that guide the thought and practice of a vast array of sociologically distinct communities. The broader implications of these somewhat non-empirical, normative, and sociological systems of thought should, therefore, be clear. Social rationalities necessarily operate within an ideological surround.

Given the challenges of diversity within pluralistic culture, the ISM pursues methodological innovations that seek to bring the ultimate standards of incommensurable rationalities into sharper focus. This effort assumes that between the social science of populations and the social science of individuals there must be a social science of communities. Nomothetic and ideographic research procedures clarify populations and individuals, respectively. "Ideologographic" approaches are necessary to illuminate communities (Watson, 2011). Among these ideologographic procedures is the use of statistical procedures to control for the influence of ideology. In one project, for instance, partial correlations controlling for anti-Christian humanistic and anti-humanistic Christian language within psychological scales made it possible to better understand both Christian and humanistic ideological surrounds (Watson, Morris, & Hood, 1987). The present project used statistical controls for ideology to highlight important diversities within the communal rationalities of Christians.

Research Into Religious Openness

Among other things, the ISM assumes that incommensurable rationalities mean that the definition of psychological processes can vary with commitments to different ultimate standards. Religious rationalities, for example, may include definitions of psychological and religious openness that are in conformity with their own, but not necessarily with social scientific standards (Kamble, Watson, Marigoudar, & Chen, 2014b; also see Hood, Hill, & Williamson, 2005).

Formal development of this claim emerged out of research into religious motivation. As initially conceptualized, the Intrinsic Religious Orientation Scale records an adaptive attempt of individuals to sincerely live their faith, whereas the Extrinsic Religious Orientation Scale assesses an often more maladaptive use of religion to accomplish other ends (Allport & Ross, 1967). Research has generally confirmed the adjustment expectations for these two measures (Donahue, 1985). Strong relationships with conservative religiosity, nevertheless, led to a skeptical reinterpretation of the Intrinsic Scale as an index of cognitive and religious rigidity that often predicts adjustment merely out of social desirability concerns (Batson, Schoenrade, & Ventis, 1993). A Quest Scale sought to operationalize a more truly open 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).

Some items from the Quest Scale highlight doubt as evidence of religious openness, a fact that led Dover, Miner, and Dowson (2007) to evaluate this instrument as inappropriate for use with Muslims. They argued that for Muslims, openness necessarily "operates *within* a faith tradition, and for the purpose of finding religious truth" (p. 204). In other words, Quest essentially reflects an extra-traditional definition of openness associated with the ideological surround of an incommensurable social scientific rationality. These researchers used Australian and Malaysian samples to devise an intra-traditional Islamic Religious Reflection Scale for operationalizing an explicitly Muslim form of openness.

A later American study modified the language of this instrument to make it appropriate for Christians. This Christian Religious Reflection Scale turned out to have Faith and Intellect Oriented Reflection factors that correlated negatively (Watson, Chen, & Hood, 2011). Faith Oriented Reflection recorded a Christian-centered approach to understanding that appeared in such self-reports as, "Faith in Christ is what nourishes the intellect and makes the intellectual life prosperous and productive." Intellect Oriented Reflection assessed openness to forms of understanding that were not specific to Christian commitment. One item said, for instance, "I believe as humans we should use our minds to explore all fields of thought from science to metaphysics." Faith Oriented Reflection predicted higher Intrinsic and lower Quest scores, whereas Intellect Oriented Reflection displayed an opposite pattern of results.

This American study also used statistical controls for ideology in order to differentiate between Religious Fundamentalist and Biblical Foundationalist Ideological Surrounds. The Altemeyer and Hunsberger (1992) Religious Fundamentalism Scale records beliefs "there is one set of religious teachings that clearly contains the fundamental, basic, intrinsic, essential, inerrant

truth about humanity and deity; that this essential truth is fundamentally opposed by forces of evil which must be vigorously fought; that this truth must be followed today according to the fundamental, unchangeable practices of the past; and that those who believe and follow these fundamental teachings have a special relationship with the deity" (p. 118). In an earlier project, ISM ideologographic procedures had "translated" statements from this instrument into a Biblical Foundationalist language that was less aggressive, more thoughtful, and more sensitive to non-fundamentalist perspectives (Watson et al., 2003). Partial correlations controlling for the Religious Fundamentalism Scale revealed that the two Religious Reflection factors could co-vary directly in American Christian samples and that the less defensive Biblical Foundationalism could be compatible with Intellect as well as with Faith Oriented Reflection.

In America, the negative zero-order correlation between Faith and Intellect Oriented Reflection suggested a polarization in religious thinking that had not been explored as a possibility in Muslim samples (Dover et al., 2007). A study in Iran, therefore, reexamined the Islamic Religious Reflection Scale and its two factors using samples of university students from Tehran and Islamic seminarians from Qom (Ghorbani, Watson, Chen, & Dover, 2013). Most important were observations that Faith and Intellect Oriented Reflection correlated positively rather than negatively in Iran and that both predicted greater openness. The two forms of Muslim religious reflection also displayed a direct association with the Intrinsic Scale, and Faith Oriented Reflection correlated negatively whereas Intellect Oriented Reflection correlated nonsignificantly with Quest.

A further analysis of religious rationalities modified the language of the Dover et al. (2007) instrument in order to create a Hindu Religious Reflection Scale. Graduate students in India responded to this measure. Faith and Intellect Oriented Religious Reflection once again displayed direct relationships with each other and with measures of religious and psychological openness (Kamble et al., 2014b). Both factors also predicted higher scores on the Intrinsic Religious Orientation Scale, and Intellect Oriented Reflection correlated positively and Faith Oriented Reflection correlated nonsignificantly with Quest.

