Faith at Work Scale (FWS): Justification, Development, and Validation of a Measure of Judaeo-Christian Religion in the Workplace

Monty L. Lynn
Michael J. Naughton
Steve VanderVeen

ABSTRACT. Workplace spirituality research has side-stepped religion by focusing on the function of belief rather than its substance. Although establishing a unified foundation for research, the functional approach cannot shed light on issues of workplace pluralism, individual or institutional faith-work integration, or the institutional roles of religion in economic activity. To remedy this, we revisit definitions of spirituality and argue for the place of a belief-based approach to workplace religion. Additionally, we describe the construction of a 15-item measure of workplace religion informed by Judaism and Christianity – the Faith at Work Scale (FWS). A stratified random sample (n = 234) of managers and professionals assisted in refining the FWS which exhibits a single factor structure (Eigenvalue = 8.88; variance accounted for = 59.22%) that is internally consistent (Cronbach's α = 0.77) and demonstrates convergent validity with the Faith Maturity Scale (r = 0.81, p > 0.0001). The scale shows lower skew and kurtosis with Mainline and Catholic adherents than with Mormons and Evangelicals. Validation of the scale among Jewish and diverse Christian adherants would extend research in workplace religion.

KEY WORDS: Christianity, Faith at Work Scale, Judaism, psychometric, scale, vocation, workplace spirituality, workplace religion

Max Weber's provocative work, *The Protestant Ethic and the Spirit of Capitalism*, sparked decades of debate among sociologists and historians over religion's contribution to economic growth (cf. Jones, 1997; Radoki, 2007). Scores of psychologists as well have explored religiosity's connection to virtue, emotion, personality, health, and other aspects of human functioning (Emmons and Paloutzian, 2003;

Pargament et al., 2005). In both of these research veins, distinctive and potent connections have been identified between religiosity and human behavior and social systems. Sandwiched between the macro realm of the economy and the micro realm of psychology, the field of workplace spirituality has been taking shape (Giacalone and Jurkiewicz, 2003). For a variety of reasons, however, scholars have eschewed religion and have focused on spirituality (cf. Gotsis and Kortezi, 2008; Hicks, 2003; Lund Dean and Fornaciari, 2007; Smith, 2005). A paucity of research on workplace religion exists despite the religious affiliation of a sizable portion of the global workforce (Baylor Religion Survey, 2006; Juergensmeyer, 2006).

Many observers have noted that people of faith often struggle with connecting their religious belief with their work (Epstein, 2002; Miller, 2006; Nash and McLennan, 2001; Van Buren, 1995; Van Loon, 2000). Faith-work integration takes on varied forms, from religion and work being conceptually disconnected, to religion serving a therapeutic or ethical role in work, to religion providing a comprehensive lens through which all work and life are seen. Scholars occasionally have ventured into workplace religion (Conroy and Emerson, 2004; Davidson and Caddell, 1994; Hicks, 2003; Sandelands, 2003) but research has been limited by presuppositions about religion and spirituality, and by an absence of measurement tools targeting workplace religion. We attempt to contribute to this line of research by revisiting the treatment of religion in workplace spirituality scholarship and by developing and testing a scale to measure the integration of religious belief and practice about work extracted from Jewish and

Christian teachings. We conclude the article with recommendations on future research directions.

Religion and spirituality

The sacred and normative aspects of spirituality have long posed unique research material for the social sciences. The sacred exceeds the boundaries and calipers of social science and spirituality's normative content is often viewed as lying within the territory of theologians and philosophers or the privatized realm of the individual. As a common and significant feature of human society, however, religion has long been contemplated by social scientists.

Functionalism, institutionalism, and quest

One way to make spirituality consistent with the research pallet of the social scientist is to define it functionally. Tracing back to Geertz (1973), the functional approach examines how meaning and order are created and transmitted through rituals and symbols. Sacred and normative elements can also be elevated to the level of the organization, homogenizing the measurement challenges posed by the pluralistic noise of belief at the individual level. Casting a broad net over the function of spirituality or the values of the workplace without distinguishing varying beliefs, traditions, and rituals in the net allows social science to remain silent on religion's normative and sacred content.

Both of these treatments – homogenizing and elevating – are present in Giacalone and Jurkiewicz's (2003) definition of workplace spirituality which is described as ''a framework of organizational values evidenced in the culture that promotes employees' experience of transcendence through the work process, facilitating their sense of being connected to others in a way that provides feelings of completeness and joy'' (p. 13). Mainstream workplace spirituality research follows Giacalone and Jurkiewicz's functional approach in limiting spirituality to values which reside at the organizational level and by focusing on outcomes. This approach allows researchers to avoid the sacred and normative nature of spirituality, but provides no tools for dealing with significant realities of post-modern workplaces, such

as workplace religious pluralism and faith–work integration among employees. Specifying outcomes of workplace spirituality makes Giacalone and Jurkiewicz's approach curiously normative and perilously utilitarian.

Giacalone and Jurkiewicz's approach to defining workplace spirituality reflects the presupposition among many management researchers that workplace spirituality is an arcing rubric under which religious, humanistic, and ecological belief systems are embraced. Tsang and McCullough (2003), for example, suggest that workplace spirituality research may progress hierarchically, moving from general spirituality to more fine-grained specific faith traditions. Among other social scientists, however, spirituality is a sub-domain of religion. Spirituality is the life inside the cloak of religion.

Moberg (2002) describes the spiritual component of religiosity as ''the essence of the religious life, a transcendent quality that cuts across and infuses all of the core dimensions of religiosity'' (p. 48). Hill et al. (2000) describe spirituality as a quest for the sacred, and religion as a quest for the sacred *plus* other elements, such as a search for non-sacred goals (e.g., identity, belongingness, and meaning) and/or the validation and support of an identifiable community.

Whether the essence of the religious life or a quest for the sacred, conceptualizations such as these suggest that the spirituality may be conceptually distinguished from religion and that spirituality is a quest or search for meaning and substance and religion is the specific beliefs, practices, and historical and institutional scaffolding which complement that quest. This bifurcation flip-flops the approach of researchers who see spirituality as the generic and religion as the particular. Regardless of how one orders them, they may be easier to make conceptually than empirically. Hill and his colleagues conclude their survey of definitions stating that the difference between spirituality and religion may be

> attempts to measure spirituality as a separate construct from religion are difficult…. In the absence of information about why an individual engages in a particular religious or spiritual behavior, it can be difficult to infer whether that particular behavior is reflecting religiousness, spirituality, or both (p. 71).

For the same reason that religion has been characterized as being dead when devoid of a spiritual

core (Moberg, 2002), spirituality is quest until it finds embodiment in beliefs, values, and/or practices. Once spirituality finds substance, it becomes religion or philosophy.[1] With this more orthodox social science approach, workplace spirituality is thus a misnomer if it takes on substance or outcomes beyond quest unless it is modified by a particular religious or philosophical tradition, such as ''Zen Buddhist spirituality.''

Benefits of substance

We believe workplace spirituality should be broadened to include specific belief systems. We employ the term ''workplace religion'' because it suggests the addition of substance (e.g., dogma, institution, etc.) to spirituality's quest and it is inclusive of deistic and non-deistic belief systems. Specifically, we argue that: Spirituality moves beyond quest when belief and practice are added; spirituality is best understood in its accompanying context; understanding issues such as workplace pluralism and work–faith integration invites scholars to tap into spirituality's substance.