In summary, Faith and Intellect Oriented Reflection correlated negatively in American Christians, but positively in Iranian Muslims and Indian Hindus. Religious reflection, therefore, was more polarized in the United States. Further evidence of polarization appeared when Faith Oriented Reflection correlated positively and Intellect Oriented Reflection correlated negatively with the Intrinsic Orientation in the United States, whereas both forms of religious reflection displayed a direct relationship with the Intrinsic Orientation in Iran and India. In India, Faith Oriented Reflection also correlated nonsignificantly with Quest, as did Intellect Oriented Reflection in Iran. In the United States, however, Faith Oriented Reflection correlated negatively and Intellect Oriented Reflection correlated positively with Quest. In other words, American Christians seemed less able to integrate intellect with faith in a manner that could make the extra-traditional Quest definition of openness more irrelevant to their religious reflection.

Religious Openness Hypothesis

In response to these data, the ISM proposes a Religious Openness Hypothesis which argues that positive linkages between Faith and Intellect Oriented Reflection reveal that religious traditions include standard-specific definitions of openness that can unify intellect with faith (Kamble et al., 2014b). In addition to findings for Muslims in Iran and Hindus in India, a direct relationship between these two forms of religious reflection after controlling for the Religious Fundamentalism Scale confirms the same potential in Bible-believing Americans. The negative zero-order correlation between Faith and Intellect Oriented Reflection, therefore, suggests that aspects of fundamentalism obscure American religious openness (Watson et al., 2011).

The Religious Openness Hypothesis explains this obscuring influence by suggesting that conservative Christian perspectives in the United States can include a defensive ghettoization of faith in response to a perceived inhospitality of Western secularization and its emphasis on reason as a replacement for belief in God in the organization of social life (e.g., Stout, 1988). The negative correlation between Faith and Intellect Oriented Reflection empirically defines this ghettoization. This relationship, in other words, reveals a faith that walls out the intellect and retreats into a reflective security that refuses to consider practices associated with any standard but its own.

In more theoretical terms, the ISM contrasts ghettoization with actualization (Watson, 2011). Actualization occurs when a community re-enacts

its traditions using innovations that allow it to faithfully explain and behaviorally manifest itself within an increasingly complex pluralistic culture. Actualization presupposes that practices developed out of extra-traditional standards can have an innovative potential that does not require any actual embrace of those outside standards themselves. Christian uses of at least some conceptual frameworks and the empirical methods of contemporary psychology illustrate the possibility. Ghettoization instead follows from the opposite belief that faithful re-enactment of traditions requires a rejection of innovation. The result is a defensive walling out of developments outside the community.

The ISM further assumes that a more viable transmission of tradition across generations will likely occur with actualization than with ghettoization (cf., Ghorbani et al., 2012). This would be so because adoption of extra-traditional practices could promote a more sociologically expansive translation of the intra-traditional standard. A more expansive translation could then strengthen faith within the community by helping tradition speak to the realities of changing Christian experience within a pluralistic culture. Such a translation might also enhance the plausibility of Christian standards for those living outside the tradition. Such individuals would include new generations of children who are born into the confusions of pluralistic cultural life and adults who struggle in their attempts to follow other standards. In other words, appropriately translated extra-traditional practices could supply a bridge for such individuals to discover openings toward incommensurable Christian rationalities.

Opposite stances by Christians on innovation reflect deeper conflicts that point toward the further ISM assumption that incommensurable rationalities can occur not just between a religion and other communities, but also within a single religion (Watson, 2014). Christians unite behind the standard of Christ; but interpretations of that standard can emerge from very different epistemological perspectives. Different epistemological perspectives can then cause Christians to calibrate their thought and practices to importantly different visions of the standard. Contrasts between Religious Fundamentalist and Biblical Foundationalist Ideological Surrounds illustrate the possibility. In Americans, the Religious Fundamentalism Scale theoretically reflects a religious rationality that combines defensiveness to

secularization with a commitment to "fundamentals." Biblical Foundationalism instead represents the incommensurable rationality of a commitment to "fundamentals" without defensiveness. Again, incommensurable does not necessarily mean incompatible; and these two scales do display a robust positive correlation (Watson et al., 2003). Statistical controls for ideology, nevertheless, confirm Biblical Foundationalism as a less and Religious Fundamentalism as a more defensive Christian ideological surround (Watson et al., 2003, 2011; Watson, Chen, & Morris, 2014).

Present Project

The present project further examined the openness of the Religious Fundamentalist and Biblical Foundationalist Ideological Surrounds in American Christians. In addition to assessing Faith and Intellect Oriented Religious Reflection, procedures administered the Religious Schema Scale (Streib, Hood, & Klein, 2010) and Religious Orientation instruments that included a recently developed Extrinsic Cultural Religious Orientation measure (Ghorbani, Watson, Zarehi, & Shamohammadi, 2010; Watson, Chen, & Ghorbani, 2014). An attempt to evaluate cognitive openness involved use of the Need for Cognition Scale (Cacioppo, Petty, Feinstein, & Jarvis, 1996).

The Religious Schema Scale assesses different styles of interpreting experience that range from closed fundamentalism to open tolerance. The Truth of Texts and Teachings subscale assesses a fundamentalist style that correlates negatively with tolerance in the West, but can also predict greater openness in India and thus has a potential to record a more non-defensive form of fundamentalism (Kamble et al., 2014b). Two other subscales operationalize religious openness. Fairness, Tolerance, and Rationality records "a religious style in which openness for fairness and tolerance stands in the foreground." Another subscale assesses "xenosophia," which in terms of Greek origins of the word refers to the foreigner (*xeno*) and to wisdom (*sophia*). Xenosophia, therefore, reflects the wisdom of "a religious style which is characterized by an appreciation of the alien and thus by interreligious dialog" (Streib et al., p. 167).

Administration of religious orientation scales made it possible to evaluate the religious motivational implications of all other variables. Quest (Batson & Schoenrade, 1991a, b) operationalized an extra-traditional, social scientific understanding of religious openness. Intrinsic

and Extrinsic Orientation Scales (Gorsuch & McPherson, 1989) record more intra-traditional forms of commitment. The Extrinsic Scale includes an Extrinsic Personal factor that involves the use of religion to achieve personal well-being and an Extrinsic Social factor in which religion serves as a means for obtaining desired social outcomes. Studies in Iran and Pakistan (Ghorbani, Watson, & Khan, 2007), India (Kamble, Watson, Marigoudar, & Chen, 2014a), and the United States (Watson, Chen, & Ghorbani, 2014) suggest that the Extrinsic Personal Orientation is largely adaptive, but the Extrinsic Social Orientation is relatively weak and exhibits ambiguous associations with other variables. Extrinsic Social data, therefore, suggest that this construct largely fails to assess the important social contributions that believers presumably attribute to their religious motivations. Hence, the Extrinsic Cultural Religious Orientation Scale operationalizes motivations to use religion to benefit society (Ghorbani et al., 2010; Watson, Chen, & Ghorbani, 2014) and includes Family and Social Order, Disorder Avoidance, Peace and Justice, and Cultural Foundations subscales.

Hypotheses

In summary, the Religious Openness Hypothesis argues that religious communities pursue truth with an openness that is compatible with intra-traditional standards. This pursuit reflects the thought and practices of an incommensurable rationality that may not always be compatible with extra-traditional social scientific standards. Positive correlations between Faith and Intellect Oriented Reflection document the potential for religious openness in Iran and India. A negative correlation between these two constructs in the United States theoretically reflects a fundamentalist defensiveness that is not evident within a Biblical Foundationalist Ideological Surround. The present project used five groups of measures to evaluate this description of American Christian religious openness.

First, and most importantly, Faith and Intellect Oriented Christian Reflection Scales made it possible to focus on the negative correlation between these two measures that serves as an empirical marker of ghettoization in the United States.

Second, Religious Fundamentalism and Biblical Foundationalism scales made it possible to analyze what the ISM presumes to be incommensurable Christian rationalities. Analysis of a Religious Fundamentalist Ideological Surround involved statistical procedures that partialed out variance associated with Biblical Foundationalism, whereas examination of a Biblical Foundationalist Ideological Surround controlled for Religious Fundamentalism. Religious openness should be less obvious within Religious Fundamentalist and more evident within Biblical Foundationalist Ideological Surrounds.

Third, Religious Schema Scales made it possible to explore religious styles that ranged from closed fundamentalism to open religious tolerance. The Truth of Texts and Teaching subscale may assess a more non-defensive form of fundamentalism. Fairness, Tolerance, and Rationality and Xenosophia record tolerant openness.

Fourth, Religious Orientation scales made it possible to evaluate the religious motivational implications of the Religious Fundamentalist and Biblical Foundationalist Ideological Surrounds. Intrinsic and various extrinsic scales examined intra-traditional forms of commitment, whereas the Quest Scale pointed toward a more extra-traditional standard of openness.

Fifth and finally, administration of the Need for Cognition Scale made it possible to evaluate the cognitive openness of these two American ideological surrounds.

Use of these measures made it possible to test two most important sets of hypotheses:

First, as the index of a more defensive form of Christian commitment, partial correlations for Religious Fundamentalism should be positive with Faith Oriented Reflection; with Truth of Texts and Teachings; with Intrinsic, Extrinsic Personal, and perhaps Extrinsic Social Religious Orientations; and with all four Extrinsic Cultural Religious Orientations. They should also be negative with Intellect Oriented Reflection; Fairness, Tolerance, and Rationality; Xenosophia; Quest; and Need for Cognition.

Second, as the index of a more non-defensive form of Christian commitment, partial correlations for Biblical Foundationalism should be positive with both forms of Religious Reflection; all three Religious Schema measures; Intrinsic, Extrinsic Personal, and perhaps Extrinsic Social Religious Orientations; all four Extrinsic Cultural motivations; and Need for Cognition. The further expectation was for either a negative or nonsignificant relationship with a Quest measure that is either incompatible with or irrelevant to the standards of this Christian ideological surround.

Method

Participants

Research participants were undergraduates enrolled in Introductory Psychology classes at a state university in the southeastern United States. This group included 116 men, 232 women, and 2 individuals who failed to indicate their gender. Average age was 18.4 (SD = 1.4). The sample was 85.7% White, 8.7% African-American, and 5.6% various other racial self-identifications. Self-reported religious affiliations were 40.3% Protestant, 11.5% Catholic, 6.9% atheist or agnostic, and the remaining 41.3% self-categorized as "Other." Subsequent investigations revealed that this surprisingly high "Other" percentage was overwhelming explained by Protestants who failed to understand these category distinctions, which were used in the present project for the first time at this particular university. As in most previous and subsequent investigations using similar samples, the percentage of Protestants was likely around 75%.

Measures

Scales appeared in a single questionnaire booklet. Responses to all items ranged across a 5-point *strongly disagree* (0) to *strongly agree* (4) Likert scale. Instruments appeared within the booklet in the order in which they are described below.

Need for Cognition. Eighteen statements made up the Cacioppo et al. (1996) Need for Cognition Scale (M response per item = 2.12, SD = 0.60, α = .85). Illustrating this measure was the self-report, "I really enjoy a task that involves coming up with new solutions to problems."