On the first point, spirituality morphs into religion or philosophy when belief and practice are coupled with quest. As Hill et al. (2000) define it, spirituality is the narrow band of searching for meaning prior to latching on to any particular beliefs, practices, or structures, but religion or philosophy are invoked after specific values, beliefs, practices, and institutions come into play. Important as it is, workplace spirituality scholars are interested primarily in what happens after quest has found a vehicle of embodiment. For many, spirituality carries less baggage than religion does and may even be perceived as ideology- and institution-free. But even when spirituality's roots are syncretistic or tacit, it is nonetheless not context-free. Orsi (2006) argues that much of what is labeled spirituality

> …severs religious idioms from their precise locations in the past, then posits an essential identity among these deracinated ''spiritual'' forms, on the one hand, and between the present and the past, on the other, obliterating difference. ''Spirituality'' does so without giving an account of the reasons for its selections, moreover masking the fact that it is making any selections at all, authorizing a new canon while pretending to be surveying an established tradition (p. 115).

In sum, once workplace spirituality moves beyond quest, it ceases being value free and outgrows its generic label.

A second reason why the workplace spirituality movement should consider substance is because spirituality is best understood in its full context.[2] Wuthnow (1998) emphasizes that spirituality is incomplete without external behaviors that employ the internal, transcendent experience. In *The Mystical Element of Religion*, Von Hügel (1923) argues that spirituality cannot flourish without accompanying institutional and intellectual dimensions. Echoed by later social scientists, Von Hügel characterizes religion as having a tripartite character: An historical and institutional dimension; an intellectual dimension; and a spiritual or mystical dimension.[3] Von Hügel's thesis is that each of these three dimensions correct, inform, purify, and stimulate the others. Once one or two of these dimensions are ousted, neglected, or deemphasized, religion becomes distorted resulting in ''an impoverishing oneness'' (p. 73).

One impoverishment of religion which has been highlighted in workplace spirituality writing is found in the phrase ''institutionalized religion'' which suggests the primacy of the institutional and the intellectual over the spiritual. This primacy inevitably saps religion of its inherent vitality, as echoed by Moberg (2002) quoted earlier. It becomes a dead faith of the living that results in traditionalism, ecclesialism, and authoritarianism. Workplace spirituality scholars counsel against polarizing spirituality and religion as good versus bad or individual versus institutional (Hill et al., 2000). But the two are connected more closely than this counsel suggests. Religion without spirituality denies the search for the divine and it is this distortion by which institutional religion has in part earned anti–institutional reactions. For Von Hügel this is not the only form of impoverishment. Divorced from any form of institutional or intellectual tradition, spirituality tends to be highly emotive resulting in a strongly individualistic, therapeutic, and ultimately relativistic notion, leaving much of its basis to be found in the emotive preference of individuals. Thus, spirituality often is defined so generically that its non-specificity tends to lack any intellectual or institutional rigor on which to come to common meaning of what it is, how it works, or how it differs from other belief systems.

The third reason why research in workplace religion should serve as an extension of workplace spirituality is that many poignant and potentially potent issues require understanding fine-grained beliefs and practices – issues such as pluralism and work-faith integration. Scholars cannot explore the sensemaking, coping tools, fit, inconsistencies, and conflicts of religion and work without considering spirituality's substance. Focusing on substance engages not only the personal but intellectual and institutional dimensions as well. Integrationist writings suggest that even for deeply spiritual people, for whom spirituality and religion are core interpretative schemas, it can be difficult to conceptualize how faith and work mesh. The expression of workplace religion is not uniform across religious traditions or even within a single religious tradition. Additionally, homogenizing belief systems does not allow an understanding of pluralistic spiritual expression which characterizes the world many workplaces (Hicks, 2003; Juergensmeyer, 2006). Without exploring substance, the dynamics of integration and pluralism cannot be carefully examined. The focus on the substance of belief and practice moves the analysis from solely personal commitments to the role cultural institutions (such as temples, mosques, churches, and movements) play in business.

In sum, we believe the time is ripe for a more fine-grained look at specific belief and practice within workplace spirituality research. Although it is possible to explore spiritual quest and the function of belief systems in the workplace without attending to the substance, the breadth and depth of such treatments is severely limited. While the workplace spirituality literature has been important to bringing one's ''whole self'' to work, it needs to take more seriously that religious belief is part of the whole for many individuals.

With a justification for scholarship in workplace religion offered, we move on to address a second need for this line of research to develop – measurement of the construct.

Scale development

With over 150 religiosity and spirituality scales available (several have been added since Hill and Hood's review of 125 scales in 1999), scholars such

as Gorsuch and Miller (1999) and Pargament (1999) have called for a justification of need prior to constructing additional scales. Although related constructs such as workplace spirituality (Ashmos and Duchon, 2000; Kinjerski and Skrypnek, 2006; Sheep, 2004) and servant leadership (Whittington et al., 2006) have been the subject of scaling, these differ from workplace religion. A scale to tap the degree to which Judaeo-Christian belief and practice are integrated with one's work would further research in workplace religion (Jackson et al., 2006). Differences in theology among religions make it difficult to word scale items so they are familiar in both content and language (Moberg, 2002). Thus, the present study will be limited to the largest portion of the US workforce – the Judaeo-Christian religious traditions. Approximately 84% of the US population is affiliated with Judaism and Christianity but within them there is substantial diversity in belief and practice (Baylor Religion Survey, 2006).

Approach

In constructing a scale, we followed Hill's (2005) criteria for measures of religion and spirituality as well as general counsel in scale development (e.g., Arthaud-Day et al., 2005; Hall and Edwards, 2002; Ladd and Spilka, 2006; Seidlitz et al., 2002). Advice included the need to be sensitive to religious development (Levenson et al., 2005), gender (Becker and Hofmeister, 2001), ethnicity (Neff, 2006), and general measurement issues in religion (Moberg, 2002). We utilized Rossiter's (2002) conceptually focused scale development model and classic scale development procedures (DeVellis, 2003; Fowler, 1995; Netemeyer et al., 2003; Tourangeau et al., 2000).

Three assumptions provided direction in scale development:

1. *Our focus is on individuals and their perceptions of how and to what degree their religious beliefs and practices integrate with work.* Scales target a variety of levels of analysis, including the individual, work unit, organization, and peers (e.g., Ashmos and Duchon, 2000; Whittington et al., 2006). Some assess individual-organizational fit while others measure attitude or behavior. Our focus is on individ-

uals' self-perceptions. Because religiosity incorporates belief and behavior (Mockabee et al., 2001), we were interested in measuring both.

2. *Scale constructs and items should fit a broad range of Judaeo-Christian traditions, occupations, and demographics.* Christian and Jewish traditions explicitly or tacitly emphasize a wide range of views and practices on issues such as wealth, work ethic, co-workers, and service. Individuals within denominational traditions differ greatly in religion-workplace integration as well. Our interest was in creating a model which fits addresses core beliefs and practices relevant to a wide variety of traditions and whose wording fits workers laboring in a variety of settings and accustomed to varying religious vocabularies.

3. *Workplace religion is formative and not necessarily linear.* Research suggests that spirituality is developmental (e.g., Mockabee et al., 2001; Wink and Dillon, 2002) but not necessarily additive. As Klemmack et al. (2007, p. 165) state, individuals may be categorized as being more or less religious but also as being religious in different ways. It is possible to conceptualize of clusters of individuals located in various quadrants of a multidimensional religiosity grid as well as maturing developmentally (Klemmack et al., 2007; Miller and Thoresen, 1999). Our aim is to construct a scale so summative and cluster research studies are feasible.