Religious Schema. The three Religious Schema measures included 5 items each (Streib et al., 2010). Texts and Teachings (M = 2.62, SD = 1.04, α = .85) appeared in such beliefs as, "What the texts and stories of my religion tell me is absolutely true and must not be changed." Fairness, Tolerance, and Rationality (M = 3.17, SD = 0.56, α = .62) included, for example, the claim, "When I make a decision, I look at all sides of the issue and come up with the best decision possible." A representative expression of Xenosophia (M = 2.20, SD = 0.73, α = .62) asserted, "It is important to understand others through a sympathetic understanding of their culture and religion."

Quest. The Quest Scale of Batson and Schoenrade (1991a, b) included 12 items (M = 1.74, SD = 0.63, α = .74). Illustrating Quest was

the claim that "I am constantly questioning my religious beliefs."

Extrinsic Cultural Religious Orientation. Included in the Extrinsic Cultural Religious Orientation Scale were 32 total items (Watson, Chen, & Ghorbani, 2014). Sixteen statements operationalized Family and Social Order (M = 1.77, SD = 0.95, α = .95) and appeared in such beliefs as, "Religious life is important because it promotes better family relationships." The Disorder Avoidance subscale (M = 1.71, SD = 0.89, α = .76) contained 5 items (e.g., "Most of the problems of society result from the failure of people to be sincerely religious"). Exemplifying the 5-item Peace and Justice subscale (M = 2.03, SD = 0.80, α = .75) was the statement, "My motivation for being religious is a desire to develop a human society that is peaceful, just, and happy." Representative of the 6 Cultural Foundations items (M = 1.85, SD = 0.86, α = .78) was the self-report, "I am religious because I know that the loss of religious life leads to the decline of civilization and culture."

Religious Orientations. Gorsuch and McPherson (1989) scales assessed Intrinsic and Extrinsic Religious Orientations. The Intrinsic Scale (M = 2.56, SD = 0.88, α = .84) included 8 items which said, for instance, "My whole approach to life is based on my religion." Illustrating the 3-item Extrinsic Personal Orientation (M = 2.33, SD = 0.97, α = .71) was the self-report, "What religion offers me most is comfort in times of trouble and sorrow." The Extrinsic Social Orientation (M = 1.17, SD = 0.88, α = .72) also included 3 items (e.g., "I go to church mostly to spend time with my friends"). As noted in the introduction and as will be discussed more fully in a companion project to this investigation (Watson, Ghorbani, Vartanian, & Chen, 2015), the relative strength of these three orientations is a noteworthy issue. Statistical procedures, therefore, analyzed the means of these three measures in preparation for the companion project. Significant differences appeared, Greenhouse-Geisser F [1.90, 662.85] = 279.79, p < .001. All post hoc comparisons were statistically significant, with the Intrinsic Orientation highest, the Extrinsic Personal Orientation intermediate, and the Extrinsic Social Orientation lowest.

Christian Religious Reflection. The Christian Religious Reflection Scale included 12 statements (Watson et al., 2011). Seven items expressed Faith Oriented Reflection (M = 2.49, SD = 0.83, α = .80) with the remaining 5 statements recording

Table 1

Correlations Among Religious Reflection, Religious Schema, and Need for Cognition Scales
(N = 350)

Measures	1	2	3	4	5	6
1. Faith Oriented Reflection	-	-.18**	.72***	.11**	-.16**	-.26***
2. Intellect Oriented Reflection	-	-	-.34***	.26***	.38***	.25***
3. Truth of Texts and Teaching	-	-	-	.18**	-.29***	-.24***
4. Fairness, Tolerance, Rationality	-	-	-	-	.28***	.19***
5. Xenosophia	-	-	-	-	-	.22***
6. Need for Cognition	-	-	-	-	-	-

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

Intellect Oriented Reflection (M = 2.45, SD = 0.78, α = .71). Representative items appear in the introduction.

Biblical Foundationalism. The Biblical Foundationalism Scale (M = 2.63, SD = 1.07, α = .97) included 15 items that ISM procedures previously identified as reflecting a less defensive commitment to fundamentals than the Altemeyer and Hunsberger (1992) Religious Fundamentalism Scale (Watson et al., 2003). One item said, for example, "The bloodshed of human history makes it clear that evil cannot be dismissed as the effect merely of 'bad human impulses.' The reality of evil is captured instead in the biblical depiction of Satan as the 'Prince of Darkness' who tempts us."

Religious Fundamentalism. Participants responded to the 12-item Altemeyer and Hunsberger (2004) Religious Fundamentalism Scale (M = 2.37, SD = 0.95, α = .91). Indicative of this construct was the reverse scored assertion that "'Satan' is just the name people give to their own bad impulses. There really is no such thing as a diabolical 'Prince of Darkness' who tempts us."

Procedure

Student participation in this project was fully voluntary, and all procedures received institutional approval. Responding to the questionnaire booklet occurred in a large classroom setting. Participants entered responses to all items on standardized answer sheets, which optical scanning equipment later read into a computer data file. Statistical procedures scored all instruments in terms of the average response per item. Analyses began with an examination of correlations among measures. Partial correlations then reexamined relationships after controlling for Biblical

Foundationalism in order to investigate a Religious Fundamentalist Ideological Surround and after controlling Religious Fundamentalism in order to explore a Biblical Foundationalist Ideological Surround.

Results

Table 1 reviews correlations among those constructs that were relevant to religious and psychological openness. Included in these measures were the Religious Reflection, Religious Schema, and Need for Cognition scales. These data most importantly demonstrated that Faith Oriented Reflection displayed the expected negative relationship with Intellect Oriented Reflection. Most but not all remaining relationships identified Faith Oriented Reflection and Truth of Texts and Teaching as relatively closed religious perspectives in contrast to the openness of the other constructs. Specifically, Faith Oriented Reflection correlated positively with Truth of Texts and Teaching and negatively with Xenosophia and Need for Cognition. Truth of Texts and Teachings also correlated negatively with Xenosophia and Need for Cognition. Positive linkages with Fairness, Tolerance, and Rationality, nevertheless, suggested that both Faith Oriented Reflection and Truth of Texts and Teachings had a least some potential for tolerance. In line with the assumption that it recorded religious openness, Intellect Oriented Reflection predicted lower scores on Truth of Texts and Teachings and higher scores on Fairness, Tolerance, and Rationality; Xenosophia; and Need for Cognition. Fairness, Tolerance, and Rationality; Xenosophia; and Need for Cognition all co-varied directly, as would be expected for presumed indices of openness.

Table 2

Correlations of Religious Reflection, Religious Schema, and Need for Cognition Scales With Religious Orientations (N = 350)

Religious Orientations	Reflection, Schema, and Need for Cognition Scales					
	FOR	IOR	TTT	FTR	Xen	NfC
Intrinsic	.69***	-.36***	.82***	.10	-.28***	-.20***
Extrinsic Personal	.53***	.06	.40***	.16**	.16**	-.14**
Extrinsic Social	.11*	.12*	.02	.06	.12*	-.08
Family and Social Order	.68***	-.21***	.64***	.03	-.09	-.32***
Disorder Avoidance	.66***	-.24***	.64***	.01	-.09	-.29***
Peace and Justice	.39***	.12*	.22***	.08	.18**	-.11*
Cultural Foundations	.58***	-.12*	.54***	.08	-.03	-.19***
Quest	-.38***	.40***	-.48***	.09	.45***	.21***

Note. Scales include Faith Oriented Reflection (FOR), Intellect Oriented Reflection (IOR), Truth of Texts and Teachings (TTT), Fairness, Tolerance, and Rationality (FTR), Xenosophia (Xen), and Need for Cognition (NfC).

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

Correlational evidence suggested some differentiation of the extra-traditional Quest measure from intra-traditional religious commitments. With one exception, all relationships among the Intrinsic and Extrinsic Religious Orientations were positive and statistically significant ($M r = .42$, $SD = .23$). These associations ranged from .13 ($p < .05$) between Disorder Avoidance and the Extrinsic Social Orientation to .81 ($p < .001$) between Family and Social Order and Disorder Avoidance. The lone exception was a nonsignificant Intrinsic linkage with the Extrinsic Social motivation (-.09, $p = 11$). In contrast, Quest correlated negatively with the Family and Social Order (-.31), Disorder Avoidance (-.34), Cultural Foundations (-.22), Intrinsic (-.44), and Extrinsic Personal (-.13, p's < .05) orientations; positively with Extrinsic Social scores (.19, $p < .001$); and nonsignificantly with Peace and Justice (-.05, $p = .35$).

Relationships with Religious Reflection, Religious Schema, and Need for Cognition further identified intra-traditional religious commitments as relatively closed (see Table 2). Faith Oriented Reflection correlated negatively with Quest and positively with all other religious orientations. The same pattern appeared for Truth of Texts and Teachings except that the Extrinsic Social correlation proved to be nonsignificant. Faith Oriented Reflection and Truth of Texts of Teaching, therefore, defined intra-traditional perspectives that were incompatible with an extra-traditional Quest. In contrast, Intellect Oriented Reflection

data suggested that it was compatible with Quest, Peace and Justice, and the Extrinsic Social orientations, but incompatible with the Intrinsic, Family and Social Order, Disorder Avoidance, and Cultural Foundations motivations. Xenosophia correlated negatively with the Intrinsic Scale and positively with Quest, Peace and Justice, and the Extrinsic Personal and Social motivations. Need for Cognition correlated positively with Quest, nonsignificantly with Extrinsic Social scores, and negatively with all other religious orientations. The only significant outcome for Fairness, Tolerance and Rationality was a direct connection with the Extrinsic Personal Orientation. In short, Intellect Oriented Reflection, Xenosophia, and Need for Cognition measured an openness that was relatively more extra-traditional in its implications.

Table 3 presents the centrally important findings of this investigation. As the ISM makes clear, incommensurable rationalities can be compatible, and Religious Fundamentalism and Biblical Foundationalism in fact exhibited a robust positive correlation (.82, $p < .001$). In the zero-order correlations reviewed in Table 3, both Religious Fundamentalism and Biblical Foundationalism displayed linkages indicative of religious defensiveness, specifically involving negative correlations with Intellect Oriented Reflection, Need for Cognition, Xenosophia, and Quest. Extensive connections with religious commitment seemed evident for both measures in their positive relationships with Faith Oriented Reflection, Truth of

Table 3

Zero-Order (r) and Partial (rab.c) Correlations of Religious Fundamentalism and Biblical Foundationalism With Other Measures (N = 350)

Variable	Religious Fundamentalism		Biblical Foundationalism	
	r	rab.c	r	rab.c
Faith Oriented Reflection	.77***	.10	.85***	.57***
Intellect Oriented Reflection	-.39***	-.34***	-.26***	.18**
Truth of Texts and Teachings	.83***	.44***	.80***	.28***
Fairness, Tolerance, Rationality	.04	-.10	.10	.14*
Xenosophia	-.64***	-.37***	-.21***	.23***
Need for Cognition	-.27***	-.10	-.26***	-.05
Intrinsic	.79***	.35***	.78***	.32***
Extrinsic Personal	.35***	-.16**	.47***	.38***
Extrinsic Social	-.02	-.12*	.05	.13*
Family and Social Order	.64***	.18***	.66***	.27***
Disorder Avoidance	.65***	.16**	.67***	.30***
Peace and Justice	.23***	-.09	.31***	.23***
Cultural Foundations	.51***	.03	.57***	.30***
Quest	-.47***	-.29***	-.40***	.04

Note: Partial Correlations for Fundamentalism control for Biblical Foundationalism whereas partial correlations for Biblical Foundationalism control for Fundamentalism.