Item development and pretesting

After establishing assumptions about the scale's content and boundaries, the next step was to generate a model of workplace religion informed by historical, theological, and sociological writings across Judaeo-Christian traditions and historical eras. From this survey, several construct dimensions and indicators were identified through multiple iterations of reflection and discussion among the researchers (Table I). Over 250 items were generated by the researchers as potential measures of the

22 indicators. The researchers edited the core dimensions, indicators, and items for clarity, accuracy, and parsimony, independently rating each item and retaining 150 items which rose above natural breaks in the item ratings.

Eight panelists representing a variety of occupations, demographics, and religious affiliations served on a focus group to pilot-test the 150 potential scale items. Panel members evaluated each item and were invited to respond to specific probes about the survey instrument (cf. Foddy, 1998). Panel feedback suggested wording modification for a few items and surfaced 59 items which rose above natural breaks for each indicator. These items were selected for distribution to a larger sample of respondents.

Sampling and procedure

An invitation and an Internet link to an electronic survey containing potential scale, demographic, and validation items was emailed to a sample of alumni from business programs in four religiously-related higher education institutions in the United States. Sampling was stratified by graduation decade and limited to individuals ending their studies at the institution between 1958 and 2005 under the assumption that many of those older may have exited the workforce and those younger may have insufficient experience to reflect upon workplace religion. In total, 1,800 individuals were emailed. Of these, 516 emails bounced, leaving 1,284 alumni presumably reached. A random drawing for eight gift certificates was offered as an incentive to complete the survey. The survey and sampling method was approved by the institutional review board at the first author's institution where the research was conducted. Permission to contact alumni of the participating institutions was granted by each school.

The response format asked respondents to indicate the degree to which they agreed with items using one of the following: 5 = Always or Frequently; 4 = Often; 3 = Sometimes; 2 = Seldom; and 1 = Never or Infrequently. We asked respondents to report their gender, race, and age and were able to ascertain the country and state domicile of the respondent from the alumni databases. Employment variables included employment status and an estimate of the average number of hours

TABLE I

Dimensions and indicators of Judaeo-Christian workplace religion

Dimension	Indicator
Called to relationship	Aware of God's presence in the workplace
	God guides at work
	Co-creates with God
	Integrates work and faith
	Trusts God and receives strength and peace
Called to meaning	Sees work as part of a calling, a mission
	Attributes work talents as gifts from God
	Pursues healthy work habits[a]
	Personal identity is not defined by occupation[a]
	Is competent and applies gifts in service to others
	Learns and grows in skill and wisdom
Called to community	Cares for coworkers who reflect God's image
	Witnesses for Christ in word and deed
	Suffers for Christ and loves sacrificially
	Reserves time for family, church, friends, and community[a]
Called to holiness	Consistently ethical even when challenged[a]
	Aware of injustice and acts to correct it
	Practices morality and encourages others to as well
Called to giving	Sees work as worship, prayer, and a gift to God
	Contributes to the common good through work
	Stewards rather than owns material things so all can benefit
	Conserves natural resources out of love for others[a]

[a]Removed from the final scale after psychometric testing.

worked per week. We used the International Standard Industrial Classification of all Economic Activities (ISIC Rev. 4 (draft), 2007) to code respondents' industries and the International Standard Classification of Occupations (ISCO-88, 1988) to classify occupations.

Religious affiliation included self-identified categories of Catholic, Protestant, Mormon, Orthodox, Jewish, and other. We asked Protestant respondents to write-in a specific denominational identifier which the researchers coded into one of two groups – evangelical or mainline – following the rubric developed by the Baylor Religion Survey (2006). Jewish respondents were asked to identify themselves as Orthodox, Conservative, or Reform. Those indicating ''other'' were asked to describe their affiliation and the researchers coded these appropriately. To test the convergent validity of the Faith at Work Scale (FWS), Donahue's 12-item short-form of the Faith Maturity Scale (FMS) (Benson et al., 1993) was included in the survey. The FMS was selected because

of its relevance, brevity, psychometric quality, and acceptance to a heterogeneous Judaeo-Christian sample.[4] Cronbach's α for the FMS short form is 0.88.

Results

Sample

Of the 1,284 alumni contacted via email, 272 responded to the survey yielding a 21% response rate. Surveys from individuals who self-affiliated with no religion or with a religion other than Christianity (including Judaism) were too small to test statistically ($n = 11$), so they were excluded from the analysis. Surveys from retirees ($n = 14$) were excluded to insure current reflection on religion and work. Surveys with substantially missing data ($n = 13$) were also excluded. This culling left a final sample of a reasonable size ($n = 234$) for an exploratory factor analytic study.

Sociodemographic, employment, and religious characteristics of the sample are reported in Tables II–IV. Slightly more than one-third of the sample was female (36.8%) which is 10% lower than the percentage of the US workforce constituted by women age 20 and older (46.2%) (Bureau of Labor Statistics, 2007). A significantly smaller proportion of ethnic minorities were represented in the sample (4.7%) compared to the US civilian labor force (26.4%). More respondents were drawn from midwestern (37.9%) and southwestern (36.6%) states than from the west, southeast, or northeast, although respondents were drawn from across the US. Only one respondent lived abroad. The median age of the respondents was 37, with a range in age from 22 to 71 years. The sample generally follows the age distribution of the US civilian work force with more workers at the younger end of the spectrum (US Census Bureau, 2007).

In terms of employment (Table III), the vast majority of respondents were paid, full-time employees. Three quarters of the sample worked

TABLE II

Sociodemographic characteristics of sample

Category	Characteristic	n	%
Gender	Male	148	63.2
	Female	86	36.8
Ethnicity	White	222	95.3
	Asian, Native Hawaiian, Pacific Islander	4	1.7
	Hispanic/Latino	4	1.7
	Black or African American	2	0.9
	American Indian or Alaska Native	1	0.4
Domicile	Midwest	88	37.9
	Southwest	85	36.6
	West	23	9.9
	Southeast	22	9.5
	Northeast	13	5.6
	International	1	0.4
Age	22–29	75	32.1
(median = 37)	30–39	56	23.9
	40–49	48	20.5
	50–59	31	13.3
	60–69	21	9.0
	70–71	3	1.3

more than 40 h per week. Employees worked in small and large organizations in over twenty industries and in several occupational levels with the largest groups employed in professional or managerial roles. As reported in Table IV, the sample had a significantly smaller percentage of Catholics and significantly larger proportion of Evangelicals than is represented among US religious adherents. There was slightly less Mainline and more Morman representation than proportionately found in the US population. Catholics represent approximately 48% of US religious adherents, Evangelicals 24%, Mainlines 18%, Jews 6%, and Mormons 3% (Jones et al., 2002). Two-thirds of the sample attend religious services once a week or more.

Scale structure

Data adequacy

Survey responses were tested to insure they were appropriate for factor extraction. A Kaiser–Meyer–Olkin statistic exceeded the recommended minimum threshold of 0.6 (KMO = 0.95) and Bartlett's Test of Sphericity was significant (x^2 = 2187.45, df = 105, $p < 0.000$), indicating that the data contained adequate correlations to factor.

Number of factors

Scree plots generated using different combinations of items consistently suggested that a one-factor solution best fit the data. (The Scree plot using the final scale items is shown in Figure 1). A Scree plot is less prone to overfactoring than Kaiser's Eigenvalue of 1 rule (cf. Fabrigar et al., 1999; Zwick and Velicer, 1986), and the results were judged to be clear enough to obviate conducting parallel analysis.