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

Texts and Teachings, and all but the Extrinsic Social religious orientations.

Attempts to statistically control for the influence of ideology produced largely though not wholly expected outcomes. In partial correlations controlling for Biblical Foundationalism, the supposedly more defensive Religious Fundamentalist perspective continued to correlate negatively with Intellect Oriented Reflection, Xenosophia, and Quest and to correlate positively with Truth of Texts and Teachings and with the Intrinsic, Family and Social Order, and Disorder Avoidance religious motivations. On the other hand, unexpected outcomes appeared in the findings that previously positive zero-order relationships became nonsignificant with Faith Oriented Reflection, Peace and Justice, and Cultural Foundations and also became negative with the Extrinsic Personal factor. The Extrinsic Social relationship also became negative. Hence, the Religious Fundamentalist Ideological Surround did display evidence of defensiveness while also exhibiting an unexpected diminishment in religious commitments. In the one result not consistent with this interpretation,

the previously negative zero-order linkage with Need for Cognition became nonsignificant.

Conversely, Biblical Foundationalism appeared as a much more open religious perspective after partial correlations controlled for Religious Fundamentalism. Previously negative zero-order relationships became positive with Intellect Oriented Reflection and Xenosophia and nonsignificant with Need for Cognition and Quest. The positive association with Fairness, Tolerance and Rationality became significant, and Biblical Foundationalism continued to display direct linkages with Truth of Texts and Teachings and with all intra-traditional measures of religious motivation.

Further evidence of Religious Fundamentalist defensiveness and Biblical Foundationalist openness appeared in the partial correlations among religious and psychological openness measures. Data above the diagonal in Table 4 describe the Religious Fundamentalist Ideological Surround, and results for the Biblical Foundationalist Ideological Surround appear below the diagonal. The relative defensiveness of Religious Fundamentalism seemed evident in

Table 4

Partial Correlations Among Openness Measures Within Religious Fundamentalist (above diagonal) and Biblical Foundationalist (below diagonal) Ideological Surrounds (N = 350)

Measures	1	2	3	4	5	6
1. Faith Oriented Reflection	-	.09	.14*	.04	.02	-.07
2. Intellect Oriented Reflection	.20***	-	-.23***	.30***	.34***	.20***
3. Truth of Texts and Teaching	.24***	-.04	-	.16**	-.21***	-.05
4. Fairness, Tolerance, Rationality	.12*	.30***	.25***	-	.31***	.23***
5. Xenosophia	.19***	.28***	.02	.31***	-	.18**
6. Need for Cognition	-.08	.16**	-.03	.21***	.14*	-

Note. Partial correlations controlling for Biblical Foundationalism define a Religious Fundamentalist Ideological Surround, whereas partial correlations controlling for Religious Fundamentalism define a Biblical Foundationalist Ideological Surround.
*$p < .05$ **$p < .01$ ***$p < .001$

(1) the failure of Faith Oriented Reflection to predict anything but Truth of Texts and Teachings, (2) the negative correlation that continued to exist between Intellect Oriented Reflection and Truth of Texts and Teachings, and (3) the inverse Xenosophia association with Truth of Texts and Teachings. In the contrast, the relative openness of Biblical Foundationalism seemed obvious in (1) positive correlations of Faith Oriented Reflection with Intellect Oriented Reflection and with all other measures except Need for Cognition, (2) the removal of the inverse linkage of Intellect Oriented Reflection with Truth of Texts and Teachings, and (3) the elimination of the negative tie of Truth of Texts and Teachings with Xenosophia.

Religious orientation data within both the Religious Fundamentalist and Biblical Foundationalist Ideological Surrounds continued to reveal at least some differentiation between intra-traditional commitments and an extra-traditional Quest. Intra-traditional commitments also seemed more integrated within the Biblical Foundationalist Ideological Surround, and the Extrinsic Social Orientation once again seemed ambiguous in its implications. More specifically, within the Religious Fundamentalist Ideological Surround, partial correlations controlling for Biblical Foundationalism revealed that the four Extrinsic Cultural Orientations continued to correlate positively with each other ($r_{3h,c} > .38$, $p < .001$). Quest predicted higher Extrinsic Social (.23) and lower Intrinsic (-.23) and Disorder Avoidance (-.11, ps < .05) motivations. The Intrinsic Scale only displayed a significant inverse relationship with the

Extrinsic Social motivation (-.20, $p < .01$), and Extrinsic Personal and Social scores correlated positively with each other and with all four Extrinsic Cultural scales ($r_{3h,c} > .20$, $p < .001$).

Within the Biblical Foundationalist Ideological Surround, partial correlations controlling for Religious Fundamentalism revealed that Quest correlated positively with Extrinsic Social (.21, $p < .001$) and negatively with Intrinsic (-.13, $p < .05$) scores. Extrinsic Cultural measures once again displayed direct linkages ($r_{3h,c} > .44$, $p < .001$). Additional Intrinsic relationships were positive with the Extrinsic Personal, Family and Social Order, and Cultural Foundations variables ($r_{3h,c} > .11$) and negative with Extrinsic Social scores (-.12, p's < .05). Once again, Extrinsic Personal and Social motivations correlated positively with each other and with the four Extrinsic Cultural factors ($r_{3h,c} > .18$, $p < .01$).

Final evidence of the relative openness and stronger religious integration of Biblical Foundationalism appeared in partial correlations of religious orientations with the openness measures (see Table 5). In contrast to the Religious Fundamentalist data, Biblical Foundationalist results revealed positive rather than nonsignificant linkages of (1) Faith Oriented Reflection with the Intrinsic Scale, (2) Truth of Texts and Teachings with the Extrinsic Personal Orientation, and (3) Xenosophia with Disorder Avoidance and Family and Social Order. A nonsignificant rather than negative association also appeared between the Intrinsic Scale and both Intellect Oriented Reflection and Xenosophia. Of less conceptual significance was a slight reduction in the Need

for Cognition relationship with Quest that made this association nonsignificant rather than positive within the Biblical Foundationalist Ideological Surround.