Factor analysis

The factor structure of the scale was tested using principle axis factoring (PAF) because the relationship among the supposed factors was theoretically unknown. PAF uses squared multiple correlations as the initial communality estimate and iterates to a final communality by incorporating variance for each measure (Widaman, 1993). To select final items for the FWS, we chose one item from each indicator which satisfied four criteria. We considered whether the item had: (1) high

TABLE III

Employment characteristics of sample

Category	Characteristic	*n*	%
Work status	Paid	215	91.9
	Homemaker	12	5.1
	Student	4	1.7
	Volunteer	3	1.3
Hours worked	<40 h per week	24	10.3
	40–49 h per week	132	56.4
	50–59 h per week	52	22.2
	>60 h per week	26	11.1
Organization size	Under 20 employees	67	28.8
	20–99 employees	35	15.0
	100–249 employees	20	8.6
	250–999 employees	30	12.9
	1,000–10,000 employees	33	14.2
	Over 10,000 employees	48	20.6
Industry	Financial activities and insurance	49	20.9
	Manufacturing	22	9.4
	Retail or wholesale trade	20	8.5
	Education	18	7.7
	Technical or scientific	17	7.3
	Real estate	14	6.0
	Medicine, health, and social services	13	5.6
	Information and communication	11	4.7
	Households goods and services	10	4.3
	Administrative and support services	7	3.0
	Construction	6	2.6
	Religious and pastoral services	6	2.6
	Transportation and storage	3	1.3
	Arts, entertainment, and recreation	2	0.9
	Mining and quarrying	2	0.9
	Military	2	0.9
	Other services	2	0.9
	Public administration	2	0.9
	Accommodation and food service	1	0.4
	Agriculture, forestry, and fishing	1	0.4
	Water supply, sewerage, and waste	1	0.4
Occupation	Professional	112	47.9
	Manager, senior official, and legislator	65	27.8
	Service and sales worker	14	6.0
	Clerk	6	2.6
	Technician and associate professional	3	1.3
	Armed services	2	0.9
	Craft and related trades worker	1	0.4
	Skilled agricultural, fishery, and forestry worker	1	0.4

correlation with other items and with the scale as a whole; (2) relatively low skew and kurtosis; (3) high factor communalities; and (4) high factor loadings. We inspected items by religious affiliation as well, favoring those with relatively high intercorrelations across multiple traditions.

TABLE IV

Religious characteristics of sample

Category	Characteristic	n	%
Affiliation	Catholic	45	19.7
	Evangelical	138	60.3
	Mainline	34	14.8
	Mormon	12	5.2
Religious service Attendance	Less than once a year	8	3.4
	Once or twice a year	8	3.4
	Several times a year	26	11.1
	Once a month	9	3.8
	2–3 times a month	30	12.8
	Once a week	82	35.0
	More than once a week	71	30.3

After selecting at least one item for each indicator, the next step was to decide whether the theoretical model justified retaining items with relatively poor performance on the above criteria. Items associated with three indicators – "Pursues healthy work practice," "Reserves time for family, church, friends, and community," and "Personal identity is not defined by occupation" – had consistently low communalities and factor loadings. Although we believe these constructs are supported by Judaeo-Christian theology, the items appear to be tapping an unidentified latent variable which differs from other scale items and is not statistically adequate to add additional factors. We removed these three indicators and their accompanying items from the scale. Items measuring "Conserves natural resources out of love for others" consistently loaded low as

Figure 1. Scree plot of Faith at Work Scale.

well. We believe this construct is partially tapped by a related indicator – "Stewards rather than owns material things so all can benefit." We eliminated items associated with the Conservation indicator. Two items measuring "Consistently ethical, even when challenged" were strongly kurtotic across most or all religious affiliations, suggesting that they would have ceiling effects and be relatively meaningless measures if they were retained. Thus, they too were omitted. In sum, 17 of the original 22 indicators were retained for the scale and 15 items were selected to constitute the Faith at Work Scale (FWS) (Table V).[5]

The scale's single factor accounts for 59.22% of the total variance (Eigenvalue = 8.88) (Table VI), shy of the 75% recommended by Stevens (2001) but above average at approximately at the sixtieth percentile of factor analytic studies in the social sciences (Peterson, 2000). Item intercorrelations were high (Table VII) and communalities and factor loadings adequate (Tables VIII, IX). Twelve of the 15 items had communalities above 0.5 and only two items (Caring and Moral) had factor loadings lower than 0.7. This significantly exceeds the average cutoff of factor loadings of 0.4 (Peterson, 2000).

Scoring, skew, and kurtosis

Scores on the FWS can range from a low of 15 to a high of 75. The mean score of the respondents in this study was 52, which places the sample mean at the 62nd percentile on the scale – skewed slightly negatively (toward a positive response). Analysis of Variance tests across religious affiliations on each of the 15 FWS items were significant, as were differences across religious affiliations on the overall FWS score ($F = 16.72$, df = 3, $p > 0.001$). The highest means were evidenced by the small sample of Mormon respondents ($n = 12$) with Evangelicals being slightly lower, followed by Mainlines and Catholics (Table X). Scale items for Mainlines and Catholics were normally distributed with few exceptions. With the relatively large Evangelical and smaller Mormon influence in the sample, however, six items had a negative skew of 2 or greater (toward a positive response) (Table XI). One item (Partnering) was significantly kurtotic using the −3 to + 3 rule of thumb for acceptable kurtosis. Two items (Growing and Witnessing) had a mean score on skewness that exceeded 4.0.
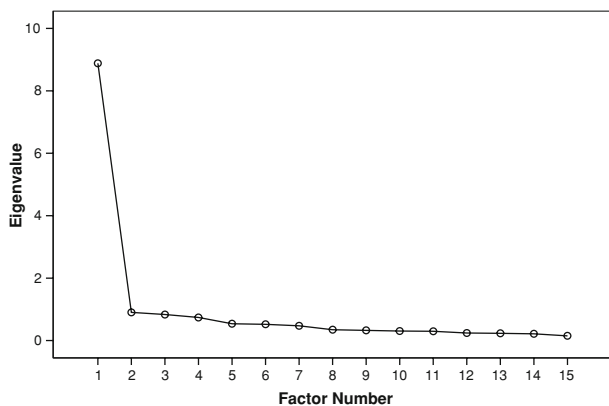
TABLE V

Faith at Work Scale core dimensions and items

Dimension	Item	
	Abbreviation	Complete wording
Relationship	Aware	I sense God's presence while I work
	Partnering	I view my work as a partnership with God
	Meaningful	I think of my work as having eternal significance
	Integrated	I see connections between my worship and my work
	Coping	My faith helps me deal with difficult work relationships
Meaning	Called	I view my work as a mission from God
	Equipped	I sense that God empowers me to do good things at work
	Diligent	I pursue excellence in my work because of my faith
	Growing	I believe God wants me to develop my abilities and talents at work
Community	Accepting	I view my coworkers as being made in the image of God
	Witnessing	My coworkers know I am a person of faith
	Caring	I sacrificially love the people I work with
Holiness	Moral	When I am with others and alone, I practice purity in my work habits
Giving	Just	I view my work as part of God's plan to care for the needs of people
	Stewarding	I view myself as a caretaker not an owner of my money, time and resources

TABLE VI

Eigenvalues and variance explained by Faith at Work Scale

Factor	Initial eigenvalues		Extraction sums of squared loadings[a]	
	Total	% of variance	Total	% of variance
1	8.88	59.22	8.47	56.46

[a]Extraction method: principal axis factoring.