Discussion

In exploring the Religious Openness Hypothesis, this investigation uncovered clear support for two broad sets of predictions. A first hypothesis essentially suggested that Religious Fundamentalism after controlling for Biblical Foundationalism would describe the ideological surround of a more defensive commitment to Christian fundamentals. The second hypothesis argued that Biblical Foundationalism after controlling for Religious Fundamentalism would instead define the ideological surround of a more open commitment to fundamentals. Confirmation of these two sets of predictions appeared in partial correlations observed with and for Religious Reflection, Religious Schema, and Religious Orientation variables.

More specifically, the Religious Fundamentalist Ideological Surround combined tendencies to reject openness with at least some commitment to fundamentals. With regard to reduced openness, Religious Fundamentalism after controlling for Biblical Foundationalism correlated negatively with Intellect Oriented Reflection and Xenosophia and displayed no significant connection with Fairness, Tolerance, and Rationality. The unexpected nonsignificant relationship with Faith Oriented Reflection suggested an even more defensive ghettoization in which Christians even failed to bring reflection based upon their faith into thoughtful contact with experience. The expected linkage with a commitment to fundamentals seemed obvious in positive partial correlations of Religious Fundamentalism with Truth of Texts and Teachings and with the Intrinsic, Family and Social Order, and Disorder Avoidance Religious Orientations. At the same time, however, religious commitments seemed at least somewhat diminished because Religious Fundamentalism correlated negatively with the Extrinsic Personal and the (admittedly ambiguous) Extrinsic Social Orientations and nonsignificantly with Peace and Justice and with Cultural Foundations. A Christian perspective that remained silent about motivations to promote peace and justice and to influence culture presumably would also point toward a more ghettoized ideological surround.

Conversely, the Biblical Foundationalist Ideological Surround combined openness with a commitment to fundamentals. With regard to openness, Biblical Foundationalism after controlling for Religious Fundamentalism predicted greater Intellect as well as Faith Oriented Reflection and also higher levels of Xenosophia and Faith, Tolerance, and Rationality. With regard to a dedication to fundamentals, Biblical Foundationalism displayed a positive partial correlation with Truth of Texts and Teachings, and a relatively more expansive religious commitment seemed evident in its direct associations with all Intrinsic, Extrinsic, and Extrinsic Cultural Religious Orientation measures.

Additional Support

Numerous additional findings supported the Religious Openness Hypothesis. Most importantly, a negative zero-order linkage between the two forms of religious reflection became positive after partialing out Religious Fundamentalism, an effect observed previously (Watson et al., 2011). Within a Religious Fundamentalist Ideological Surround, Faith Oriented Reflection failed to predict Xenosophia or Fairness, Tolerance, and Rationality; and Truth of Texts and Teachings predicted lower levels of both Intellect Oriented Reflection and Xenosophia. Within a Biblical Foundationalist Ideological Surround, however, Faith Oriented Reflection correlated positively with Xenosophia and with Fairness, Tolerance, and Rationality; and Truth of Texts and Teachings displayed nonsignificant rather than negative associations with Intellect Oriented Reflection and Xenosophia. In short, Religious Reflection and Religious Schema data further demonstrated that the Biblical Foundationalist Ideological Surround described a more open and the Religious Fundamentalist Ideological Surround a less open religious perspective.

Intrinsic and Extrinsic Religious Orientation data also generally supported implications of the Religious Openness Hypothesis. The Intrinsic Scale correlated positively with Faith Oriented Reflection and nonsignificantly with Intellect Oriented Reflection within a Biblical Foundationalist Ideological Surround, but these relationships became nonsignificant and negative, respectively, within a Religious Fundamentalist Ideological Surround. Within the Religious Fundamentalist Ideological Surround, Xenosophia displayed linkages that were negative with Intrinsic and nonsignificant with Disorder Avoidance and

Table 5

Thoughtful Seeking Partial Correlations with Religious Orientations Within Religious Fundamentalist and Biblical Foundationalist Ideological Surrounds (N = 350)

Measure	Religious Fundamentalist Ideological Surround						Biblical Foundationalist Ideological Surround					
	FOR	IOR	TTT	FTR	Xen	NfG	FOR	IOR	TTT	FTR	Xen	NfG
Intrinsic	.07	-.26***	.51***	.03	-.19***	.00	.21***	-.09	.47***	.10	.01	.02
Extrinsic Personal	.27***	.21***	.03	.13*	.30***	-.03	.44***	.22***	.21***	.15*	.32***	-.06
Extrinsic Social	.13*	.13*	-.04	.06	.13*	-.08	.19***	.12*	.06	.06	.12*	-.09
Family/Social Order	.30***	-.05	.25***	-.06	.07	-.20***	.38***	.06	.25***	.00	.21***	-.19***
Disorder Avoidance	.23***	-.09	.24***	-.09	.07	-.16**	.34***	.01	.26***	-.03	.20***	-.16**
Peace and Justice	.25***	.22***	-.04	.06	.26***	-.04	.34***	.23***	.07	.08	.29***	-.06
Cultural Foundations	.22***	.03	.18**	.03	.11*	-.05	.34***	.10	.26***	.07	.19***	-.06
Quest	-.09	.33***	-.29***	.14**	.41***	.12*	-.03	.26***	-.17**	.12*	.35***	.10

Note. The Religious Fundamentalist Ideological Surround reflects partial correlations controlling for Biblical Foundationalism, whereas the Biblical Foundationalist Ideological Surround involves partial correlations controlling for Religious Fundamentalism. Measures include Faith Oriented Reflection (FOR), Intellect Oriented Reflection (IOR), Truth of Texts and Teachings (TTT), Fairness, Tolerance, and Rationality (FTR), Xenosophia (Xen), and Need for Cognition (NfC).

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

Family and Social Order Religious Orientations. Within the Biblical Foundationalist surround, Xenosophia relationships were instead nonsignificant with the Intrinsic and positive with these two Extrinsic Cultural scales. Religious perspectives, therefore, seemed less polarized and more integrated within the Biblical Foundationalist than within the Religious Fundamentalist Ideological Surround.

Central to development of the Religious Openness Hypothesis were concerns about the validity of Quest as a specifically religious form of openness (e.g., Dover et al., 2007). In the present project as well, Quest seemed closer to intellect than to faith. This was so because Quest correlated negatively with Faith Oriented Reflection and Truth of Texts and Teachings, and positively with Intellect Oriented Reflection and Need for Cognition. Positive zero-order or partial correlations with Xenosophia and with Fairness, Tolerance, and Rationality further documented the openness of Quest. Perhaps most importantly, however, Quest displayed partial correlations that were negative with Religious Fundamentalism, but nonsignificant with Biblical Foundationalism. This contrast suggested once again that Biblical Foundationalism was less defensive than Religious Fundamentalism, a conclusion supported by another recent examination of Quest (Watson, Chen, & Morris, 2014).

Administration of the Need for Cognition Scale made it possible to evaluate the cognitive openness of religious measures. Along with a direct linkage with Quest, positive correlations with Xenosophia and with Fairness, Tolerance and Rationality confirmed the openness of these constructs. At the same time, Need for Cognition associations with Religious Fundamentalism, Biblical Foundationalism, and religious orientations proved to be negative or nonsignificant. Negative relationships suggested that religious commitments were at least somewhat incompatible with cognitive openness. Findings that Need for Cognition partial correlations with both Religious Fundamentalism and Biblical Foundationalism became nonsignificant in contrast the negative zero-order relationships, nevertheless, meant that it was unclear how to interpret these results. The counterintuitive suggestion was that the negative zero-order relationship was as attributable to the openness of Biblical Foundationalism as to the defensiveness of Religious Fundamentalism. The Need for Cognition Scale can also have complex implications in Indian

Hindu samples (Kamble et al., 2014b). Overall, such outcomes suggest a need to further examine the issue of cognitive openness and religious commitments in American Christians, perhaps using a broader array of relevant cognitive measures that might include, for example, openness to experience.

Broader Implications

In summary, this investigation supported the Religious Openness Hypothesis with four broader implications perhaps being most noteworthy. First, the Religious Openness Hypothesis argues that Christianity and other traditional religions define openness in terms that are compatible with the standards of their own rationalities. Supporting evidence comes from demonstrations that Faith and Intellect Oriented Religious Reflection correlate positively in Iranian Muslims (Ghorbani et al., 2013) and Indian Hindus (Kamble et al., 2014b). Such relationships document the ability of traditional religions to unite faith with intellect. A negative correlation between these two measures in American Christians may seem to contradict the claim (Watson et al., 2011), but the Religious Openness Hypothesis explains this effect in terms of a fundamentalist defensiveness in response to Western secularization. Defensiveness, in other words, encourages a retreat of Faith Oriented Reflection into an epistemological ghetto that walls out an Intellect Oriented Reflection that seems closer to the Enlightenment-based processes of secularization (Stout, 1988). American commitment to fundamentals without defensiveness should, therefore, be compatible with both Intellect and Faith Oriented Reflection. Findings for the Biblical Foundationalist Ideological Surround confirmed that expectation.

Second, fundamentalism in West, therefore, may include an element of defensiveness that is not evident in other societies like Iran and India. Among other things, this means that caution seems essential in drawing inferences about "fundamentalism" world-wide based upon data from just one society or another. The importance of such interpretative caution was already evident in a previous demonstration that an empirical marker of fundamentalism in Iran predicted greater openness to experience, when the opposite relationship would presumably be the expectation in the West (Ghorbani, Watson, Shamohammadi, & Cunningham, 2009).

Third, in a recent historical analysis, Gregory (2012) narrated the unintended secularizing

consequences of the Protestant Reformation and lamented the broader cultural impact of fundamentalism in the West. Because of fundamentalism, he argued, "Viewed from the secularist side from the 'culture wars,' simply to be a religious believer who actually believes anything of substance is considered objectionable" (Gregory, p. 356). The present and previous investigations suggest that deeper understandings of Biblical Foundationalism and the ISM may be useful in offering non-defensive and constructive responses to such secularist objections. Biblical Foundationalist data suggest that Bible-based beliefs can support the "openness" that is a hallmark of secularism. The ISM emphasis on incommensurable rationalities also means that faith in "anything of substance" cannot be a meaningful charge against those with religious commitments or against anyone else. This is so because secularists have their own substantive faith in nature as the ultimate standard (e.g., Connor, Riches, Imfeld, & Hampson, 2012).

Fourth and finally, the Religious Openness Hypothesis appears useful in generating important research questions. A skeptic, for example, might argue against the notion that defensiveness explains the polarization of Western religious reflection and that this relationship merely documents how Christians are more narrow-minded than Muslims in Iran and Hindus in India. This skepticism can be tested. The Religious Openness Hypothesis predicts that Intellect and Faith Oriented Reflection should correlate positively in Christians living outside the West where secularization is less culturally influential and where defensiveness should consequently thus be less evident. This hypothesis has in fact been tested with the results once again supporting the Religious Openness Hypothesis (Watson, Ghorbani, Vartanian, & Chen, 2015).

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