Reliability and validity
A reliability calculation (Cronbach's $\alpha = 0.77$) satisfies the rule of thumb minimum of 0.7 for scale internal consistency. The FWS correlates significantly with the Faith Maturity Scale (Benson et al., 1993) ($r = 0.81$, $p > 0.0001$), indicating strong convergent validity with the FWS.[6]

Discussion

In this study, we have attempted to broaden and deepen workplace spirituality by highlighting the benefits of exploring belief and practice, not just function. Religious belief and practice connect to life and work in potent and unique ways and, we argue, are best understood holistically with spirituality, practice, and belief examined together.

Examining substance in spirituality opens doors to exploring workplace pluralism and workfaith integration. It extends research into measuring the trends of spiritual beliefs and practices connected with work, changes across age in workplace religion, the comparison of belief and practice internationally and interculturally, and the interaction, melding, and clash of various expressions of workplace religion. Studies of outcomes associated with spirituality can be connected more specifically with religious beliefs and practice.

To further empirical research into workplace religion, we describe the development and initial testing of a measure of Judaeo-Christian workplace religion.

The FWS is based on a broad, multi-tradition reading of Judaeo-Christian theology and is designed

TABLE VII

Means, standard deviation, and correlation matrix for Faith at Work Scale items

Item abbreviation	Descriptives		Pearson correlations[a]															
	Mean	Std. dev.	Awa	Par	Mea	Int	Cop	Cal	Equ	Dil	Gro	Acc	Wit	Car	Mor	Jus	Ste	FWS
Aware	3.16	1.14	1.00															
Partnering	3.17	1.27	0.79	1.00														
Meaningful	2.90	1.24	0.62	0.74	1.00													
Integrated	3.12	1.20	0.68	0.78	0.70	1.00												
Coping	3.88	0.95	0.56	0.60	0.46	0.58	1.00											
Called	2.91	1.25	0.65	0.72	0.79	0.72	0.51	1.00										
Equipped	3.75	1.06	0.64	0.65	0.57	0.60	0.64	0.61	1.00									
Diligent	3.63	1.10	0.59	0.65	0.55	0.63	0.63	0.60	0.64	1.00								
Growing	4.07	1.03	0.52	0.62	0.54	0.65	0.61	0.56	0.62	0.62	1.00							
Accepting	3.47	1.16	0.59	0.61	0.50	0.54	0.50	0.54	0.52	0.56	0.49	1.00						
Witnessing	4.05	1.12	0.52	0.64	0.49	0.59	0.54	0.53	0.49	0.59	0.58	0.62	1.00					
Caring	3.33	1.03	0.51	0.53	0.49	0.45	0.40	0.53	0.46	0.42	0.37	0.59	0.52	1.00				
Moral	3.82	0.91	0.41	0.48	0.39	0.48	0.43	0.46	0.33	0.58	0.33	0.47	0.47	0.33	1.00			
Just	3.50	1.19	0.61	0.66	0.67	0.66	0.54	0.70	0.64	0.63	0.56	0.58	0.53	0.55	0.45	1.00		
Stewarding	3.49	1.09	0.55	0.62	0.51	0.56	0.48	0.54	0.46	0.66	0.48	0.58	0.53	0.38	0.48	0.55	1.00	
FWS total	52.22	12.90	0.81	0.88	0.79	0.84	0.73	0.83	0.77	0.81	0.74	0.76	0.75	0.65	0.61	0.81	0.73	1.00

[a]Listwise $n = 200$; all correlations are significant with an $\alpha > 0.001$.

TABLE VIII

Communalities of Faith at Work Scale items

Item abbreviation	Initial	Extraction[a]
Aware	0.68	0.63
Partnering	0.79	0.77
Meaningful	0.70	0.60
Integrated	0.71	0.69
Coping	0.55	0.51
Called	0.72	0.66
Equipped	0.63	0.57
Diligent	0.68	0.63
Growing	0.59	0.52
Accepting	0.58	0.53
Witnessing	0.58	0.52
Caring	0.47	0.38
Moral	0.42	0.33
Just	0.64	0.64
Stewarding	0.55	0.49

[a]Extraction method: principal axis factoring.

TABLE IX

Factor matrix of Faith at Work Scale items

Item abbreviation	Factor[a]
Aware	0.79
Partnership	0.88
Meaningful	0.77
Integrated	0.83
Coping	0.71
Called	0.81
Equipped	0.75
Diligent	0.80
Growing	0.72
Accepting	0.73
Witnessing	0.72
Caring	0.62
Moral	0.57
Just	0.80
Stewarding	0.70

[a]Extraction method: principal axis factoring; 1 factor extracted; 4 iterations required.

to apply to a variety of occupations and work settings. The single-factor, 15-item scale reflects five dimensions of relationship, meaning, community, holiness, and giving. The scale meets expectations in construct and convergent validity and in scale internal consistency. Items highly correlate and exhibit adequate

TABLE X

Means and standard deviations of Faith at Work Scale items by Christian tradition

Item abbreviation	Christian traditions[a]							
	Catholic (*n* = 45)		Evangelical (*n* = 138)		Mainline (*n* = 34)		Mormon (*n* = 12)	
	Mean	Std. dev.	Mean	Std. dev.	Mean	Std. dev.	Mean	Std. dev.
Aware	2.79	0.94	3.32	1.08	2.97	1.31	3.55	1.13
Partnership	2.40	1.19	3.44	1.16	2.73	1.21	3.45	1.21
Meaningful	2.35	1.11	3.12	1.23	2.55	1.18	3.45	1.04
Integrated	2.47	1.20	3.39	1.09	2.76	1.35	3.90	0.88
Coping	3.30	0.94	4.06	0.78	3.48	1.18	4.27	1.27
Called	2.28	1.13	3.14	1.18	2.74	1.41	3.09	1.30
Equipped	3.35	1.10	3.90	0.97	3.55	1.03	4.27	0.65
Diligent	3.05	1.01	3.91	0.97	3.15	1.09	4.27	0.91
Growing	3.60	1.08	4.28	0.85	3.79	1.02	4.91	0.30
Accepting	2.93	0.94	3.66	1.11	2.91	1.05	4.27	0.79
Witnessing	3.30	1.36	4.39	0.95	3.44	1.27	4.82	0.41
Caring	3.05	1.15	3.47	0.97	3.03	1.06	3.27	0.91
Moral	3.28	0.97	3.98	0.75	3.40	1.07	4.80	0.42
Just	2.82	1.10	3.70	1.11	3.17	1.05	4.00	1.41
Stewarding	2.90	1.02	3.76	0.99	2.93	1.20	4.30	0.82
Total	43.34	11.44	55.69	11.06	46.25	13.87	64.11	5.18

[a]Jewish responses were insufficient in number to be statistically meaningful and so are omitted.

communalities and factor loadings across a diverse sample of Catholic, Evangelical, Mainline, and Mormon respondents. The scale's single factor moderately captures the construct of workplace religion from a Judaeo-Christian perspective, explaining 59.22% of the variance.

The sample used to test the FWS was diverse in Christian tradition, age, occupation, and industry but was deficient in its representation of ethnic minorities. Although scale items were extracted from Jewish and Christian sources, there were too few Jewish respondents in the sample to adequately test the scale across Orthodox, Conservative, and Reform Jewish traditions. Orthodox Christian traditions were inadequate in number to test as well. All but one respondent lived in North America, suggesting the scale may not generalize to other parts of the world. Thus, in terms of follow-up studies, obtaining scale responses from a broad cross section of ethnic minorities and Jewish respondents, and

testing it in various nations and cultures would further scrutinize the scale's psychometric qualities.

Beyond general scale testing, confirmatory factor analysis could be used to construct and examine various theories of workplace religion. Additionally, comparative studies of religious traditions could enlighten understanding in faith-work integration, not only from a summative perspective but also in multidimensional religious space, investigating how faith adherents may conceptualize of faith-work integration differently.

In sum, exploring substance surrounding workplace spirituality promises additional insight into what to this point has been limited to mostly conjecture, anecdotal observation, and homogenized measures. In cultures flourishing in pluralistic religion, it seems both appropriate and timely to refine theoretical conceptualizations and augment empirical measures which allow exploration of workplace religion.

TABLE XI

Skew and kurtosis of Faith at Work items

Item abbreviation	N	Mean	Std. deviation	Skewness[a]			Kurtosis[b]		
	Statistic	Statistic	Statistic	Statistic	Std. error	Statistic/Std. error	Statistic	Std. error	Statistic/Std. error
Aware	227	3.15	1.13	−0.07	0.16	−0.41	−0.68	0.32	−2.11
Partnering	228	3.11	1.26	0.03	0.16	0.21	−1.05	0.32	−3.27
Meaningful	229	2.87	1.24	0.22	0.16	1.34	−0.93	0.32	−2.91
Integrated	226	3.11	1.22	−0.05	0.16	−0.31	−0.91	0.32	−2.83
Coping	229	3.81	0.99	−0.67	0.16	−4.18	0.26	0.32	0.82
Called	224	2.90	1.25	0.22	0.16	1.32	−0.91	0.32	−2.82
Equipped	226	3.75	1.03	−0.60	0.16	−3.69	−0.21	0.32	−0.65
Diligent	225	3.64	1.08	−0.47	0.16	−2.91	−0.53	0.32	−1.64
Growing	225	4.07	1.01	−1.05	0.16	−6.44	0.72	0.32	2.22
Accepting	223	3.43	1.14	−0.20	0.16	−1.21	−0.81	0.32	−2.50
Witnessing	223	4.06	1.10	−1.20	0.16	−7.39	0.83	0.32	2.56
Caring	222	3.32	1.03	−0.29	0.16	−1.75	−0.37	0.33	−1.13
Moral	213	3.82	0.90	−0.68	0.17	−4.10	0.53	0.33	1.59
Just	215	3.45	1.19	−0.26	0.17	−1.58	−0.87	0.33	−2.62
Stewarding	216	3.50	1.10	−0.23	0.17	−1.40	−0.77	0.33	−2.33
FWS Total	200	52.22	12.99	−0.30	0.17	−1.74	−0.52	0.34	−1.52

[a]Skewness is a measure of a distribution's asymmetry; a normal distribution has skewness of zero. Positive and negative skewness reflect long right and left tails, respectively. In this case, a negative skew is toward a positive item response. Items may be considered skewed if they exceed the range of +2 to −2 when the skew statistic is divided by the item's standard error.

[b]Kurtosis is an indicator of whether the distribution of responses to an item is peaked or flat. A normal distribution has kurtosis of zero. Positive and negative kurtosis reflects less or more spread than normal, respectively. An item may be considered kurtotic if it exceeds +3 to −3 when divided by the standard error.

Notes

[1] Over a decade ago, Spilka (1993) concluded that understandings of spirituality in the psychological literature may be gathered under three categories: Religious spirituality based in theology (e.g., Orsi, 2006); natural spirituality drawing on ecology (e.g., Zsolnai and Ims, 2006); and humanistic spirituality emphasizing anthropological sources (e.g., Pava, 2003). Schumacher (1979, p. 116) similarly defined three aspects of good work: "To act as spiritual beings, that is to say, to act in accordance with their moral impulses – *Man as a divine being*. To act as neighbors, to render service to his fellows – *Man as a social being*; To act as persons, as autonomous centers of power and responsibility, that is, to be creatively engaged, using and developing the gifts that we have been blessed with – *Man himself and herself*." Although Schumacher doesn't mention ecology, the last point links with his emphasis upon small technology and industry which, he argued, respects and preserves the natural environment. These three categories of spirituality are not mutually exclusive as Tucker (2007) suggests.

[2] Zinnbauer et al. (1997, p. 911) state: "For those who find the whole of life to be sacred, there is little difference between the two processes." Similarly, Pargament et al. (2005, p. 668) observe that "…to the religiously minded, the sacred is not illusory. It is not a means to achieve psychological and social ends devoid of spiritual value. It is not merely one part of living. It is the core of life." Workplace spirituality on the individual level is not merely a treatise on ethical work or a theology of work, but a lived experience which transforms the work and workplace in transcendent ways, imbuing it with meaning beyond its immediate context (Raidt, 2001). Thus, to understand workplace spirituality, its potential as an encompassing world view should be recognized. Nevertheless, for some, religion may be reduced to moralistic therapeutic deism – general moral platitudes divorced from the intellectual tradition of their religion. Others struggle with how their faith and work coincide.

³ Recent research supports the view that spiritual transformation is strongly tied to religious participation (Smith, 2006).

⁴ To make the Faith Maturity Scale (Benson et al., 1993) relevant to Jewish respondents, the wording of "My life is committed to Jesus Christ" was altered to "My life is committed to God."

⁵ We employ the term "workplace religion" because: It suggests the addition of substance (e.g., dogma, institution, etc.) to spirituality's quest; it is inclusive of deistic and non-deistic religion; and it can incorporate humanistic and ecological belief systems as well as religious ones. "Faith at Work" is the name given to the scale developed in this research because it suggests a relationship with a deity which extends beyond the dogmatic and institutional intonation of the word "religion."

⁶ Due to sampling particularities, Evangelicals (Southern Baptists) were dropped from the mostly Mainline Christian sample that was used to develop the Faith Maturity Scale study (Donahue et al., 1993). That Evangelicals were included in the present study along with Catholics, Mainlines, and a small sample of Mormons suggests that the FWS potentially has broad reasonable application across Christian and, yet to be tested, Jewish audiences.

References

Ashmos, D. P. and D. Duchon: 2000, 'Spirituality at Work: A Conceptualization and Measure', *Journal of Management Inquiry* **9**, 134–145. doi:10.1177/105649260092008.

Arthaud-Day, M. L., J. C. Rode, C. H. Mooney and J. P. Near: 2005, 'The Subjective Well-Being Construct: A Test of Its Convergent, Discriminant, and Factoral Validity', *Social Indicators Research* **74**, 445–476. doi:10.1007/s11205–004–8209–6.

Baylor Religion Survey: 2006, *American Piety in the 21st Century: New Insights to the Depth and Complexity of Religion in the US* (Baylor Institute for Studies of Religion, Waco, TX).

Becker, P.E. and H. Hofmeister: 2001, 'Work, Family, and Religious Involvement for Men and Women', *Journal for the Scientific Study of Religion* **40**, 707–722. doi:10.1111/0021–8294.00086.

Benson, P. L., M. J. Donahue and J. A. Erickson: 1993, 'The Faith Maturity Scale: Conceptualization, Measurement, and Empirical Validation', in M. L. Lynn and D. O. Moberg (eds.), *Research in the Social Scientific Study of Religion*, Vol. 5 (JAI Press, Greenwich, CT), pp. 1–26.

Bureau of Labor Statistics: 2007, 'Employment Situation (Table A-2. Employment Status of the Civilian Population by Race, Sex, and Age; Table A-3. Employment Status of the Hispanic or Latino Population by Sex and Age)', Retrieved September 2, 2007 from http://www.bls.gov/news.release/empsit.toc.htm.

Conroy, S. J. and T. L. N. Emerson: 2004, 'Business Ethics and Religion: Religiosity as a Predictor of Ethical Awareness Among Students', *Journal of Business Ethics* **50**, 383–396. doi:10.1023/B:BUSI.0000025040.41263.09.

Davidson, J. C. and D. P. Caddell: 1994, 'Religion and the Meaning of Work', *Journal for the Scientific Study of Religion* **33**, 135–147. doi:10.2307/1386600.

DeVellis, R. F.: 2003, *Scale Development: Theory and Applications*, 2nd Edition (Sage, Thousand Oaks, CA).

Emmons, R. A. and R. F. Paloutzian: 2003, 'The Psychology of Religion', *Annual Review of Psychology* **54**, 377–402. doi:10.1146/annurev.psych.54.101601.145024.

Epstein, E. M.: 2002, 'Religion and Business – The Critical Role of Religious Traditions in Management Education', *Journal of Business Ethics* **38**, 91–96. doi:10.1023/A:1015712827640.

Fabrigar, L. R., D. T. Wegener, R. C. MacCallum and E. J. Strahan: 1999, 'Evaluating the Use of Exploratory Factor Analysis in Psychological Research', *Psychological Methods* **4**, 272–299. doi:10.1037/1082–989X.4.3.272.

Finnis, J., J. Boyle and G. Grisez: 1999, 'A Sounder Theory of Morality. Readings in Moral Theology, No. 11', in R. McCornick and C. Curran (eds.), *The Historical Development of Moral Theology in the United States* (Paulist Press, New York), pp. 200–218.

Foddy, W.: 1998, 'An Empirical Evaluation of In-Depth Probes Used to Pretest Survey Questions', *Sociological Methods and Research* **27**, 103–133. doi:10.1177/0049124198027001003.

Fowler, F. J. Jr.: 1995, *Improving Survey Questions: Design and Evaluation* (Sage, Thousand Oaks, CA).

Geertz, C.: 1973, 'Thick Description: Towards an Interpretative Theory of Culture', in C. Geertz (ed.), *The Interpretation of Cultures: Selected Essays* (Basic Books, New York), pp. 3–30.

Giacalone, R. A. and C. L. Jurkiewicz: 2003, 'Toward a Science of Workplace Spirituality', in R. A. Giacalone and C. L. Jurkiewicz (eds.), *Handbook of Workplace Spirituality and Organizational Performance* (M.G. Sharpe, Armonk, NY), pp. 3–28.

Gorsuch, R. L. and W. R. Miller: 1999, 'Assessing Spirituality', in W. R. Miller (ed.), *Integrating Spirituality into Treatment: Resources for Practitioners* (American Psychological Association, Washington, DC) , pp. 47–64.

Gotsis, G. and Z. Kortezi: 2008, 'Philosophical Foundations of Workplace Spirituality: A Critical Approach',

Journal of Business Ethics **78**, 575–600. doi:10.1007/s10551–007–9369–5.

Hall, T. W. and K. J. Edwards: 2002, 'The Spiritual Assessment Inventory: A Theistic Model and Measure for Assessing Spiritual Development', *Journal for the Scientific Study of Religion* **41**, 341–357. doi:10.1111/1468–5906.00121.

Hicks, D. A.: 2003, *Religion and the Workplace: Pluralism, Spirituality, Leadership* (Cambridge University Press, Cambridge).

Hill, P. C.: 2005, 'Measurement in the Psychology of Religion and Spirituality: Current Status and Evaluation', in R. F. Paloutzian and C. L. Park (eds.), *Handbook of the Psychology of Religion and Spirituality* (Guilford Press, New York), pp. 43–61.

Hill, P. C. and R. W. Hood Jr.: 1999, *Measures of Religiosity* (Religious Education Press, Atlanta).

Hill, P. C., K. I. Pargament, R. W. Hood Jr., M. E. McCullough, J. P. Swyers, D. B. Larson and B. J. Zinnbauer: 2000, 'Conceptualizing Religion and Spirituality: Points of Commonality, Points of Departure', *Journal for the Theory of Social Behaviour* **30**, 51–77. doi:10.1111/1468–5914.00119.

ISCO-88: 1988, *International Standard Classification of Occupations (International Labour Organization, Geneva)*, available at: http://www.ilo.org/public/english/bureau/stat/isco/index.htm.

ISIC Rev. 4 (draft): 2007, *International Standard Industrial Classification of All Economic Activities, Revision 4* (*United Nations Statistical Division, New York*), available at: http://unstats.un.org/unsd/class/default.asp.

Jackson, S., R. Eames, L. Van Drunen and J. Voskuil: 2006, 'Engaging Ideas: Can Christian Business Scholarship Inform Business Practice?', *Journal of Biblical Integration in Business* **Fall**, 141–162.

Jones, H. B. Jr.: 1997, 'The Protestant Ethic: Weber's Model and the Empirical Literature', *Human Relations* **50**, 757–778.

Jones, D. E., S. Doty, C. Grammich, J. E. Horsch, R. Houseal, M. Lynn, J. P. Marcum, K. M. Sanchagrin and R. H. Taylor: 2002, Religious Congregations and Membership in the United States 2000: An Enumeration by Region, State and County Based on Data Reported for 149 Religious Bodies (Glenmary Research Center, Atlanta).

Juergensmeyer, M.: 2006, 'Thinking Globally about Religion', in M. Juergensmeyer (ed.), *The Oxford Handbook of Global Religions* (Oxford University Press, New York), pp. 3–14.

Kinjerski, V. and B. J. Skrypnek: 2006, 'Measuring the Intangible: Development of the Spirit at Work Scale', Paper presented at the Academy of Management Annual Meeting, Atlanta, August.

Klemmack, D. L., L. L. Roff, M. W. Parker, H. G. Koenig, P. Sawyer and R. M. Allman: 2007, 'A Cluster Analysis Typology of Religiousness/Spirituality Among Older Adults', *Research on Aging* **29**, 163–183.

Ladd, K. L. and B. Spilka: 2006, 'Inward, Outward, Upward Prayer: Scale Reliability and Validation', *Journal for the Scientific Study of Religion* **45**, 233–251.

Levenson, M. R., C. M. Aldwin and M. D'Mello: 2005, 'Religious Development from Adolescence to Middle Adulthood', in R. F. Paloutzian and C. L. Park (eds.), *Handbook of the Psychology of Religion and Spirituality* (Guilford Press, New York), pp. 144–161.

Lund Dean, K. and C. J. Fornaciari: 2007, 'Empirical Research in Management, Spirituality and Religion During Its Founding Years', *Journal of Management, Spirituality and Religion* **4**, 3–34.

Miller, D. W.: 2006, *God at Work: The History and Promise of the Faith at Work Movement* (Oxford University Press, New York).

Miller, W. R. and C. E. Thoresen: 1999, 'Spirituality and Health', in W. R. Miller (ed.), *Integrating Spirituality into Treatment: Resources for Practitioners* (American Psychological Association, Washington, DC), pp. 3–18.

Moberg, D. O.: 2002, 'Assessing and Measuring Spirituality: Confronting Dilemmas of Universal and Particular Evaluative Criteria', *Journal of Adult Development* **9**, 47–60.

Mockabee, S. T., J. Q. Monson and J. T. Grant: 2001, 'Measuring Religious Commitment Among Catholics and Protestants: A New Approach', *Journal for the Scientific Study of Religion* **40**, 675–690.

Nash, L. and S. McLennan: 2001, *Church on Sunday, Work on Monday: The Challenge of Fusing Christian Values with Business Life* (Jossey-Bass, San Francisco).

Neff, J. A.: 2006, 'Exploring the Dimensionality of 'Religiosity' and 'Spirituality' in the Fetzer Multidimensional Measure', *Journal for the Scientific Study of Religion* **45**, 449–459.

Netemeyer, R. G., W. O. Bearden and S. Sharma: 2003, *Scaling Procedures: Issues and Applications* (Sage, Thousand Oaks, CA).

Orsi, R. A.: 2006, '2 + 2 = 5, or the Quest for an Abundant Empiricism', *Spiritus* **6**, 113–121.

Pargament, K. I.: 1999, 'The Psychology of Religion and Spirituality? Yes and No', *International Journal for the Psychology of Religion* **2**, 201–229.

Pargament, K. I., G. M. Magyar-Russell and N. A. Murray-Swank: 2005, 'The Sacred and the Search for Significance: Religion as a Unique Process', *Journal of Social Issues* **61**, 665–687.

Pava, M. L.: 2003, 'Searching for Spirituality in all the Wrong Places', *Journal of Business Ethics* **48**, 393–400.

Peterson, R. A.: 2000, 'A Meta-Analysis of Variance Accounted for and Factor Loadings in Exploratory Factor Analysis', *Marketing Letters* **11**, 261–275.

Piedmont, R. L. and M. M. Leach: 2002, 'Cross-Cultural Generalizability of the Spiritual Transcendence Scale in India: Spirituality as a Universal Aspect of Human Experience', *American Behavioral Scientist* **45**, 1888–1901.

Radoki, C.: 2007, 'Understanding the Roles of Religion in Development: The Approach of the RaD Programme', Working Paper 9 (University of Birmingham, Birmingham).

Raidt, E.: 2001, 'Towards a Christian Spirituality of Work', Paper presented at Work as Key to the Social Question: The Great Social and Economic Transformations and the Subjective Dimension of Work (John A. Ryan Center for Catholic Studies, University of St. Thomas, Rome/Vatican City), March.

Rossiter, J. R.: 2002, 'The C-OAR-SE Procedure for Scale Development in Marketing', *International Journal of Research in Marketing* **19**, 305–335.

Sandelands, L. E.: 2003, 'The Argument for God from Organization Studies', *Journal of Management Inquiry* **12**, 168–177.

Schumacher, E. F.: 1979, *Good Work* (Harper Colophon Books, New York).

Seidlitz, L., A. D. Abernethy, P. R. Duberstein, J. S. Evinger, T. H. Change and B. L. Lewis: 2002, 'Development of the Spiritual Transcendence Index', *Journal for the Scientific Study of Religion* **41**, 439–453.

Sheep, M. L.: 2004, 'Nailing Down Gossamer: A Valid Measure of the Person-Organization Fit of Workplace Spirituality', *Academy of Management Proceedings*, pp B1–B6.

Smith, Y. S.: 2005, 'The JBIB and the State of Faith/ Business Integration: Accomplishments and Gaps', *Journal of Biblical Integration in Business* **Fall**, 154–165.

Smith, T. W.: 2006, 'The National Spiritual Transformation Study', *Journal for the Scientific Study of Religion* **45**, 283–296.

Spilka, B.: 1993, 'Spirituality: Problems and Directions in Operationalizing a Fuzzy Concept', Paper presented at the meeting of the American Psychological Association, Toronto, Ontario, August.

Stevens, J. P.: 2001, *Applied Multivariate Statistics for the Social Sciences*, 4th Edition (Lawrence Erlbaum, Hillsdale, NJ).

Tourangeau, R., L. J. Rips and K. Rasinski: 2000, *The Psychology of Survey Response* (Cambridge University Press, New York).

Tsang, J. and M. E. McCullough: 2003, 'Measuring Religious Constructs: A Hierarchical Approach to Construct Organization and Scale Selection', in S. J. Lopez and C. R. Snyder (eds.), *Positive Psychological Assessment: A Handbook of Models and Measures* (American Psychological Association, Washington, DC), pp. 345–360.

Tucker, M. E.: 2007, 'The Ecological Spirituality of Pierre Teilhard de Chardin', *Spiritus: A Journal of Christian Spirituality* **7**, 1–19.

US Census Bureau: 2007, *2007 Statistical Abstract, Table 577, Civilian Labor Force–Percent Distribution by Sex and Age: 1960 to 2005*, retrieved September 2, 2007 from http://www.census.gov/compendia/statab/labor_force_ employment_earnings/.

Van Buren, H.J. III: 1995, 'Work and Religious Faith: How People of Faith Relate to their Employers', *Journal of Values-Based Management* **8**, 279–288.

Van Loon, E. C.: 2000, 'Faith on the Job: A Typology for the Integration of Faith and Work Life for Christians Working in For-Profit Businesses', unpublished M.A. thesis (Hartford Seminary, Hartford, CT).

Von Hügel, F. F. : 1923, *The Mystical Element of Religion as Studied in Saint Catherine of Genoa and Her Friends* (J. M. Dent, London).

Whittington, J. L., B. Frank, R. May, B. Murray and V. Goodwin: 2006, 'Servant Leadership in Organizations: Scale Development and Validation', Paper presented at Academy of Management Annual Meeting, Atlanta, August.

Widaman, K. F.: 1993, 'Common Factor Analysis Versus Principal Component Analysis: Differential Bias in Representing Model Parameters?', *Multivariate Behavioral Research* **28**, 263–311.

Wink, P. and M. Dillon: 2002, 'Spiritual Development Across the Adult Life Course: Findings from a Longitudinal Study', *Journal of Adult Development* **9**, 79–94.

Withnow, R.: 1998, *After Heaven: Spirituality in America Since the 1950s* (University of California Press, Berkeley).

Zinnbauer, B. J., K. I. Pargament., B. Cole, M. S. Rye, E. M. Butter, T. G. Belavich, K. M. Hipp, A. B. Scott and J. L. Kadar: 1997, 'Religion and Spirituality: Unfuzzying the Fuzzy', *Journal for the Scientific Study of Religion* **36**, 549–564.

Zsolnai, L. and K. J. Ims (eds.): 2006, *Business Within Limits: Deep Ecology and Buddhist Economics, Frontiers of Business Ethics*, Vol. 1 (Peter Lang, Oxford).

Zwick, W. R. and W. F. Velicer: 1986, 'Comparison of Five Rules for Determining the Number of Components to Retain', *Psychological Bulletin* **99**, 432–442.

Monty. L. Lynn
Management Sciences,
Abilene Christian University,
ACU Box 29325,
Abilene, TX 79699, U.S.A.
E-mail: lynnm@acu.edu

Michael J. Naughton
Catholic Studies,
University of St. Thomas,
Mail 55-S, 2115 Summit Avenue,
St. Paul, MN 55105, U.S.A.
E-mail: mjnaughton@stthomas.edu

Steve VanderVeen
Economics, Management and Accounting,
Hope College,
Box 9000,
Holland, MI 49422, U.S.A.
E-mail: vanderveen@hope.edu